CESS Monograph 58

Rapid Situational Assessment of Fundamental Principles and Rights at Work in the Cotton Growing Communities in Telangana, India

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B. Suresh Reddy
P. Aparna
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CENTRE FOR ECONOMIC AND SOCIAL STUDIES
(Planning Dept, Govt. of Telangana & ICSSR - Ministry of Education, Govt. of India)
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Foreword

The Centre for Economic and Social Studies (CESS) was established in 1980 to undertake research in the field of economic and social development in India. The Centre recognizes that a comprehensive study of economic and social development issues requires an interdisciplinary approach and attempts to involve researchers from various disciplines. The Centre focuses on policy-relevant research through empirical investigation with sound methodology. CESS has made important contributions to social science research in several areas, in accordance with the faculty's research interests.

Dissemination of research findings to fellow researchers and policy makers is an important dimension of policy relevant research which directly or indirectly contributes to policy formulation and evaluation of interventions. CESS has published several books, journal articles, working papers and monographs over the years. The monographs are basically research studies and project reports undertaken at the Centre. They provide an opportunity for CESS faculty, visiting scholars and research scholars to disseminate the research findings in an elaborate form.

The present monograph titled "Rapid Situational Assessment of Fundamental Principles and Rights at Work in the Cotton Growing Communities in Telangana, India" by E. Revathi, B. Suresh Reddy, P.Aparna and P.Sampath is an attempt to examine the various issues related to Fundamental Principles and Rights at Work (FPRW) among cotton cultivating communities and assess the related vulnerabilities arising due to non-compliance with fundamental rights at work and working conditions among the cotton farmers and workers in Telangana State. The study assessed the ILO conventions relating to four pillars of FPRW- the freedom of association and effective recognition of right to collective bargaining; elimination of forced labour; abolition of child labour, and; elimination of labour market discrimination with respect to producers and workers in cotton sector. The efficacy of government interventions like minimum support price, formal credit to avoid tied loans, prevention of child labour and minimum wage assume importance in the context of FPRW given the susceptibility of the cotton farming to informal credit markets and input and output market vagaries.

This monograph provides valuable suggestions to researchers and policy makers from the evidence based empirical analysis on FPRW among cotton growing communities and also contributes to the implementation of SDG 8 on 'Decent work for all'. I hope it would be useful to the research community, policy makers, development practitioners and all those interested in the promotion of FPRW leading to 'decent work' conditions among farmers and agriculture workers in general and those in cotton sector in particular.

E.Revathi
Director, CESS

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E. Revathi
B. Suresh Reddy
P. Aparna
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Hyderabad,
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Acronyms

Bt	Bacillus thuringiensis
CAPI	Computer-Assisted Personal Interview
CCI	Cotton Corporation of India
FGD	Focus Group Discussion
FPRW	Fundamental Principles and Rights at Work
IRFT	International Resources for Fairer Trade
OECD-FAO	Organisation for Economic Co-operation and Development (OECD) and the Foodand Agriculture Organisation.
PJTSAU	Professor Jayshankar Telangana State Agriculture University
TE	Triennium Ending (average for a period of three years)
USDA	U.S. Department of Agriculture

Chapter 1
Cotton Farmers and Labour in Telangana: The Fundamental Principles and Rights at Work Context

1.1 Introduction

Cotton is an important agricultural commodity, both at the global and domestic sense. In many developing and underdeveloped countries, cotton exports are not only a source of vital foreign exchange earnings, but also account for a substantial proportion of their GDP and tax income, that lead to significant economic and social development. Cotton cultivation generates employment, income and food security to millions of farmers and their families across the world.

The latest USDA estimates for 2019/20 indicate that world cotton production is projected at 121.5 million bales. Globally, it provides income to more than 250 million people and employs almost 7 percent of entire labour force in developing countries. India, China, and the United States remain the largest cotton-producing countries. Since 2015-16, India has been the world's biggest producer of cotton, currently producing approximately 28.50 million bales or 23 per cent of global cotton. Projections till end of the decade (2028) show it will remain to be the world's largest cotton producer with more than 65 percent of expected area increase, but given low yields, account for only 1/3rd of increase in global production (OECD-FAO Agriculture Outlook 2019-28). Cotton in India is grown by around 6 million farmers – predominantly smallholders – and 50 million people indirectly depend on the cotton sector in trade and processing for their livelihood (Ministry of Textiles, GOI 2018). Following the introduction of Bt technology in cotton, there was a significant increase in the area under cotton, volume of production and productivity. In India the major cotton producing states in terms of share in total cotton area during TE 2019-20 are Maharashtra, Gujarat, Telangana, Haryana, Karnataka, Rajasthan, Andhra Pradesh, Madhya Pradesh, Punjab, and Tamil Nadu in that order. The present study is confined to Telangana State in India which constitutes around 15 percent of the total cotton growing area of the country during this period.

Telangana State is third largest cotton producer in the country. The total area under cotton has been on the rise; it was 0.184 million hectares in 2018-19 and 0.213 million hectares in 2019-20 and has further risen to around 0.241 million hectares in 2020-21[43]. Cotton was cultivated in around 36 percent of total area cultivated in the state during TE 2019-20. However, in terms of productivity, the state scores a medium rank (456kg/hectare, TE 2019-20) vis-à-vis other major cotton growing states of Gujarat, Karnataka and AP. Cotton is the major rainfed crop cultivated in the state, it is also cultivated under protected irrigation systems in both black soils as well as light soils. It is estimated that there are about 0.2 million cotton cultivators in the state, a majority of who are small holders. The undivided districts of Nalgonda, Adilabad, Warangal, Karimnagar, Khammam and Mahbubnagar comprise above 30 percent sown area under cotton. Around 99 percent area is under BT variety in the state.

Telangana State is also known for seed production of which cotton seed is an important variety. Incidence of child labour in cotton seed production still exists though on a smaller scale compared to the past and the age has moved from lower below 14 years to adolescent age group (15-18 years). Labour market discrimination is present in some activities leading to wage discrimination. Seed companies enter into contract with small farmers through organizers. The share of farmers in cotton seed price in general is insufficient to result in payment of fair wage to the employed labour.

Cotton was perceived as a pathway to upward economic mobility in the rainfed ecology since the mid-nineties in Telangana. Land is leased in to small and marginal farmers[44]to cultivate cotton. Cotton farmers faced issues of high cost of production, fluctuating and often non remunerative prices, debt burden that drove them to attempt suicide tooBt technology emerged as one of the alternatives to increased use of pesticide. Different forms of labour have emerged to counter the challenges faced by small and marginal farmers in cotton cultivation.

The efficacy of government interventions like minimum support price, formal credit to avoid tied loans; child labour and minimum wage assume importance in the context of FPRW (Fundamental Principles and Rights at Work) given the susceptibility of the cotton farming to vulnerabilities. There is a need to assess the four pillars of FPRW-the freedom of association and effective recognition of right to collective bargaining;

43 This rise has been due to the regulated agriculture policy of the State which emphasized on diversification of cropping pattern.

44 Small and marginal holdings constitute around 86 percent with around 50 percent of cultivated area operated

elimination of forced labour; abolition of child labour, and; elimination of labour market discrimination with respect to producers and workers in cotton sector, thus enabling farmers and workers to come out of poverty to work in decent conditions. This also contributes to the implementation of SDG 8 on 'Decent work for all'.

1.2 Review of Literature

The review is broadly classified into three strands. The first strand presents a brief account of the agrarian situation of the 1990s with a focus on the agrarian crisis, adoption of Bt cotton seeds and cotton farmer suicides in Telangana state. This will provide a background which positions the cotton farmer in the implementation of FPRW pillars. The second strand discusses the ILO conventions relating to FPRW and definitions of child labour. The third strand presents the status of FPRW among cotton growing communities by examining the socio-economic impact of cotton cultivation, forms of cotton labour, incidcene of child labour and wage inequality. Apart from the above, a brief account of FPRW is also presented with reference to Farmer Producer Companies and Co-opearives. The impact of Covid 19 pandamic on agricultural sector and rural economy is described at the end.

1.2.1 Agrarian Distress and Vulnerability of Cotton Farming Community Agrarian Crisis during the 1990s

There has been a slow-down in agricultural growth since the mid-1990s which has had an adverse impact on the livelihoods of farming community. Reduced developmental role of State in irrigation, flood control, research, extension, and institution building and the decisive role of State on the prices of factors of agricultural production; electricity, water, fertilizers & pesticides, have caused the distress situation in agricultural sector. This situation is compounded by product market imperfections and the price fluctuations of crops. Globalization process has intensified the importance of trade and commercialization in the agricultural sector. The liberalization of agricultural trade has exposed commercial agriculture to the volatility in the world commodity markets (Reddy and Mishra, 2009; Deshpande and Arora, 2010).

Cotton farming in India has passed through three phases since its commercialization by East India Company: the colonial period, followed by the Green Revolution and genetical modification (Andrew, 2016). Cotton is an important commercial crop in India and it stood as the third highest exporter of raw cotton globally. Though cotton crop has been treated as 'white gold' among the cultivating community, it has been often associated with crop failures resulting in crisis and suicides among cotton farmers. Some

of the problems encountered by the cotton farmers are entirely different compared to other farmers in India. The yield uncertainty in cotton is mainly because of its cultivation largely in rain-fed areas and the risk of pest attacks. Controlling bollworms was the major problem faced by the cotton farmers throughout the cotton producing regions of the country during the 1990s (Narayanamoorthy A and Kalamkar S.S., 2006).

Farmers' suicide is a symptom of the agrarian distress caused by declining profitability and increasing risks of commercialization of agriculture. The distress had a greater impact on small farmers particularly in the rain-fed and tribal areas (Rao, 2009). Several cotton farmers committed suicide due to crop failure as a result of pest attack in undivided Andhra Pradesh and Maharashtra during this period (Dev and Rao, 2007). Pest attack, consecutive droughts, rising input costs and heavy investment on private irrigation pushed farmers into crisis.

Global changes and macro policy shifts, changing structural transformation in the agriculture sector and societal and household situations are the important factors causing distress and suicides among the cotton farmers. Lack of collective institutions and alienation from the family and society aggravated the crisis (Revathi, 2009). The 'upward mobility' attitude or 'catching-up' behavior of the farmers in dry land areas push them towards adopting the cropping pattern that is followed in the developed regions (Galab et al, 2013. The spurious quality of seeds resulting in crop failure particularly of cotton during the mid-nineties has also added to this crisis (Revathi and Murthy, 2005).

Agricultural Bio-Technology- Bt Cotton

Bio-technology applications entered the realm of agriculture in USA and other countries in the form of crop protection – herbicide tolerance and insect resistance. Bt (Bacillus Thuringiensis) cotton was introduced in China during the mid-1990s. Initially, Indian government was reluctant to approve its implementation due to environmental concerns raised by Civil Society Organizations. However, commercial planting was approved in India during the period 2002-03 (Jana Orphal, 2003). During the initial period following its introduction, the environmental risks of BT Cotton were debated more than its economic benefits. Later, several field studies (Narayanamoorthy A and Kalmkar S.S., 2006; Dev and Rao, 2007; Revathi, 2009) were conducted to examine the yield and pesticide use effects of Bt cotton. A study conducted in Karnataka during the initial years of its implantation found higher yields and lower pesticide use and results have raised expectations of Bt technology towards poverty reduction. However, the study observed that economic advantage of Bt cotton depends on agronomic conditions and the cost of seed is the major disadvantage (Jana Orphal, 2003). Studies conducted in

various states showed controversial results on cost reduction and yield improvement of Bt over non-Bt cotton. However, contrary to the expectations, all these studies have shown that Bt cotton has not reduced the pesticide consumption. Though, productivity is found to be higher in Bt over non-Bt cotton varieties, the same level of returns cannot be expected throughout the cotton producing areas of the country (Narayanamoorthy A and Kalmkar S.S, 2006). The results of a study conducted in four districts of undivided Andhra Pradesh (Dev and Rao, 2007) showed that Bt cotton technology is superior to the conventional cotton hybrids in terms of yield and net returns. The study observed the participation of small and SC (Scheduled Caste) framers in using Bt cotton varieties. Another important finding of the study is that it increased the use of casual labour particularly of female labour. Similar to the findings of the studies conducted, this study also observed that high cost of seeds, less yield than expected, unavailability of quality seeds, non-control of pest as the major concerns of the Bt-adopters.

Farmers could earn profits in the first five years of implementation of Bt technology but fell into debt during the subsequent years.The incidence of suicides during the period 1998-2004 was the highest in Northern Telangana followed by Rayalaseema and South Telangana. Farmers with mono-cropping system, dependence on ground water irrigation, tenancy and dependence on high-cost sources of informal credit caused suicides among farmers in the state (Revathi, 2009). Along with these, factors such as multiplicity of cotton hybrids, extensive use of chemical fertilizers and pesticides, spurious seeds, fertilizers and pesticides, adverse climatic conditions, drought, increasing input cost and increasing debt burden, government policy on subsidies and imports, small size of holdings, insufficient irrigation led to suicides (Nanda and Jadhav, 2018). Suicides are impacted by social, economic, and cultural factors ranging from agricultural crisis, indebtedness to changing social relations in the context of globalization and the technology. Suicide prevention strategies therefore need to consider socio-economic issues that are linked to production, trade, and social security in employment-oriented production sectors (Galab et. al, 2010).

High investments on groundwater irrigation and possession of animals might reduce the probability of committing suicides while increased dependence on market inputs and high expenditure on social events could increase it. Public support for irrigation, increased flow of credit from formal institutions and regulation of input markets, development of non-farm activities minimize the risk of irregular income flows (Revathi, 2009). Collective institutions either woman's collectives or farmers' collectives have proved to be effective community-based institutions which enable the farmers to

grapple with the market and the State (Galab et al., 2013). Bt is an additional option for cotton pest management and the benefits of technology depend on the institutional and ecological conditions of the adopters (Jana Orphal, 2003).

Genetically modified (GM) crops added another dimension to agricultural land which is already damaged as a result of the excessive usage of fertilizers and pesticides under the 'high yielding variety' (HYV) seeds package of the Green Revolution (GR). GM crops increased the possibility of emergence of secondary pests, increased pesticide use and decreased genetic diversity. GR and GM interventions broadly benefited the large farmers and in resource rich areas. While GR led to the degradation of the environment, GM raised ethical, environmental and health concerns. These technologies spread across varied agro-climatic zones and exposed the small and marginal farmers to market risks. Failure of cotton crop and growing debts in rain-fed cotton growing regions of Andhra Pradesh, Maharashtra and Madhya Pradesh led to suicides among cotton farmers. Cotton farming in Indian villages is being transferred into'toxic landscapes' that operate, shape and impact human well-being through multiple, complex, cultural, psychological, and economic aspects. Green Revolution and Gene Revolution, as it were, adversely impacted the landscape and well-being of rural population (Nanda and Jadhav, 2018).

Organic Cotton Farming-An Alternative

A report by the Environmental Justice Foundation (EJF, 2007) observed that a substantial proportion of the communities adversely affected by the hazardous cotton pesticides are in India. Over half of the pesticides application in agriculture in India is accounted for in cotton production. Cotton cultivation in the country is characterized by a near lack of safety measures and represents a highly unsafe environment to work. The report revealed traces of pesticide residues in blood samples taken from the Indian cotton labour. The application of hazardous pesticides affects not only those who directly involve in its production but contaminates water and cotton seed derivates such as cotton seed oil, an important source of edible oil. Organic cotton production offers a strong alternative to current practices of cotton production. Over the last few decades' organic cotton production has grown and it is underway in 22 countries across Africa, Asia, the Mediterranean and America. Women seem to get more benefits as organic farming improved their family health. Research Institute of Organic Agriculture (Frank Eyhorn et al., 2005) conducted a research study to analyse the impact of conversion to organic cotton farming on livelihoods of small farmers in the Maikaal bioRe organic cotton project in Madhya Pradesh. The study argues that organic cotton farming can

be a viable option to improve income and reduce vulnerabilities of small farmers. This will, in the long run, enable them to invest in irrigation and find alternative sources of income. However, it requires a strong policy support to encourage marginal and small farmers to manage the hurdles of conversion to organic farming system. Interviews with organic cotton farmers in Odisha (Altenbuchner, Christine et al., 2017) revealed that organic farming benefits farmers through soil improvements, reduced exposure to toxic chemicals and lower input costs, which in turn reduces dependency on money lenders. Organic farming improves their livelihood by providing access to training and their organizing into groups. However, with high work intensity associated with organic farming practices it impacts women more than men.

1.2.2 International Labour Organisation Conventions relating to labour

The International Labour Organisation (ILO) formulates international labour standards in the form of conventions. The ILO has declared eight conventions as fundamental to workers' rights worldwide. These eight conventions boil down to four international labour standards. The ILO drafted the declaration on Fundamental Principles and Rights at Work in 1998. These are as follows:

Workers should have the right to organise in trade unions and negotiate their working conditions collectively;

Workers should be free from any form of forced labour such as slavery, servitude, compulsory labour for political re-education or debt indenture;

Children below the age of 15 or as defined by the national legislation should not work so that they have the opportunity to learn and develop freely;

Discrimination on the grounds of gender, race, nationality, religion, political opinion, or social origin is banned, as is discrimination in remuneration on the grounds of gender (BCI, 2016).

The Guideline 11 of the 2016 Resolution of the ILO Committee on Decent Work in Global Supply Chains suggests that the role of national governments in promoting good governance in supply chain is similar to that of the Alliance 8.7. The focus of Alliance 8.7 also includes FPRW and supply chain management (OSCE, 2017)[45].

45 Alliance 8.7 is the global initiative supporting progress towards target 8.7 at all levels. The target 8.7 suggests taking immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and securing the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms

All the ILO member states agreed to respect, promote, and realize these core standards whether they have been ratified or not. India ratified the ILO conventions on Forced Labour, Equal Remuneration, Discrimination and Rural Workers' Organisation. However, the ILO conventions on Child Labour, Worst forms of Child Labour and Safety and Health in agriculture have not been ratified by India.

The laws related to national labour and Occupational Health and Safety (OHS) legislation to protect the interests and improve the conditions of agricultural workers in India – Minimum Wages Act, 1948; Plantation Labour Act, 1951; Bonded Labour System (Abolition) Act, 1976; Protection of Human Rights Act, 1993; Equal Remuneration Act, 1976 – are applicable and have direct bearing on agricultural labour.

An overview of the global picture relating to the four categories shows that there are 2.5 million forced labour of which 4.3 million are children. Child labour is estimated at 152 million of which 73 million are in hazardous work and 114 million are less than 15 years. Women are more likely to be in vulnerable employment and earn 23 percent lesser than men. Exclusion of workers from the right to associate affect the vulnerable workers such as agricultural workers, mirgrant workers and workers in non-standard forms of employment (Esim et al., 2019).

Definitions of Child Labour and Young Workers

India, along with other top cotton producing countries of China, Pakistan, Brazil, Uzbekistan and Turkey (six of the world's top seven producers) have been reported using child labour in their cotton fields (NCPCR, 2011).

The International Labour Organisation defined child labour as

Labour performed by a child who is under the minimum age specified in the national legislation for that kind of work; and

Labour that jeopardizes the physical, mental or moral well-being of a child, known as hazardous work (Minimum Age Convention, No.138, 1973); ILO Convention 138 which states that 'child labour is any economic activity performed by a person under the age of 15 years' and

Unconditional 'worst' forms of child labour, internationally defined as slavery, trafficking, debt bondage and other forms of forced labour, forced recruitment for use in armed conflict, prostitution & pornography and illicit activities (Worst Forms of Child Labour Convention No. 182, 1999; ILO, 2002)

India does not have a national minimum age for employment. India's main legislation on child labour is Child Labour (Prohibition and Regulation) Act, 1986, amended in 2016, which prohibits employment of children under-18 years in various occupations and processes. Household enterprises are exempted from prohibition of employing children under the terms of the Act. As a result, there are no legislative limits on young children working for their own parents. Employment of children (under-14) in non-domestic enterprises is subject to regulations regarding hours of work and rest period (BCI, 2016).

1.2.3 Labour and Social Impact in Cotton Cultivation

Better Cotton Initiative (BCI, 2016) examined the labour and social impact in cotton cultivation in three regions- West Africa, South Asia (India and Pakistan) and Brazil. Access to finance, market, inputs, and ability to form organizations etc. influence the positive social impact of cotton cultivation. Health and safety, credit and indebtedness and workers' and producers' organizations are the serious concerns of sustainable cotton cultivation. The health of workers who do not wear, or are not provided with personal protection equipment (PPE) is adversely affected , and; farmers' inability to repay the debts and workers inability to organize themselves poses threats to the attainment of sustainable cotton cultivation (goals?).

The wide range of rural development, employment generation and poverty alleviation initiatives could not bring significant improvement, primarily due to lack of appropriate representation of workers in the decision making process and lack of a forum to advocate and assert workers' rights. A majority of labour rights and impacts emanate from non-application or ineffective enforcement of legislation. Thus a clear demonstration and communication of compliance with existing regulation is required to showcase the positive social impact of cotton cultivation (ICAC, 2008).

Cotton is the major creator of employment and cotton cultivation is prevalent primarily in developing and emerging economies working on small, predominantly family-based farms. The revenues derived from cotton production can ameliorate the circumstances of poverty which give rise to social impacts. However, women and girls in West Africa and South Asia, who contribute to various activities in the cotton cultivation cycle work as unpaid family members or as low paid wage labour. Women farmers find difficulty in gaining access to credit due to men's ownership of collateral assets (BCI, 2016).

1.2.4 Child labour

The main focus of research on social and economic impact of cotton cultivation in India and other major cotton producing countries is on child labour. This was the observation made by the Expert Panel of the International Cotton Advisory Committee (ICAC) on the Social, Environmental and Economic Performance of Cotton (SEEP), which collected literature from ten major cotton producing countries where the predominant theme was child labour, accounting for 44 percent of the material reviewed. I Issues such as census statistics, workforce numbers, labour costs and forms of employment are the second prevalent topics, followed by consequences of pesticide exposure as a result of cotton cultivation, which was addressed as 'social impact' in about 21 percent of the materials. The review also stated that there are no census statistics on crop-specific number of farmers and agricultural labour in the surveyed countries (ICAC, 2008).

A greater part of literature on incidence of child labour, child trafficking, and migration of child workers focused on cotton seed production. These studies discussed about the complexities of the definitions of child labour, reasons for involving child labour, labour standard issues, working conditions etc. Debating on the complexities, Morrow and Vennam (2009) argued that child labour needs to be seen in the context of local understanding of childhood and the contributions that children make to their families. Citing various studies on this issue, the authors pointed that provision of high-quality education services would solve the puzzle that child labour increases with land ownership which was termed as 'wealth effect'. Their argument gains significance in the face of a large number of out of school children, as also a high number of schools operating in a single room building suggesting the poor quality of education in undivided Andhra Pradesh.

Seed production is labour intensive and hired labour is used especially during cross pollination. It is difficult for marginal farmers to find labour or exchange labour during cross pollination operation and seed production. Thus, large numbers of children are being mobilized. So, migrant child labour is prevalent mostly in seed production (CESS, 2019).

The Fair Labour Association (FLA), 2004 conducted a study to assess the labour risks in cottonseed farms in Andhra Pradesh and Gujarat. The definition of child labour as derived from the interviews conducted by the study suggest that children under 14 years who are not attending school and working as hired labour on the farms constitute child labour. But none of the interviewed (seed organisers, staff of seed companies,

staff of local non-governmental organisations (NGOs), workers and farmers) were clear about the children that combine work and studies and work on family farms.

There are different views expressed with regard to the children working for family and as child labour. The ILO does not consider a child working in the family as child labour as long as the child attends regular school and as per Child Labour (Prohibition and Regulation) Act of 1986, children working in family operated agricultural operations are not child labour. The UN Convention on the Rights of the Child, 1992 (CRC) and ILO Convention 182 are concerned with the protection of persons under 18 years, young workers, from any hazardous work. The Farm Labour Act of 1991 and the Minimum Wages Act of 1948 have provision for the protection of children, adolescents and adults. However, studies observed that protections are not respected in practice (FLA, 2004).

The main causes of involving child labour in cotton cultivation as per BCI study (2006) are: Employer can pay lower wages to children and extract more work and on the supply side, factors include – inadequate education facilities in rural areas, resulting in children losing interest in education; formal education and livelihoods trainings are not employment oriented and hence fail to address livelihood issues; household poverty; migration leading to dropouts and children ending up in situations of child labour. The FLA study (2004) provided the reasons such as preference for girls for their 'nimble fingers' and obedience and fast work, they are preferred for cross-pollination activity as the height of the plant is just the right height for girls, and they are preferred also for sowing, inter-cultivation and harvesting activities.

1.2.5 Bonded Labour

Another labour standard issue apart from child labour on cotton seed farms is bonded labour. Bonded labour is banned in India by Law. However, IRFT observes that bonded labour practices may be prevalent in disguise. Debt bondage in farming is the most widespread form of forced labour in India. The FLA (2004) study found that a greater proportion of child labour on cotton seed farms represent bonded labour as monetary advances were made to the parents and workers were not in a position to negotiate market wages.

The Visit of National Commission for Protection of Child Rights (NCPCR) team to Gujarat from 7th to 10th October, 2011 revealed that a large number of children were trafficked from Rajasthan to Gujarat in order to engage them in artificial pollination work in Bt-cotton seed farms. The state contributed one third of cotton produced in

the country because of its better irrigation facility. The state prospered at the social cost of the child labour (NCPCR, 2011).

Dakshini Rajasthan Majdoor Union conducted a survey in 2007 to examine the pattern of use of child labour in cotton seed farms in North Gujarat. It covered 42 farms of different seed companies. The study found an extensive use of child labour in cotton farms in Gujarat at 33 percent of child labour below the age of 14 and 42 percent belonging to adolescent age. Thus, three quarters of workforce comprised of children and adolescents. All workers were tribal migrants from Rajasthan and Gujarat. Use of local labour was miniscule (Ashok Khandelwal et.al. 2008).

Further, health and safety is another major concern in cotton farming as workers both children and adults are exposed to chemicals and pesticides. The studies found lack of awareness about safe storage, use and disposal of pesticides among the workers and farmers. Extensive measures to improve working condition through training and capacity building at the seed company level are recommended.

The debate on 'needs-based' and 'rights-based' approaches to child labour reveals that, as per the 'needs-based' approach children should both be in school full-time and not working at all. However, this approach fails to acknowledge any possible benefits to children from their involvement in work and any possible difficulties with schooling. Thus, a reconceptualization of local understandings of childhood, as well as a disruption of intergenerational contract and of intergenerational relations would be necessary if child labour was to be eliminated. Poverty intersects with other factors in encouraging children's work in agriculture though their involvement in cotton seed production is problematic (Morrow and Vennam 2009).

A 'rights-based' approach would argue that children have the right to the health care, adequate standard of living and freedom of expression. Much of the literature on child labour cites only UN CRC Article 32, the right of the child 'to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education'.

International experience strongly suggests that it is beneficial and empowering for children if 'rights-based principles' are defined flexibly. Children's best interests depend on their diversity being treated with as much respect as their universality, and dignity, the basic criteria of human rights. The right and well-being of children depend above all on profound respect both for who they may become and for who they are right now (Ibid).

1.2.6 Women in cotton cultivation

Women are involved essentially in small size holdings of cotton cultivation and their work is seldom recognised. Lack of credit, lack of property entitlement, lack of decision making independence, lack of representation and participation in collective organization and health risks from pesticide use and lack of coverage under national labour legislation are the problems confronting women farmers. Women's participation in cotton cultivation goes by different arrangements – as family labour, as daily labour or contract labour participating in activities such as sowing, fertilizing, weeding and harvesting. Occupational segregation is found in situations where women are particularly clustered in picking operation. The pesticide use brings additional problems for women whose reproductive health may be at risk. Lack of land rights, preponderance of unpaid family labour and cultural perceptions are few causes for unequal position of women in cotton cultivation (ICAC, 2008).

1.2.7 Wage inequality

There are significant variations in wage rates based on gender, location and nature of labour agreement. Fair Labour Association (FLA) and the India Committee of the Netherlands (ICN) commissioned a study to examine the prevailing wage rates in cotton seed sector in Andhra Pradesh, Gujarat, Karnataka and Maharashtra (Venkateswarlu and Jacob, 2012). Wage rates differ across the states and within the states also. Wages are high for some activities such as ploughing, spraying pesticides and applying fertilizers than for sowing, weeding, harvesting and cross-pollination. Division of work based on gender has implications for earnings of men and women engaged in various activities. Women are preferred for labour-intensive and low paid activities such as cross-pollination, weeding and picking as compared to ploughing, spraying pesticides and fertilizer application which are less labour intensive and highly paid, usually done by men. Wage differences are also found in those activities where both men and women participate for example in fertilizer application; male wages are higher by 20 to 60 percent. Children employed in cross-pollination activity are paid less than adult women engaged in the same activity. Further, daily casual labour gets more wage than the seasonal worker and among the seasonal workers, local workers get more wage as compared to migrant workers. However, caste-based discrimination is not found in any of the locations. Men get wages higher than legal minimum wage while women get less than the legal minimum wage except for pollination activity and wages of child workers are lower than legal minimum wage. The Minimum Wages Act is not implemented properly in agricultural sector in all the states and there is lack of

awareness about the Minimum Wage Act among workers and farmers. The workers in cotton seed production are not organized and there are no active worker organizations operating in the study locations (Ibid).

1.2.8 Worker and producer organizations

Farmers and workers who are organized are able to realize their economic and labour rights. Addressing the social impacts of cotton cultivation from the labour rights perspective is not a comprehensive approach. It is the lack of resources and capacity to form organizations which commonly prevents such development. There is little formal worker organization in agricultural sector particularly in cotton sector. Seasonal, migratory and causal nature of labour, illiteracy , ignorance of workers' rights and their isolation make the task of organizing rural workers difficult. The role of worker representative organization is found in the large-scale cotton farms in US and Brazil (ICAC, 2008).

1.2.9 FPRW and Co-operatives

The realisation of FPRW remains a global challenge despite progress made in some countries. Cooperatives can play a significant role in advancing FPRW. Agricultural co-operatives provide scale to smallholders, helping them access markets, information, technology and finance. Having broad membership base, co-operatives educate and create awareness among the members on FPRW (Esim et al. 2019).

1.2.10 Labour dynamics in cotton cultivation in Telangana

The returns to farmers are either low or negative due to increasing cost of production and lower market price than MSP. A household survey conducted in four districts (Adilabad, Warangal, Nalgonda and Gadwal) in Telangana during 2019-20 Kharif season revealed that only two-thirds of households experienced marginal profits i.e. Rs. 14,000 per acre and one-third of the households incurred losses of more than Rs.8,500 per acre (Bhim Reddy et al., 2021).

In terms of cultivated land, half of the farmers engaged in cotton cultivation are small producers. Adilabad district is an exception where there is a predominance of large farmers. The growth in cotton acreage is due to the adoption of cotton cultivation by the small and marginal farmers and the spread of the cotton cultivation to the agriculturally backward semi-arid region of the state due to Bt technology in cotton.

Household or family labour constitutes a significant part of human labour engaged in cotton cultivation including seed cultivation. Engaging family labour in cultivation is

to minimise the labour costs. Cotton seed cultivation is difficult and non-remunerative if it is largely based on hired labour. Cotton and cotton seed cultivation have increased in-migrant labour for cross-pollination and cotton picking. The migrant workers are hired through an intermediary and they are paid money in advance and are provided with shelter and food.

The penetration of technologies targeted at saving labour and related costs. Mechanisation of bullock-drawn ploughing, large winged sprayers that cover multiple rows of plants at once, use of herbicides to reduce labour for weeding have been found in cotton growing districts. The predominance of small farmers and the involvement of family labour overlap the roles of employer and labour which influences the dynamics of hired labour market (Bhim Reddy et al., 2021).

1.2.11 Covid 19 and Agricultural Sector in India

The impact of lockdown imposed to control the spread of Covid 19 has been severe across the developed and developing countries. The growth of the Indian economy has been shattered and agriculture sector which provides livelihoods to majority of population has been under stress. NABARD has conducted an on-line survey during 29th April 2020- 4th May 2020 in 560 districts across 33 states. The on-line responses were collected from 401 District Development Mangers placed at districts. Their responses were based on their field level perceptions supported by discussions with various stakeholders operating in the rural areas. The information was collected on the agricultural production, prices of inputs, demand and supply of labour and marketing of agricultural produce etc. The report observes that the disruptions in the supply chain led to a rise in the prices of agricultural inputs and the lockdown has an adverse impact on the functioning of FPC (Farmer Producer Companies) and FCs (Farmer Clubs). However, FPCs, FCs, SHGs and NGOs diverted their functions towards creation of awareness about Covid 19 and its preventive measures, distribution of essential commodities to people and ventured into activities of stitching of face masks, PPEs and preparation of sanitizers etc.. With regard to demand for labour for performing agricultural operations, and supply, the report states that there has been an increase in the supply of labour due to return of migrant workers to their native places. However, this phenomenon of return migration is not uniform across the sample districts, only 13 percent of districts have shown an increase in the supply of labour. On the other hand, the demand for labour increased in the 43 percent of districts. These imbalances have slightly increased the wages in 76 out of 560 districts surveyed (NABARD, 2020).

To sum up the review, studies on agrarian distress show two dimensions of the agricultural distress-agricultural development crisis, reflected in low growth, declining profitability of agriculture and agrarian crisis, reflected in growing landlessness and casualisation of labour in agriculture, proliferation of small and marginal holdings and fragmentation of landholding. High investment due to high cost of production, unstable global prices resulting in fluctuating profitability are some factors that lead to suicides among cotton farmers.

Minimum wage, equal wages irrespective of gender, decent standard of living and collective bargaining are the fundamental rights of workers The progress of some countires in the implementation of FPRW though impressive, it is still a challenge worldwide. There is lack of appropriate representation of workers in decision making and lack of a forum to advocate and assert workers' rights. A significant proportion of wage labour depend on cotton crop due to its manual operations like picking of cotton. Labour standards in cotton crop are an issue of concern. Child labour is also rampant in cotton production in India.

The literature revealed that there is no a clear regional or categorical distinction between 'producers' and 'workers'. It is evident that the predominance of small farmers and the involvement of family labour overlap the roles of employer and labour which influence the dynamics of hired labour market. All these are leading to a situation of 'overwork' of family labour and low wages to hired labour, seasonal migrants living in temporary shelters, child labour in the guise of family labour. The review clearly indicated that there are no empirical studies till date, focusing exclusively on the four pillars of Fundamental Principles at Rights at Work i.e child labour, forced labour, discrimination and freedom of association and bargaining. The present study on "Rapid Situational Assessment of Fundamental Principles and Rights at Work in the Cotton Growing Communities in Telangana, India"is a first step in this direction.

1.3. Research questions

- What are the existing socio-economic characteristics of cotton producers and workers in the State?
- What is the status of fundamental principles and rights at work (FPRW) among cotton producing communities (small and big farmers and labour)?
- What are the vulnerabilities with respect to non-compliance with FPRW and reasons for non-compliance?

- What are the conditions at work and provisions for health and occupational safety?
- What is the role of policies in ensuring FPRW among cotton cultivating communities?
- What are the existing institutional support mechanisms in implementation of FPRW in cotton cultivation?

1.4. Objective and scope of the study

Overall objective

To address the above research questions, the study was conducted to produce evidence-based knowledge on the FPRW among cotton cultivating communities and assess the vulnerabilities of non-compliance with fundamental rights at work and working conditions in Telangana State.

Specific objectives

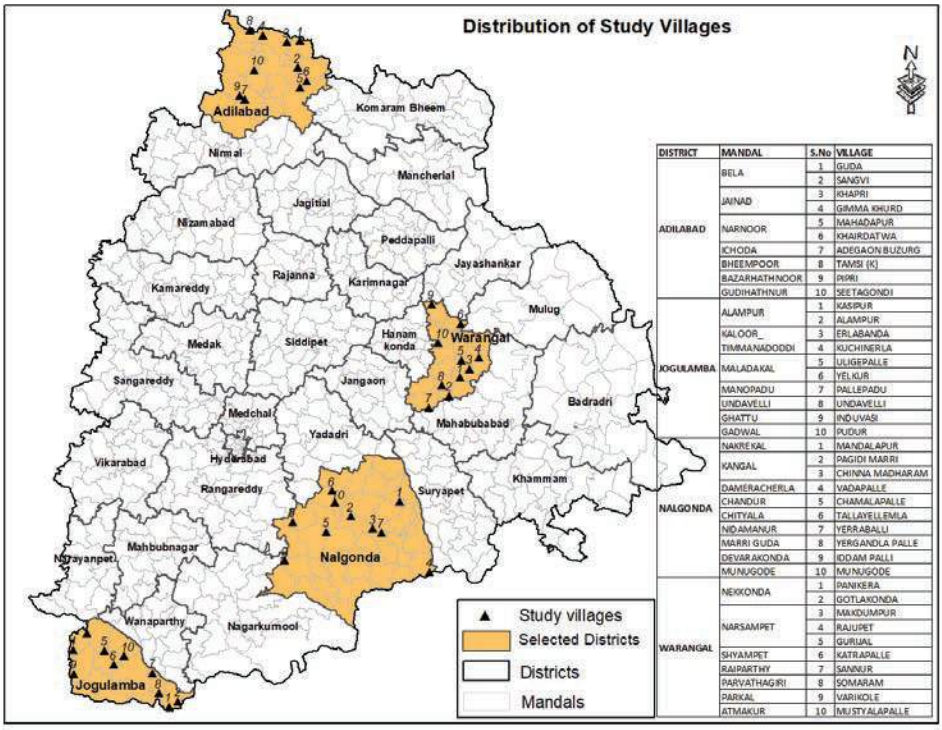
1. To assess the socio-economic characteristics of cotton farmers and workers in cotton production
2. To assess the situation of the four pillars of FPRW in cotton production.
3. To assess the vulnerabilities with respect to non-compliance with fundamental rights at work and working conditions.
4. To understand and build socio economic profiles of different labour forms in cotton production
5. To suggest suitable policy recommendations to strengthen the FPRW among cotton producing communities in the State

The study based on the evidence-based knowledge on FPRW in the cotton producing communities in the State enables the policy makers and implementers to be better informed for planned interventions, to identify spaces for action to address the gaps and support promotion of decent work, improve incomes and optimize resources. This strengthens the State in achieving SDG 8 target 8.7 'decent work for all'.

1.5. Research Methods, Tools and Techniques

1.5.1 Sample Districts and Villages

To assess the situation of FPRW in cotton cultivation in the state, four districts viz. Adilabad, Warangal, Jogulamba Gadwal and Nalgonda districts have been selected for study. These districts not only represent the importance of cotton crop in the state but also the different agro-climatic zones.



DISTRICT	MANDAL	S.No	VILLAGE
ADILABAD	BELA	1	GUDA
		2	SANGVI
	JAINAD	3	KHAPRI
		4	GIMMA KHURD
	NARNOOR	5	MAHADAPUR
		6	KHAIRDATWA
	ICHODA	7	ADEGAON BUZURG
	BHEEMPOOR	8	TAMSI (K)
	BAZARHATHNOOR	9	PIPRI
	GUDIHATHNUR	10	SEETAGONDI
JOGULAMBA	ALAMPUR	1	KASIPUR
		2	ALAMPUR
	KALOOR_	3	ERLABANDA
	TIMMANADODDI	4	KUCHINERLA
	MALADAKAL	5	ULIGEPALLE
		6	YELKUR
	MANOPADU	7	PALLEPADU
	UNDAVELLI	8	UNDAVELLI
	GHATTU	9	INDUVASI
	GADWAL	10	PUDUR
NALGONDA	NAKREKAL	1	MANDALAPUR
	KANGAL	2	PAGIDI MARRI
		3	CHINNA MADHARAM
	DAMERACHERLA	4	VADAPALLE
	CHANDUR	5	CHAMALAPALLE
	CHITYALA	6	TALLAYELLEMLA
	NIDAMANUR	7	YERRABALLI
	MARRI GUDA	8	YERGANDLA PALLE
	DEVARAKONDA	9	IDDAM PALLI
	MUNUGODE	10	MUNUGODE
WARANGAL	NEKKONDA	1	PANIKERA
		2	GOTLAKONDA
	NARSAMPET	3	MAKDUMPUR
		4	RAJUPET
		5	GURIJAL
	SHYAMPET	6	KATRAPALLE
	RAIPARTHY	7	SANNUR
	PARVATHAGIRI	8	SOMARAM
	PARKAL	9	VARIKOLE
	ATMAKUR	10	MUSTYALAPALLE

The sample for the study has been selected from all the villages of the given district. In order to select the sample villages from four sample districts, the principle of **probability proportionate to size (PPS)** has been used**.** For this purpose, all the villages of the district are arranged in ascending order of the area under cotton crop giving weight to the area under cotton crop[46]. This resulted in wider distribution of villages. The sample number of villages for each selected district is 10. Thus, in order to obtain Sample

46 The data on village-wise area under cotton for the year 2018-19 for all the four sample districts are taken from Directorate of Economics and Statistics, Govt. of Telangana.

Interval (SI), the total cotton area of the district has been divided by the sample number of villages for each district i.e. 10.

The procedure for the selection of sample villages and the list of sample villages are given in Appendix 1A.1.

1.5.2 Listing of Households in Sample Villages

All the households of the selected village are listed if the number of households is below 250. For the villages with more than 250 households, hamlets are formed with each hamlet composing around 125 households. Out of this, two hamlets are selected randomly and all the households are listed in these selected hamlets to get the representation of the village (Appendix A1.2).

Based on the information obtained through listing of households based on parameters such as size of the land holding and occupational status i.e. farmer/labour cultivating cotton crop or working in cotton farms, the sample for small, big farmers and agricultural labour are selected to administer Employer and Employee questionnaires respectively (see Appendix A1.3 for listing schedule). Major time criterion has been applied to categorise the farmer into owner-cultivator or labour. In case the respondents turned out to be the owner-cultivator, he/she is again categorised as small or big farmers depending on the size of owned land. The cut-off area to decide small or big farmer is 5 acres. If land owned is less than 5 acres, he/she is considered as small farmers and if the land owned is greater than or equal to 5 acres, he/she is a big farmer.

1.5.3 Sample Size

The study selected 10 farmers (4 big and 6 small farmers) and 10 agricultural labourers from each village randomly from the listing of households. Thus, the sample consisted of 10 farmers and 10 cotton labour from each village. The sample for a district is 200 i.e. 20 each from 10 sample villages. The total sample size of four study districts therefore is 800 i.e. 200 each from 4 sample districts (Appendix A1.4) covering both cotton farmer and labour working in cotton farms.
The ratio of small and big farmer households is 6:4 despite overall ratio being 2/3: 1/3 for two reasons:

i) Representation of the two categories can be obtained by multiplying with weights (area under cotton). Though we are not giving any estimates, this is required for a good representation of the village

ii) Employer perspective can be captured by having them adequately represented in the sample

In brief, the FPRW study is conducted in 40 villages spanning 4 districts, covering 800 households. These include 240 small farmers, 160 medium/big farmers cultivating cotton crop and 400 labour working in cotton farms.

However, in case of deficiency of any category of sample respondents at the village level, we substituted them with the rest. For instance, if no big farmers were found in the selected village, we have substituted them with small and vice versa and similarly if no labour is found, substituted them with either small or big famers in that order and if there are no farmers at all, the 20 sample surveyed were labour.

1.5.4 Questionnaires

Employer/farmer and Employee/Labour questionnaires are administered across the selected sample farmers and labour respectively. The study uses the terms 'worker' and 'labour' synonymously though they are different concepts in labour economics literature.

Field survey was conducted during the period August – September 2021, while quantitative data has been collected for the past agriculture year 2020-21. Focused group discussions were held during the field survey and data obtained from these pertain to current agriculture year 2021-22.

1.5.5 Computer-Assisted Personal Interviews (CAPI)

Using CSPRo7.4 programme, CAPI was developed for both the questionnaires. CAPI helped in reducing the time required for data entry. More importantly, CAPI helped the project research team in real time monitoring of the data collected by the research investigators.

1.5.6 Qualitative Data

Some forms of labour (contract labour coming from locations other than the selected village which may also have child labour or have characteristics of bonded/ compulsory labour) and circulating labour if the system does not prevail in the selected village or any other forms always run the risk of beng missed by the exclusive use of Quantative data, i.e., the use of Questionnaires. To overcome this, Qualitative tools of FGD and interviews were conducted to assess the vulnerabilities of these groups. Cotton farmers both male and female from two size groups, different categories of workers viz. casual

and communting workers by gender, child labour, CEO, board members and member farmers of FPOs, Trade Union Representatvies constitued participants of Focus Groups. Interviews were also conducted with various stakeholders like officials from Labour and Agicultural Deparments at the District and Mandal levels, formal and non-formal credit institutions, input dealers, commission agents, cotton traders, organisers and sub-organisers. The list of stakeholders covered in FGDs and interviews is given in Annexure 4. The study, thus may be reported to have two components

i) Quantitative which provides a preliminary assessment of FPRW issues in cotton production communities, economics of cotton and cotton seed production (collected through a sub sample), and;

ii) Qualitative data (FGDs and interviews) which attempts to cover vulnerabilities and risks of cotton production communities as on the field and also focuses on labour forms, missed out in the quantitative survey

1.5.7 Research Techniques

The study computed growth rates for area, production and yield of cotton of major cotton producing states of India. It also used simple averages to explain the FPRW situation across the study districts. Further, the study conducted two-sample tests to examine whether there is any statistically significant difference between gender and literates and non-literates on various parameters such as their composition as farmers and workers, their responses on health and safety, their awareness levels about various institutions, incidence of child labour and so on.

1.5.8 Training of Research Investigators

To conduct the field survey, eighteen research investigators, who are mostly post graduates and had field survey experience, were recruited. They were predominantly from the study districts. Equal number of male and female investigators i.e. 9 each was recruited for the field survey. Training programme was conducted for research investigators at CESS campus from 9th August to 14th August 2021. Along with the project core research team, different resource persons have provided orientation to the investigators. Along with the training on core area of the study, questionnaires and selection of hamlets and households, training was also imparted on how to enter data using CAPI.

1.6 Structure of the Report

The report has the following five chapters:

1. Cotton farmers and labour in Telangana: The Fundamental Princples and Rights at Work Context
2. Cotton production and profile of cotton farmers and labour in Telangana: A Socio-economic Analysis
3. Status of Fundamental Principles and Rights at Work in the Study Area
4. Vulnerabilities for non-compliance of Fundamental Principles and Rights at Work among cotton producing communities
5. Conclusions and Policy Recommendations

Chapter 2
Cotton Production and Profile of Cotton Farmers and Labour in Telangana: A Socio-economic Analysis

2.1 Introduction

The agriculture sector in Telangana state has been experiencing transformation in the cropping pattern from cereals, to fruits & vegetables, cotton and soybean. Small and marginal farmers occupy 88 percent of agricultural holdings in Telangana state as against 86 percent at all-India level during 2015-16 with the average size of holding being around 1 hectare at the state as well as at the all-India level. The number of agricultural holdings cultivating cotton is 98 lakh at all-India (6.7 percent of the total holdings), out of which around 70 percent belong to small and marginal farmers. In Telangana state, cotton holdings are about 20 lakhs (33.7 percent of total holdings) of which 82 percent belong to small and marginal farmers (GoI, 2015-16). Thus one-third of farmers with a share of 28 percent in the total land are into cotton cultivation in the state during this period.

Cotton is mostly cultivated in un-irrigated lands as about 90 percent of cotton area is un-irrigated in the state as against 72 percent at all-India level. The introduction of Bt-cotton in 2002 contributed to the increase in area mostly with small and marginal farmers getting attracted towards high returns. Cotton crop is described as *high-cost-high-return-high risk* crop and as small and marginal farmers predominantly engaged in this and in case of failure of the crop they fall in to debt-trap and become vulnerable as their risk bearing capacity is low (Reddy, 2020).

Telangana has a long history of producing cotton seeds. The cotton seed production was introduced in the combined state of Andhra Pradesh in the 1970s. This enhanced employment and also raised the quantity and quality of cotton produced. However, a number of studies indicated incidence of bonded labour and female child labour in the seed production working under exploitative environment. With the introduction of Bt-cotton in 2002 their situation became more complicated and resulted in the denial of rights of children and violation of national laws and international convention declarations (Venkateswarlu, 2007).

The state has also witnessed a structural change in the employment scenario. There has been a decline in the number of cultivators in the state from 35 lakh in 2001 to 32 lakh in 2011 while the increase in the number of agricultural labour is large, from 47 lakh to 60 lakh at the rate of 2.41 per cent per annum during 2001-2011. Most of the agricultural labour is also engaged in tenant farming by leasing-in land from absentee landowners. The state has witnessed a significant increase in the casualization of workforce and feminisation of agriculture.

The relationship between farm-size and profitability also changed as the cost of cultivation data for the period 2013-14 showed an increasing profitability with the increase in farm size among all crops in Telangana (Reddy, 2020). Climatic conditions, small size of land holdings, non-availability of quality seeds at reasonable prices, varied input costs across the regions, lack of awareness of modern farming practices, pest attack, lack of timely finance from institutional sources and lack of price and other support from the government are the major challenges of farmers producing any crop, particularly cotton. All these factors contribute to the well-being of farming community particularly small and marginal and tenant farmers and agricultural labour especially women and children.

Section 2.1 of this Chapter, attempts to analyse the State of Telangana among the major cotton producing States of India in terms of area, production and yield of cotton. The share and growth of cotton over a long period of time at the state level is discussed in section 2.2. The performance of cotton crop in terms of area, production and yield is examined across the districts of Telangana for the recent period in section 2.3. The description of sample districts and villages is presented in section 2.4. Sections 2.5 and 2.6 deal with the socio-economic profile of cotton farmers and labour in Telangana State respectively followed by summary in section 2.7.

2.2 Area, production and yield of cotton in major cotton producing states of India

Telangana is the third largest cotton producing state in the country (Figure 2.1). The area under cotton in the state is 19.54 lakh hectares during TE 2019-20 which occupied about 36 percent of the net area sown. In this context, Telangana stood first among major cotton producing states in India (Figure 2.2). However, in terms of productivity, the state ranked fourth among the major cotton producing states (Figure 2.3).

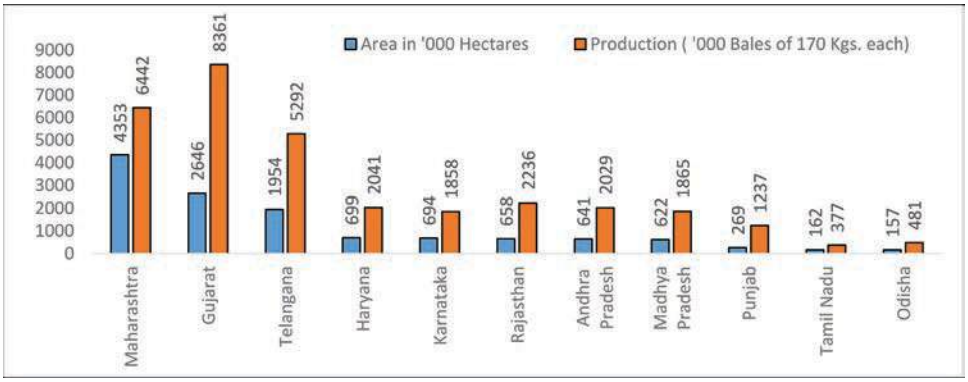


Figure 2.1 Area and Production of cotton across major cotton producing states in India-TE 2019-20
***Source**: https://eands.dacnet.nic.in*

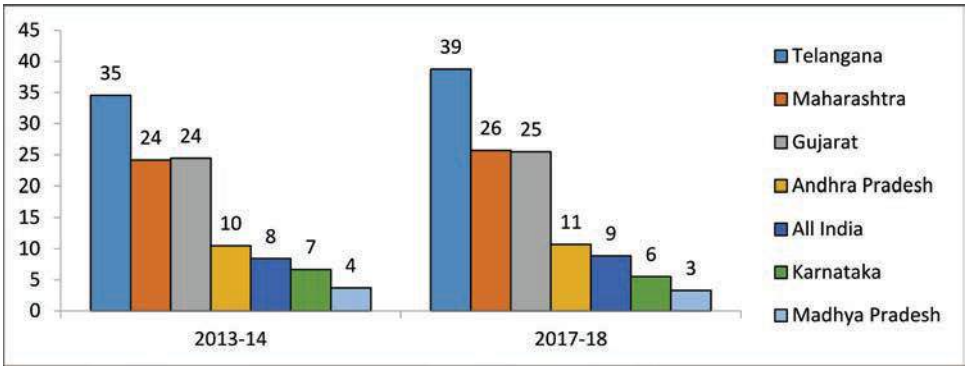


Figure 2.2 Share of cotton in NSA across major cotton producing states in India (%)
Source: https://eands.dacnet.nic.in

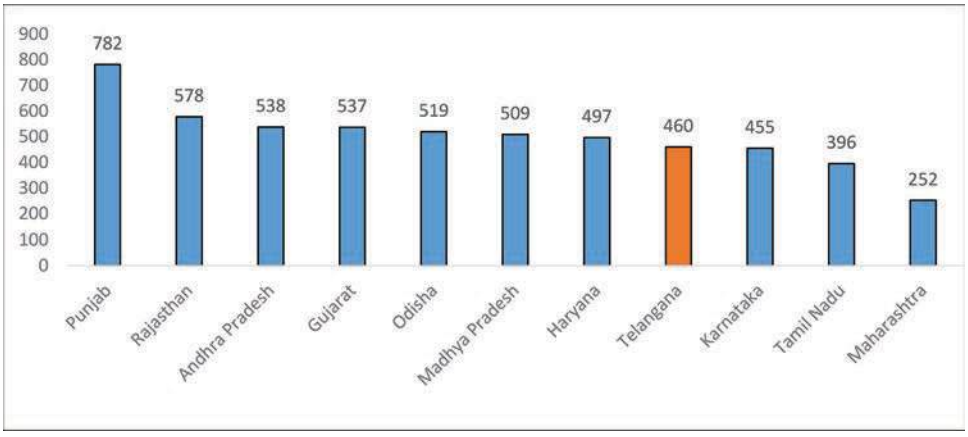


Figure 2.3 Productivity of cotton across major producing states in India (Kg per hectare) TE 2019-20
Source: https://eands.dacnet.nic.in

2.3 Trends in area, production and yield of cotton in Telangana State

Gross cropped area in the State increased from 51.51 lakh hectares in the TE 1982-83 to 54.9 lakh hectares in 2011-12 and to 59.34 lakh hectares during TE 2018-19. Along with this, shift in cropping pattern also took place. Rice, millets, cotton and groundnut are the major crops in the state.

The share of cotton in net cropped area was 3.2 percent during the period TE 1982-83 and it had increased to 15.9 percent during the period TE 2002-03. The production of cotton increased from 0.5 lakh bales to 9.5 lakh bales during this period. The increase in both the area and production of cotton in Telangana started picking up since the 1980s as there was lot of effort towards developing hybrid variety seeds suitable to rain-fed areas across the country. However, after the introduction of Bt cotton seeds, there has been a tremendous growth in area and production during the period 2000-2010 (Reddy et al. 2014). The share of cotton area has reached its maximum during 2015-16 wherein 42 percent of net area sown was under this crop. However, owing to the drought conditions during 2016-17 the share of cotton area in net cropped area declined by 13 percentage points from the previous year. In 2019-20 cotton occupies 38.7 percent of net cropped area of the state and it remained stagnant for the past three years though the production has been rising (Figure 2.4 and Figure 2.5).

During the current decade of 2010-2019, there was a deceleration in the growth of area, production and yield of cotton in the state. The deceleration in growth of production was far higher than that of area and yield (Figure 2.6). The deceleration in production of cotton is due to deceleration in area rather than of yield.

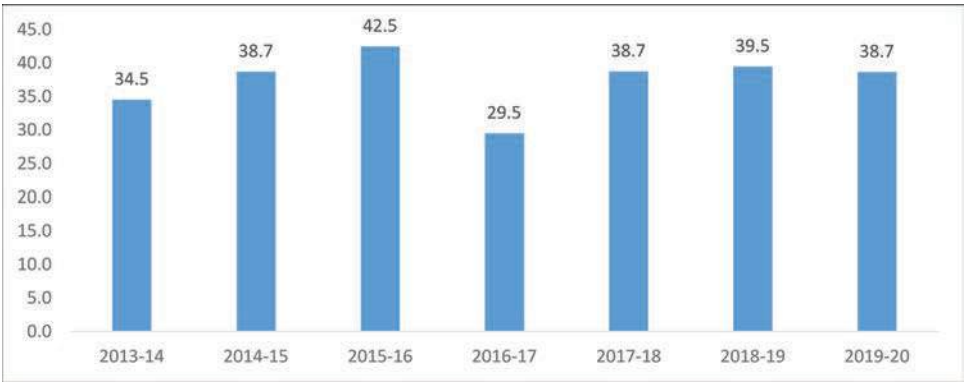


Figure 2.4 Share of cotton area in net cropped area in Telangana (%)

***Source**: Handbook of Statistics on Indian States, 2021, Reserve Bank of India,*
https://rbi.org.in/Scripts/AnnualPublications.aspx%3Fhead%3DHandbook%20of%20Statistics%20on%20Indian%20States

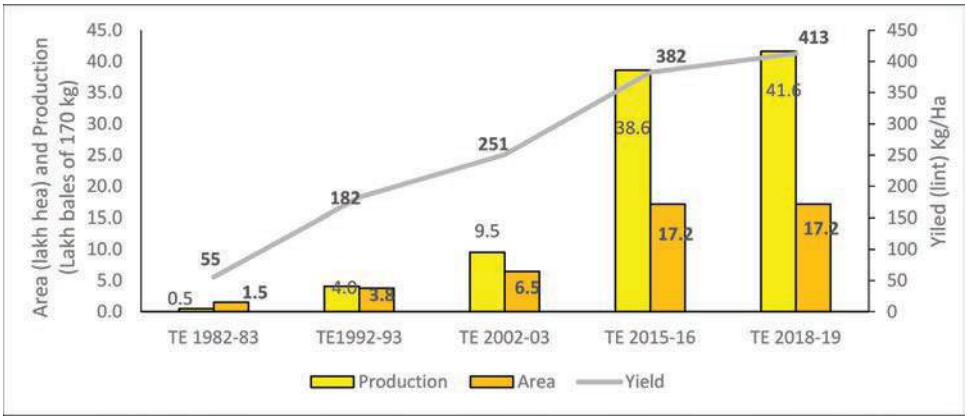


Figure 2.5 Area, production and yield of cotton in Telangana State: 1980-2019

Source: https://eands.dacnet.nic.in

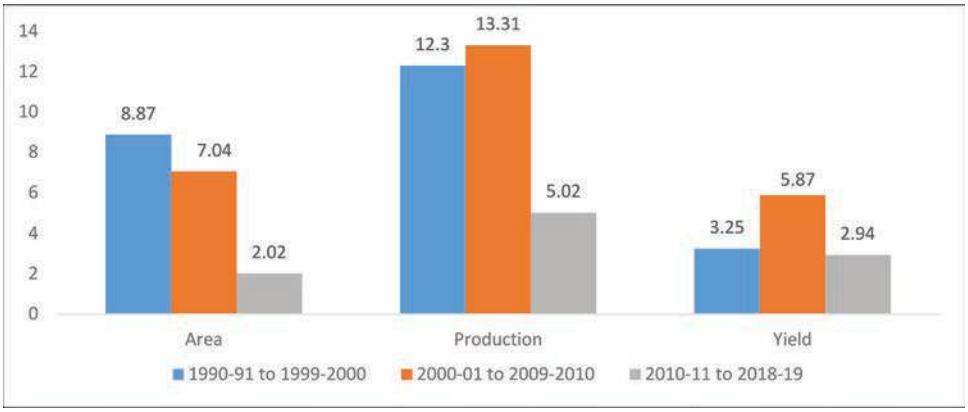


Figure 2.6 Growth of area, production and yield of cotton in Telangana State: 1990-2018-19

2.4 Major Cotton cultivating districts in Telangana

Based on the rainfall, soil conditions and climate, the state is divided into three agro-climatic zones viz., North Telangana Zone (NTZ), Central Telangana Zone (CTZ) and South Telangana Zone (STZ).

1. The North Telangana Zone consists of Adilabad, Nizamabad and Karimnagar districts,

2. The Central Telangana zone consists of Khammam, Warangal and Medak districts,

3. The Southern Telangana Zone consists of Mahbubnagar, Nalgonda and Rangareddy districts.

Table 2.1 List of newly formed districts according to the agro-climatic zonesin Telangana

North Telangana Zone	Central Telangana Zone	South Telangana Zone
Adilabad	Bhadradri Kothagudem	Jogulamba Gadwal
Jagtial	Jangaon	Mahbubnagar
Kamareddy	Jayashankar Bhupalapally	Medchal Malkajgiri
Karimnagar	Khammam	Nagarkurnool
KomaramBheem Asifabad	Mahabubabad	Nalgonda
Mancherial	Medak	Rangareddy
Nirmal	Sangareddy	Suryapet
Nizamabad	Siddipet	Vikarabad
Peddapalli	Warangal	Wanaparthy
Rajanna Sircilla	Hanumakonda	Yadadri Bhuvanagiri
	Mulugu	Narayanpet
Total=10	Total=11	Total=11

***Source**: https://pjtsau.edu.in/research.html*

Cotton may be considered as an important crop across all the zones of the state as it occupies nearly 35 percent of net area sown in each of these zones during TE 2018-19. Around 37 percent of net area sown is under cotton in the CTZ while the other two zones have 35 percent each (Table 2.1). Its share in state's production of cotton is also higher than the rest but yield is lower than that of NTZ. Out of the three zones, STZ occupies around 39 percent of cotton area of the state but its share in production and yield of cotton is lowest of the three zones. Further, this zone has 40 percent of net area sown of the state which is the highest among the three (Table 2.2).

More than 60 percent of area is under cotton in three out of top five districts in the NTZ and one among top five in STZ. Thus, Komaram Bheem Asifabad, Adilabad, Rajanna Sircilla in NTZ and Nalgonda in STZ are the high cotton concentrated districts.

Table 2.2 Characteristics of agro-climatic zones of Telangana

Category	North Telangana Zone	Central Telangana Zone	South Telangana Zone	State
Predominant crops	Maize, soybean, sesame, cotton, red gram, sugarcane and turmeric	Cotton, rice, maize, green gram, mango, sugarcane and chillies	Sorghum, cotton, rice, red gram, sesame maize, castor, safflower and groundnut	--
% Share of NSA in total (TE 2018-19)	27.7	32.1	40.2	100.0
% Share in total cotton area (TE 2018-19)	27.4	33.3	39.3	100.0
% Share in total cotton production (TE 2018-19)	33.0	38.2	28.8	100.0
% Share of cotton in NSA (TE 2018-19)	35.3	37.0	34.8	35.6
Yield (Kg/Ha) (TE 2018-19)	487	465	297	413
Cotton concentrated districts (Top five districts in each zone that have location quotient *greater than 1) TE 2018-19	Komaram Bheem Asifabad (66.9), Adilabad (64.9), Rajanna Sircilla (60.8), Mancherial (54.5), Karimnagar (43.0), Peddapalli (36.4)	Jangoan (55.2), Hanumakonda (53.4), Jayashankar Bhupalapally (48.0), Warangal (47.6), Khammam (38.4)	Nalgonda (59.9), Yadadri Bhuvanagiri (44.7), Nagarkurnool (43.4), Rangareddy (37.0), Jogulamba Gadwal (31.2)	--

***Note**: Figures in the parentheses are share of cotton crop in net sown area of the respective districts*

**Location quotient is a ratio used to determine the concentration of cotton crop in districts in the state. It is derived by taking the ratio of share of cotton area in total cropped area of a district to the share of cotton in total area of the state. If the value for a district is above 1 indicates the concentration of the crop in that district.*

Source: https://pjtsau.edu.in/research.html and https://eands.dacnet.nic.in

Irrigation and crop diversification have been considered as distress reducing factors for the farming community. The percentage of area under food and non-food and share of net area irrigated in the net sown area and share of irrigated area under cotton are examined across the major cotton producing districts from each of the zones. The data for all these variables pertain to the period TE 2018-19 (Table 2.3). The data shows that at the state level, food crops occupy 63 percent and non-food crops occupy 37 percent. Cotton occupies a major share in non-food crops category. The same is observed across the zones and districts except for NTZ where the share of non-food crops is slightly

lower than the rest. Ground water is found to be the major source of irrigation for a majority of the districts. Further, the tribal concentrated districts of Adilabad and Komaram Bheem Asifabad cultivate cotton and other crops under rain-fed conditions where the irrigation ratio is lowest among the major cotton producing districts of the state. It is only in Warangal and Hanumakonda districts that the share of irrigated cotton is more than 60 percent. But these districts were known for suicides among cotton farmers during the period 1998-2004. Factors such as high usage of inputs, hence high cost of production, indebtedness and role of input dealers reduce the income gains from the crop and cause distress among cotton farmers (Revathi, 2009). All the major cotton producing districts from south Telangana zone have shown lower yield than that of state level. Thus, low irrigation and dependency on groundwater, low yield coupled with other institutional lacunae put the cotton farmers in vulnerable situation particularly in South Telangana zone.

Table 2.3 Share of food and non-food crops and irrigated area across the major cotton producing districts of Telangana-TE 2018-19

District	Zone	Total Food	Non-food	Cot-ton	% NIA	% Well in NIA	% irrigated area under cotton	Yield (Kg/ ha)
Jangoan	CTZ	53.4	46.6	44.1	40.6	88.5	13.7	477
Jayashankar Bhupalapally	CTZ	60.4	39.6	38.9	63.2	60.4	32.7	478
Khammam	CTZ	62.5	37.5	31.4	57.0	50.1	19.3	543
Warangal	CTZ	60.7	39.3	35.4	75.4	80.9	69.6	411
Hanumakonda	CTZ	64.4	35.6	34.8	74.3	89.7	61.9	423
Central Telangana Zone		**64.6**	**35.4**	**30.5**	**52.5**	**70.4**	**25.9**	**465**
Adilabad	NTZ	27.1	72.9	58.5	20.8	86.0	11.8	478
Karimnagar	NTZ	72.4	27.6	26.5	88.7	74.3	35.1	510
Komaram Bheem Asifabad	NTZ	32.2	67.8	61.7	6.9	33.0	0.5	405
Mancherial	NTZ	54.2	45.8	45.3	38.6	40.6	8.3	538
Peddapalli	NTZ	75.3	24.7	24.5	91.7	64.7	49.6	543
Rajanna Sircilla	NTZ	53.1	46.9	46.3	46.8	97.2	5.0	523
North Telangana Zone		**62.6**	**37.4**	**25.9**	**54.6**	**71.9**	**14.1**	**487**
Jogulamba Gadwal	STZ	53.0	47.0	29.1	45.2	62.8	39.5	314
Nagarkurnool	STZ	46.4	53.6	36.4	31.0	77.1	0.0	329
Nalgonda	STZ	48.0	52.0	50.5	38.2	62.9	0.2	227
Rangareddy	STZ	61.8	38.2	33.8	22.9	98.5	0.0	292
Yadadri Buvanagiri	STZ	64.3	35.7	34.3	43.4	81.5	0.0	340
South Telangana Zone		**62.0**	**38.0**	**30.0**	**35.7**	**69.5**	**3.2**	**297**
State		**63.0**	**37.0**	**28.9**	**46.4**	**70.6**	**13.9**	**405**

Source:https://eands.dacnet.nic.in

2.5 Sample Districts

Four major cotton producing districts of Telangana are selected for the study – Adilabad, Warangal, Nalgonda and Jogulamba Gadwal. The first three districts belong to different agro-climatic zones viz. North Telangana, Central Telangana and South Telangana respectively. The fourth district belongs to South Telangana and it is selected because cotton seed cultivation is prevalent in this district (Table 2.2). Of all the three regions, Southern region has relatively larger area both geographical area and net area sown compared to other regions of the state. Moreover, this region receives low rainfall and the area under irrigation is also low compared to other regions. Adilabad and Warangal receive highest rainfall of more than 1000 mm. Drought is more frequent in Nalgonda district where for every three years the rainfall is deficit by more than 10 percent. The predominant source of irrigation is groundwater in all the three zones. Among the selected sample districts, Adilabad, Nalgonda and Warangal have registered higher proportion of cotton area in their respective NSA than the state average. However, productivity is lower than that of state except in Adilabad district. Jogulamba Gadwal district has shown lower share of area and productivity than other sample districts as well as that of state average (Figure 2.7). Cotton seed production is high in this district. Thus, the sample districts represent varied agricultural situations which influence not only returns to the farmer but also the working conditions and welfare of the labor employed in the cotton fields.

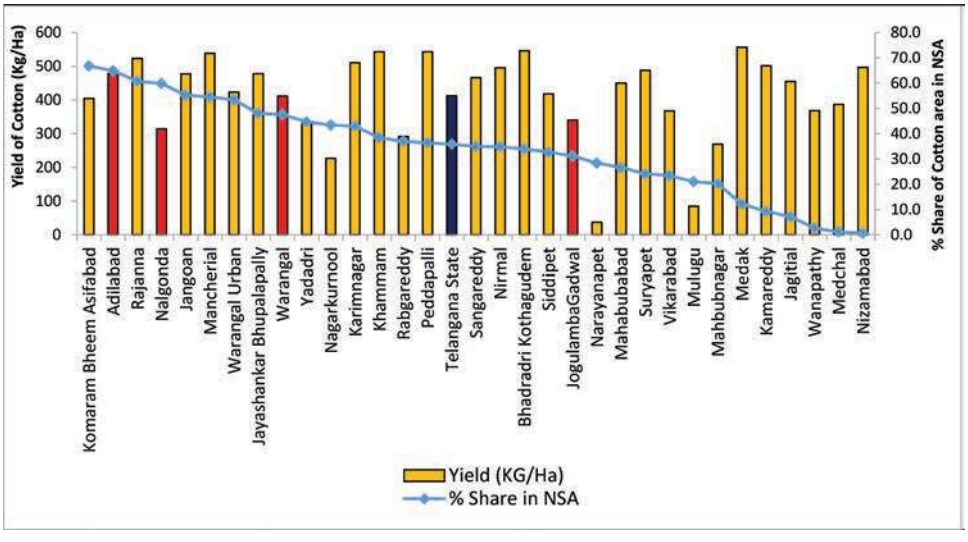


Figure 2.7 Share of cotton in NSA and Yield (Kg/Ha)-TE 2018-19

Source: https://eands.dacnet.nic.in

2.5.1 Sample Villages

The sample villages for the field survey are selected based on the principle of *probability proportionate to size* which allows for the wider distribution of villages and proper representation of the district. Thus, the selected villages are spread across various mandals[43] of the district. Accordingly, mandals of selected villages represent the whole district as they fall into high, medium and low levels in terms of share of cotton area in net area sown (Tables 2A.1 to 2A.8)

2.6 Profile of cotton farmers in Telangana

Dominance of small and marginal farmers in cotton cultivation in Telangana

There has been a rapid increase in the area of cotton cultivated by small and marginal farmers in the state between 2005-06 and 2015-16 at 10.4 and 12.8 percent per annum respectively. In the case of former, the area increased from 2.23 lakh hectares to 6.04 lakh hectares while in the case of the latter the area increased from 1.33 lakh hectares to 4.42 lakh hectares. There is a negligible growth in area among medium size farmers while it declined among the large farmers (last column-Table 2.4).

Around half of the holdings of cotton in the state belong to marginal farmer category i.e. having less than one hectare or 2.5 acres of land. This proportion is very high among Scheduled Caste community i.e. at 65 percent during 2015-16. By including the small farmers this proportion increases to 90 percent among SCs. In the case of STs, the marginal and small cotton holdings constitute 80 percent total ST holdings. Thus, cotton in the state is predominantly cultivated by small and marginal farmers belonging to SCs and STs. Marginal, small and semi-medium farmers belonging to scheduled caste and scheduled tribe communities dominate cotton cultivation, while small and semi-medium farmers from other social categories also cultivate cotton in the state.

Table 2.4 Growth of cotton area by size of land holding in Telangana-2005-2016 (Per cent per annum)

Size of Land Holding	Scheduled Caste	Scheduled Tribe	All Social Groups
Marginal (< 1 ha)	11.0	11.6	12.8
Small (1-2 ha)	9.7	8.8	10.4
Semi-medium (2-4 ha)	5.4	3.0	5.9
Medium (4-10 ha)	1.3	-2.5	0.6
Large (10 & above ha)	-2.5	-7.7	-5.3
All classes	8.3	5.4	7.7

***Source**: http://agcensus.dacnet.nic.in/StateCharacteristic.aspx*

43 Mandal is an administrative unit below the district. On average there are 15-20 villages in a mandal.

Costs and returns of cotton cultivation in Telangana

The cost of cultivation for the period 2018-19 shows negative returns to the cotton farmer in the state (Table 2.5). Application of fertilisers is higher in Telangana compared to other major cotton producing states in India. Around 270.79 kgs of fertiliser per hectare of area is used in the state compared to 198.63, 186.10 and 128.76 kgs in high productivity states such as Madhya Pradesh, Gujarat and Andhra Pradesh respectively. The seed requirement is also high in the state compared to other states. The high utilization of fertilizer is because of uneven rainfall and low irrigationIrregular rainfall exposes the farmers to repeated applications of fertilizer. Since Bt cotton was introduced in India in 2002, most cotton farmers in the state switched to it. Though Bt cotton uses fewer pesticides as compared to conventional seeds, it requires more fertilisers. Though this practice results in soil depletion, the farmer continues using more fertilizer out of habit. Moreover, the cost per unit of labour is also high in the state as compared to other major cotton producing states (Table 2.6). Due to the high cost of production, the value of output is the second lowest among major cotton producing states in India. The data from the *NSSO 70th Round on Situation of Agricultural Households in India- 2012-13* shows that the dependence of farmers on local trader and input dealers for the purchase of fertilisers and plant protection chemicals is high in the state. According to the *NSSO 77th Round on Situation Assessment of Agricultural Households and Land and Livestock Holdings of Rural Households 2019*, in Telangana state, 47 percent of total agricultural households cultivated cotton and 94 percent of them have debt. The average amount outstanding per cotton cultivating household was estimated as Rs. 1.74 lakh. More than 50 percent of amount outstanding was taken from non-institutional sources.

Across the social groups, the average amount outstanding among cotton cultivators is two times higher among 'other caste' cultivators as compared to SC and ST cultivators. Though the incidence of indebtedness is same across all the social groups, the amount per household varies across the groups. This may be due to size of land holding wherein majority of SC farmers fall in the marginal and small holdings categories.

Low value of output, high cost of production due to high use of inputs (seed and fertilizers) and dependence on dealers and traders for both inputs and credit put the farmers in vulnerable situations. The small and marginal farmers are particularly vulnerable due to their low asset base.

Table 2.5 Estimates of cost and production of cotton (Rs. Per hectare) – 2018-19

State	Total value of output per hectare (Rs.)	Total cost of cultivation per hectare (Rs.)	Net value of output per hectare (Rs.)
Andhra Pradesh	81872	75750	6122
Gujarat	84732	75186	9545
Karnataka	65654	58811	6843
Madhya Pradesh	100795	91736	9060
Maharashtra	87129	84743	2387
Telangana	78325	87457	-9132

***Source**: https://eands.dacnet.nic.in/Cost_of_Cultivation.htm*

Table 2.6 Material and labour input per hectare of cotton and rate per unit– 2018-19

Item	Andhra Pradesh	Gujarat	Karna-taka	Madhya Pradesh	Maharash-tra	Telangana
Seed (Kg.)	3.10	1.78	2.09	1.25	1.83	2.84
Fertilizer (Kg. Nutrients)	128.76	186.10	113.63	198.63	216.69	270.79
Manure (Qtl.)	0.18	32.47	1.98	10.08	7.24	1.43
Human Labour (Man Hrs.)	370.34	844.85	653.67	939.63	895.76	487.23
Animal Labour (Pair Hrs.)	23.09	13.36	33.54	42.64	72.24	32.47
	Rate per unit (Rs.)					
Seed	1718.25	1652.67	1595.56	1674.39	1601.87	1662.64
Fertilizer	32.44	26.47	32.95	27.33	32.56	27.63
Manure	80.02	135.94	139.65	231.76	210.19	133.77
Human Labour	48.22	30.13	28.14	35.75	30.15	54.87
Animal Labour	202.57	162.29	161.79	114.70	140.13	198.91

Source: https://eands.dacnet.nic.in/Cost_of_Cultivation.htm

2.7 Profile of cotton labour in Telangana

Forms of labour in cotton cultivation in Telangana

There are mainly three forms of worker/labour observed in cotton cultivation in the state – own cultivation, family labour and casual labour. According to PLFS 2018-19 data, around one third of workers are owner-cultivators, one-fifth work as family labour and 46 percent are casual labour. Thus, a major proportion of workers are casual labour in the state. However, these shares vary between male and female. Around 62 percent of males are owner-cultivators and 32 percent work as casual labour, while 61

per cent of females are casual labour and 37 percent are family labour. These patterns remained same between 2011 and 2019 except that the share of family labour among females has declined and casual labour has increased. On the other hand, the share of owner-cultivators among males has increased, and that of family labour has declined. Thus, females constitute a greater proportion of causal labour while majority of males participate as owner cultivators (Table 2.7).

The type of labour changes across the age groups also. The share of casual labour among the workers below the age of 19 years is higher than that of the adults. In the case of adult workers, the share of owner-cultivator and family labour is 54 percent while casual labour constitutes 46 percent. Looked at, gender-wise, , the share of casual workers is higher among female for both the age groups while in the case of males, the share of casual workers is higher among children (less than 18 years) compared to adults (Table 2.8). Thus, cotton labour varies across age groups and gender with implications on type of work (casual, contract and piece rate) and wages thereof.

Table 2.7 Distribution of workers in cotton cultivation by type in Telangana- all ages

Forms of Labour	2011-12			2018-19		
	Male	Female	All	Male	Female	All
Owner-Cultivator	50.4	2.4	26.1	62.0	1.6	32.5
Family Labour	19.4	48.3	34.0	6.4	37.0	21.3
Casual Labour	30.2	49.3	39.9	31.6	61.4	46.1
All	100.0	100.0	100.0	100.0	100.0	100.0

***Source**: Unit data from NSSO 68th Round and PLFS 2018-19*

Table 2.8 Distribution of workers in cotton cultivation by type and age in Telangana-2018-19

Forms of Labour	<=18 years			19 years and above		
	Male	Female	All	Male	Female	All
Own-Cultivator	0.0	0.0	0.0	62.6	1.6	32.9
Family Labour	31.4	0.0	14.8	6.2	37.5	21.4
Casual Labour	68.6	100.0	85.2	31.2	60.9	45.7
All	100.0	100.0	100.0	100.0	100.0	100.0

***Source**: Unit data from PLFS 2018-19*

Gender discrimination in wages in cotton cultivation in Telangana

In the above section we have observed that the cotton labour market is segmented by age and gender. In this section, we examine whether the activities performed by men and women are different and if the same activity is performed by both, whether they receive the same wage or not. The unit data from NSSO Employment and Unemployment Survey data for the time period 2011-12 has been used to study the activity and wage differentials between men and women. The operation-wise wages are estimated using this data. The daily wages for operations such as ploughing, sowing, and transplanting, weeding, harvesting and other cultivation activities are estimated. Around 2/3rd of both men and women participated in other operations in cotton cultivation in the state. Apart from this, weeding and harvesting are the dominant activities for both women and men, ploughing in addition is an important activity for men. Females employed in weeding in cotton cultivation received nearly half of the male wage. In the case of harvesting their wage is lower by 60 percent. In the case of other cultivation activities where 2/3rd of both men and women participate, the female wage is less by 26 percent of male wage (Table 2.9). When compared to the minimum wages prescribed by the Andhra Pradesh Government for agricultural operations, male wages are higher than the minimum wages while female wages are lower than the prescribed minimum wages.

Table 2.9 Average daily nominal wages (Rs.) of casual labour in cotton cultivation in Telangana-2011-12

Activity	Male	Female	Gap (%)	Share in total days –Male	Share in total days –Female	Minimum Wage for agricultural operations (Rs.) -2011*		
						Zone I	Zone II	Zone III
Ploughing	200	--	--	17.5	0.0	190	165	150
Transplanting	--	100	--	0.0	0.2	180	175	150
Weeding	196	100	49.1	6.6	8.6	180	175	150
Harvesting	235	99	57.9	8.0	25.1	250	220	200
Other Cultivation	167	123	26.4	68.0	66.2	180	175	150
All	180	115	36.2	100.0	100.0			

***Note**: -- insignificant number*

**Source: Venkateswarlu and Jacob, 2012*

***Source**: Unit data from NSSO 68th Round*

2.8 Summary

Telangana state as one of the major cotton producing states in India occupied around 15 percent of the total cotton area of the country during TE 2019-20. In terms of area under cotton and production, it is the third largest state in the country. Cotton crop occupies around 19.54 lakh hectares in the state which constitutes around 39 percent of net area sown in the state. While Telangana stood first among the major cotton producing states of India in terms of area, it is lagging behind the other states with regard to the productivity of cotton crop. Thus, the socio-economic condition of both the farmers and agricultural labour is closely associated with the cultivation of cotton crop in the state.

The area under cotton cultivation was minimal during the 1980s and it had picked up significantly since the 1990s and reached its maximum during the decade of 2000. The share of cotton in the net sown area was 42 percent during the period 2015-16. The latter decade witnessed the rapid spread of Bt cotton seeds across the country. The state has experienced rapid growth not only in area but also production and yield of cotton during the period 2000-2010. The recent decade i.e. 2010-2019 witnessed deceleration in the growth in area, production and yield in the state. Further, the deceleration in production of cotton was far higher than that of deceleration in area and yield due to deceleration in area rather than that in the yield.

Cotton is the predominant crop across all the three agro-climatic zones in the state. It occupies more than 35 percent of net area sown in these zones. The southern Telangana zone has a share of 39 percent of the total cotton area of the state but the yield per hectare is very low i.e. 297 kgs per hectare. This zone receives relatively less rainfall and has less area under irrigation. The sample districts selected for the study i.e. Adilabad, Warangal, Nalgonda and Jogulamba Gadwal are located in North, Central and Southern regions of the state respectively. These districts not only represent the prominence of cotton crop in the state but also belong to different agro-climatic zones which influence not only returns to the farmer but also the working conditions and welfare of the workers working in the cotton fields.

The rapid growth in the area of cotton cultivation is witnessed mainly among the marginal farmers across all social groups during the period 2003-2016. Around half of the holdings of cotton in the state belong to marginal farmer category i.e., those having less than one hectare of area. This proportion is very high among Scheduled Caste community i.e. at 65 percent during 2015-16. The share of both marginal and small

cotton holdings constitutes around 90 percent among SCs while it is 80 percent among STs. Thus, cotton in the state is predominantly cultivated by small and marginal farmers belonging to SCs and STs.

The returns on cotton crop are not encouraging due to heavy usage of inputs and increasing cost of human labour. The value of cotton output is the second lowest in the state. Farmers' heavy dependence on markets for inputs, and low and negative returns put the marginal and small farmers in most vulnerable situation. The incidence of indebtedness among the cotton farmers is also high as almost all the cotton farmers were found to have debt during 2018. The average amount outstanding was Rs. 1.74 lakhs during this period. The dependence on non-institutional sources among them is high as more than 50 percent of the credit was provided by them.

Among the cotton labour community, casual labour occupies major proportion in the state at 46 percent. However, this proportion varies across the gender, the percentage of causal labour among females being 62 percent while it is only 31 percent among males. Besides, the share of female casual labour has been increasing in the state. Further, the percentage of casual labour is higher among females belonging to the age group of less than 18 years compared to men. Thus, females (children, adolescents and adults) constitute a greater proportion of casual labour while majority of males participate as owner cultivators. Thus, cotton cultivation in the state is associated with marginal and small farmers belonging to SCs and STs and casual labour particularly girls and women labour.

Secondary data at the state level reveals both promising and depressing conditions of cotton cultivation. On one hand cotton cultivation is on rise particularly among small and marginal farmers. On the other hand, the productivity and returns are not encouraging due to high cost of production which push the farmer into debts. The labour market in cotton crop is segmented by age and gender which has implications on the wages paid to different segments of labour. These conditions pose challenges in the implementation of FPRW in cotton sector in the state.

CHAPTER 3
Status of Fundamental Principles and Rights at Work (FPRW) in Study Area

3.1 Introduction

It is evident from the socio-economic analysis in the previous chapter that cotton farmers and labour are susceptible to poor working conditions and deprivation of Fundamental Principles and Rights at Work (FPRW). The profile of the farmers and labour engaged in cotton farming in Telangana reveals the conditions of labour and the structure of labour economy typical to cotton farming. Cotton farming has a strong gender element owing to predominance of women among the workers. Most of the operations in cotton cultivation are gendered and feminized. Cotton farming is characterized by workers predominantly comprising women working for mostly male farmers. Labour is engaged mostly on daily wages by both small and big farmers across the districts. The precarious conditions of the farmers with marginal profits or sometimes with negative returns could be major factor resulting in low wages to the labour who, being unorganized are also disadvantaged in negotiating for better conditions.

The objective of the present chapter is to assess the status of four pillars of FPRW with respect to cotton producing farmers and labour in the study districts of Adilabad, Warangal, Nalgonda and Jogulamba Gadwal of Telangana state. The empirical data collected from the field and Focused Group Discussions (FGD) is used to assess the FPRW status with reference to the (profile?) of the farmers and the labour which varied across the districts. An attempt is made to also present the socio-economic profile of the sample farmers and labour in the context of FPRW. The profile and socio-economic characteristics: age group, gender, caste, literacy, experience in cotton farming, and land holding size across the districts, are discussed.

3.2 Socio-Economic conditions of cotton farmers and labour

3.2.1 Age

The cotton farmers or employers are older than the labour. The study reveals that average age of the male sample farmers is 47 and that of female farmers is 44. Youngest female farmers were seen in Warangal district with an average age of 39 and youngest

male farmers were seen in Adilabad district with an average age of 46. Empirical data showed that the average age of sampled adult cotton labour (41) was lower by about six years to the average age (47) of cotton farmers. Within cotton labour the youngest female labour were seen in Jogulamba Gadwal district with an average age of 40 and male labour were in Adilabad with an average age of 37 (Table 3.1).

Table 3.1 Distribution of cotton farmers and labour by average age

Average age of Sampled Cotton Farmers					
Gender	**Adilabad**	**Warangal**	**Nalgonda**	**Jogulamba Gadwal**	**All Districts**
Male	46	48	50	46	48
Female	46	39	45	43	44
All	46	47	49	45	47
Average age of Sampled Cotton Labour					
Male	37	46	38	40	40
Female	41	43	42	40	41
All	40	44	42	40	41

***Source**: Farmer and Worker schedules*

3.2.2 Gender

Gender dynamics are an important feature of cotton farming. While most of the cotton workers are female, the farmers are mostly male. Predominance of women labour is common across the districts[43].

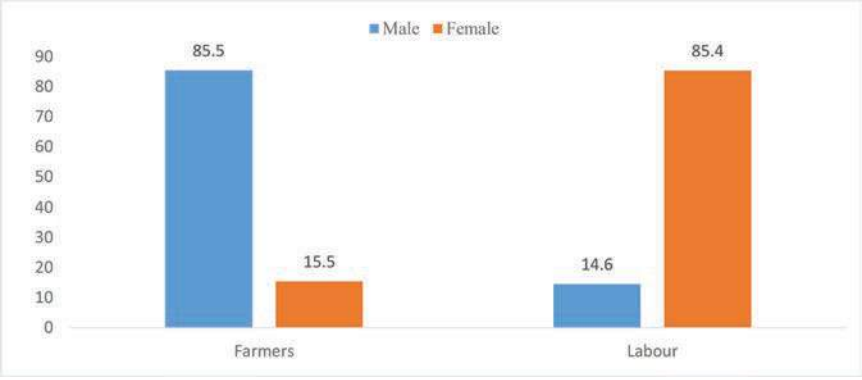


Figure 3.1 Distribution of farmers and labour by gender

Source: Farmer and Worker schedules

6 The two-sample t test revealed that the difference is significant from zero with p value less than 0.05 and t statistics 2.36 which shows that farmers are mostly male. However, the two-sample t test conducted for workers is not significantly different from zero. It may be due to majority of small and marginal farmers also participating in cotton cultivation as labour and work for a majority of the time on their own farm.

Around 85 percent of sampled cotton farmer households were male headed and the remaining 15.54 per cent were female headed households (Figure 3.1). On the contrary, majority of sampled labour were female (85.43 per cent). This highlights the importance of women labour in carryingout the various cotton production tasks.

Cotton farming in the study area is in practice for more than 20 years while some of the sampled farmers have lesser exposure to cotton cultivation. Small farmers of the study districts had an average cotton farming experience of 16.58 years and the big farmers had more than 20 years' experience. Experienced farmers had rich knowledge of cotton practices which are suitable to local specific conditions and can do well under constraints. Among all study districts, small as well as big farmers of Jogulamba Gadwal district had lesser cotton farming experience of around 11 to 12 years and most of them had good experience in seed cotton production. More than 97 percent of male and female labour had bank account (Table 3A.1 and 3A.2).

3.2.3 Social Category

Caste background of the stakeholders in cotton cultivation reflects the social and economic dynamics of sample villages, and people's perceptions, values and knowledge that influence labour relations. It is evident from the table that the sampled farmers in the study districts were from all social groups. Post stratification of the sample households of cotton farmers revealed that majority (60.88 percent) belonged to backward classes followed by scheduled castes (15.38 per cent). Among the study districts, Adilabad had more SC households (27.67 percent) in the sample whereas STs were more (30.91 per cent) in Warangal and Backward class communities more in Jogulamba Gadwal district (86.32 per cent) (Table 3.2).

Table 3.2 Distribution of farmers by Social Category

Social Category	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Scheduled Caste (SC)	28 (27.7)	5 (4.8)	12 (11.8)	12 (11.9)	62 (15.4)
Scheduled Tribe (ST)	17 (16.7)	31 (30.9)	0 (0.0)	0 (0.0)	34 (8.4)
Backward/ Other Backward Class (BC/ OBC)	47 (46.8)	54 (53.7)	58 (57.7)	86 (86.3)	244 (61.0)
Open Category (OC)	2 (8.8)	11 (10.5)	31 (30.5)	2 (1.3)	61 (15.2)

Source: Field Survey: Farmer schedule

***Note**: Figures in parenthesis are percentages*

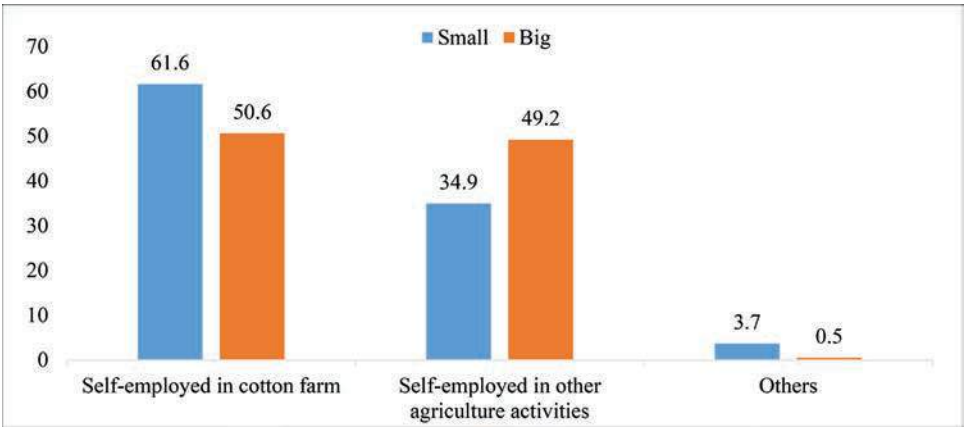


Figure 3.2 Distribution of farmers by type of Occupation

Source: Field Survey: Farmer schedule

Figure 3.2 indicates the type of predominant occupation according to time criterion, 61.96 per cent of small farmers were self-employed in cotton farm followed by self-employment in other agriculture activities (33.15 percent). Whereas big farmers were self-employed in cotton farm (50.6%) or self-employed in other agricultural activities (49.2%), a small percentage of small farmers (3.9%) have other than agriculture as main occupation.

3.2.4 Land Holding

Cotton is cultivated in own land as well as in leased lands by the small and big farmers. While part of such land is irrigated, the land under cotton seed production is very limited and most of it is in Jogulamba Gadwal district. Land is considered to be the main asset in rural areas, and it normally indicates the status and the level of living of a household. The landholdings of the sample households are converted into standard units of an acre. The average landholding of the small and big farmers across four study districts is presented in the Table 3.3. Big farmers of Nalgonda had highest land area with an average holding of 6.76 acres and small farmers of Warangal had lowest land size with an average holding of 1.52 acres. Average size of own land holding among small farmers is 3.0 acres and average size of big farmer holding is 9.9 acres. Cotton crop is predominantly cultivated as a rainfed crop. A small percentage of operating area (owned+ leased in) is irrigated. This varies across land holding size, with big farmers having on an average 3.3 acres under irrigation while small farmers had on an average 1.7 acres. Across districts, the irrigated area is slightly bigger among big farmers in Nalgonda followed by Warangal (Table 3.3). Further data on leased in land clearly points

out that small and big farmers have leased in 3.8 and 5.9 acres of land respectively for cotton cultivation. This explains why more than 50 percent of farmers are self-employed in cotton farms (Figure 3.2). While small farmers cultivated cotton on an average in 6.43 acres in own and leased land, it was 12.27 acres in case of big farmers. Irrigation plays crucial role in the yield (Box 1). Seed production activity in cotton is present only in Jogulamba Gadwal district. Around one acre of land was allocated an average both by small and big farmers for the production of cotton seed.

Table 3.3 Distribution of farmers according to land particulars in cotton crop (in acres and guntas)

Land Particulars	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
N	Small (59)	Big (41)	Small (70)	Big (30)	Small (59)	Big (41)	Small (59)	Big (41)	Small (N=247)	Big (N=153)
Total land owned	3.52	10.03	2.47	7.61	3.15	8.74	2.68	11.36	3.02	9.9
Area under cotton in own land	3.16	6.62	1.52	5.52	2.80	6.76	2.26	5.81	2.56	6.34
Land leased-in for cotton cultivation	4.59	5.93	1.49	1.23	4.41	5.70	3.56	7.22	3.87	5.93
Total land under cotton	7.76	12.55	3.01	6.75	7.21	12.46	5.81	13.04	6.43	12.27
Area under seed production in cotton	0.00	0.00	0.00	0.01	0.00	0.00	0.99	0.94	0.12	0.11
Area is under irrigation in own land	0.47	0.95	0.99	2.96	1.30	1.58	1.31	1.42	0.84	1.25
Area under irrigation in leased land	0.45	1.73	0.92	1.01	1.08	3.59	1.61	0.04	0.88	2.05
Total Irrigated land	0.92	2.67	1.91	3.96	2.38	5.17	2.92	1.46	1.72	3.29

Source: Farmer schedules

As in India, even in Telangana state, farmers and labour in the unorganised sector do not benefit from formal social security measures Field survey findings in figure 3.3 revealed that none of the farmers are covered under Aam Aadmi Beema Yojana but 21.47 percent of small farmers and 9.04 percent of big farmers were covered under other

schemes such as Prime Minister Suraksha Bima Yojana (PMSBY) and Prime Minister Jeevan Jyoti Bima Yojana (PMPJBY). Poor implementation of social security measures could be due to lack of awareness, illiteracy and lack of unionisation of workers on the one hand and the resource constraints of the state on the other.

However, the incentive schemes for the farmers initiated by the state government are implemented relatively more effectively. Implementation of the state government's flagship programme called Rythu Bandhu (Farmer Investment Support Scheme) has benefitted 89.47 percent of small farmers and 96.57 percent of big farmers across the study districts. Similarly, 70.39 percent of small farmers and 75.37 percent of big farmers were receiving such support under the PM Kisan scheme from central government for farming. During the FGDs small farmers have informed that financial support received through Rythu Bandhu is coming handy for purchase of cotton seed, labour payments and purchase of diesel and tractor expenses for land preparation. Jangaiah of Yerragandlapalli village, Marriguda mandal, Nalgonda district views that Rythu bandhu is like a light in the darkness for farmers as it is useful for meeting some investments required of a farmer ("*Adhe dheepam aadiko eediko, adhoka punyame manaku*").

Figure 3.3 Distribution of farmers according to their coverage under schemes in 2020-21

Source: Field Survey: Farmer schedule

The study tried to ascertain the main reasons for non-coverage of farmers under Aam Aaadmi Bima Yojana. Study revealed that both lack of awareness on the scheme and inability to pay the premium on part of the farmers were responsible factors for low implementation of the Aam Aadmi Bima Yojana (Table 3A.3). Despite knowing about the scheme, 6.49 percent of small farmers and 8.66 percent of big farmers could not afford to pay the premium for Aam Aadmi BimaYojana.

Labour in cotton farming across the districts are most deprived and excluded from the benefits of social security measures. None of the labour is covered under Aam Aadmi BimaYojana, depriving them of any benefit in the event of physical risks occurring while carrying out cotton production tasks (Table 3A.4). More than 30 percent of farmers either don't know or did not respond to this question during the field survey. No farmer contributed towards coverage of their labour under Aam Aadmi Bima Yojana. The main reason cited by small farmers (63.49 percent) and big farmers (67.29 percent) was lack of awareness about the scheme (Figure 3.4). Another important reason cited by farmers was that labourers keep changing frequently with different operations in cotton production and it is difficult for the farmers to pay premium to a big number of labourers who keep moving.

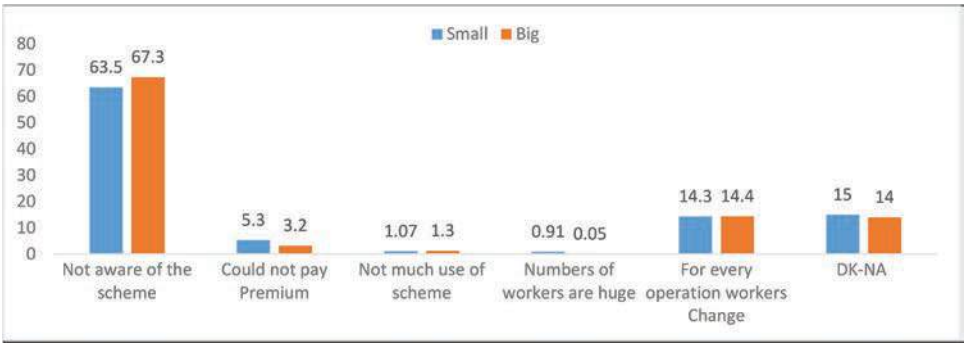


Figure 3.4 Distribution of farmers according to reasons for not contributing to the Aam Aadmi BimaYojana to labour

Source: Field Survey: Farmer schedule

Box 1. Costs and returns of cotton cultivation in study villages of Telangana (2020-21)

Does irrigation and type of cotton production matter for positive net returns and welfare of the labour?

Many a times, the farmers in both irrigated and rainfed areas are incurring net losses in cotton cultivation due to erratic distribution of rainfall, heavy rains during harvesting stage and heavy damage caused due to incidence of pink bollworm. This is evident from the empirical data of Gadwal and Nalgonda district.

However, in general, cotton farmers in irrigated areas are receiving slightly better returns compared to that of less irrigated and unirrigated areas during kharif 2020-21. The net returns are higher in the villages of Warangal district

while farmers are incurring net losses in Gadwal district. This is with regard to the commercial cotton production under rainfed conditions. In the case of seed cotton production, the net returns are the highest among the selected villages. Cotton seed production engages huge amount of labour (73.5 percent) mostly migrant labour which is exposed to various kinds of exploitation. Both the labour and the farmers, particularly small and marginal farmers are linked with various institutions and middlemen and are always at their mercy. The information on cost is based on paid-out costs and the returns may be even less (compared to) cost of production.

Costs and returns of cotton cultivation in the study villages (Rs per acre)

District	Village	Paid-out cost	Value of output	Net Income
Adilabad	Sangdi	11700	19250	7550
	Umri (Khapri)	20400	27000	6600
	Tamsi K	11700	13500	1800
Warangal	Katrapalle	23000	33000	10000
	Varikole	32000	48750	16750
	Mukdumpur	19600	33000	13400
Jogulamba Gadwal	Pudur(Seed Production)	136000	246000	110000
	Pudur (commercial cotton)	33000	27500	-5500
Nalgonda	Thalelma	44000	27625	-16375
	YerraGandlaPalli	41400	20000	-21400

Percentage distribution of input-wise paid-out costs in the study villages

District	Village	Seed	Human Labour	Machine/ Drought power	Fertiliser& Pesticides
Adilabad	Sangdi	6.0	59.8	4.3	29.9
	Umri	6.9	44.1	19.6	29.4
	Tamsi K	6.0	38.4	34.2	21.4
Warangal	Katrapalle	6.5	47.8	10.9	34.8
	Varikole	6.3	46.9	15.6	31.3
	Mukdumpure	8.2	51.0	17.9	23.0
Jogulamba Gadwal	Pudur Seed Production	1.5	80.9	4.4	13.2
	Pudur commercial	12.1	42.4	18.2	27.3
Nalgonda	Thalelma	6.8	43.2	22.7	27.3
	YerraGandlaPalli	9.7	60.4	18.4	11.6

***Source**: Focused group discussions in Adilabad, Jogulamba Gadwal, Nalgonda and Warangal.*

3.2.5 Employment, labour forms and wages

Employment conditions assume importance for workers in agriculture. It reflects an important aspect of vulnerability of the workers. This is more so in cotton crop which occupies a major area in the Telangana state. This study examined the type of employees recruited by farmers, contract followed (if any), operations performed by male and female labour, extent of employment generated on cotton farms, work timings and rest period and payment of wages to labour, payment for overtime work and minimum wages.

Across the study districts only 2.48 percent of small farmers and 14.11 percent of big farmers had recruited permanent employees (Table 3.4). Mainly, big farmers of Adilabad district (33.78 percent) had recruited permanent workers who work for one year and above. Big farmers of Jogulamba Gadwal (9.20 percent) mostly cultivating cotton seed have recruited permanent labour.

Table 3.4 Percentage Distribution of farmers according to employment of labour on permanent basis during 2020-21

Permanent employees (working for one year and above)	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Small	Big	Small	Big	Small	Big	Small	Big	Small	Big
Yes	0.8 (1.4)	14 (33.8)	4 (5.7)	3 (8.7)	2 (3.0)	1 (3.34)	0 (0.0)	4 (9.20)	6 (2.48)	22 (14.1)
No	58 ((98.6)	27 (66.2)	66 (94.3)	27 (91.3)	57 (97.0)	40 (96.6)	59 (100.0)	37 (90.8)	241 (97.5)	131 (85.9)
Total	59 (100)	41 (100)	70 (100)	30 (100)	59 (100)	41 (100)	59 (100)	41 (100)	247 (100)	153 (100)

Source: Farmer schedules

***Note**: Figures in parenthesis are percentages*

Of those farmers who recruited permanent employees, majority of small (76.35 percent) and big (77.26 percent) farmers had oral agreements with them (Table 3A.6). Only 23.65 percent of small farmers and 15.38 percent of big farmers had written agreements with labour. Out of 33.78 percent of big farmers of Adilabad district that recruited permanent labour, around 11.70 percent of farmers had neither written nor oral contract with their labour. A high percentage (> 50 percent) of male and female labour being illiterate could be one of the reasons for the absence of written agreements (Table3A.7). Excepting for a small percent of farmers who employed permanent or

annual labour, 95% of small and 98% of big farmers employed only temporary labour (Figure 3.5). This was reported during the focused group discussions in the study villages. The predominant form of labour on cotton farms is thus temporary labour.

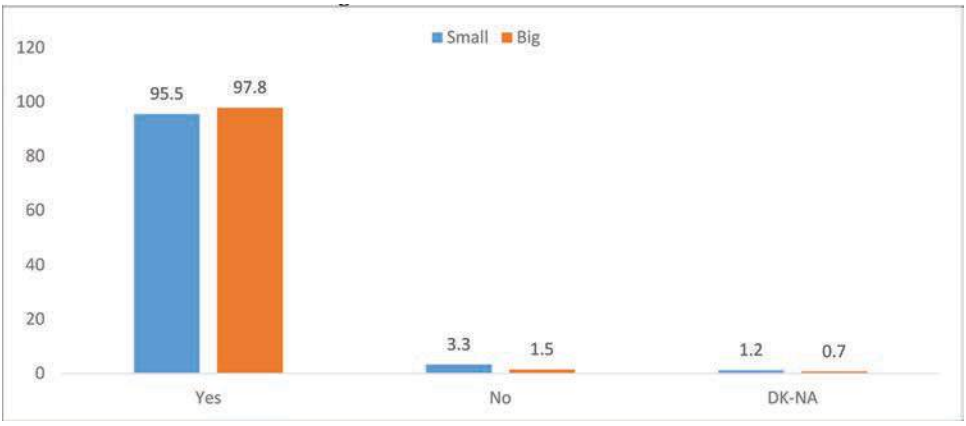


Figure 3.5 Distribution of farmers according to employment of labour ontemporary/ seasonal basis during 2020-21

Source: Farmer schedules

Of those farmers employed temporary labour, 57.7 percent of small farmers and 59 percent of big farmers that employed temporary labour had neither oral nor written contract as seen in Table3A.8. Another 40 percent of these farmers said they had oral contract with the temporary labour which was not affirmed by the labour themselves. Around 74 percent of the labour had no contract in any form with their empoyers

Computer Assisted Personal Interview of small farmer in Pudur village of Jogulamba Gadwal District

(Table3A.9). Only 25 percent of male and female labour had verbal contract with their cotton farmer employers. According to the workers across 'All Districts', more than 70 percent of farmers had adhered to the agreed terms in the contract whether written or oral. However, according to the female labour of Jogulamba Gadwal district, more than 50 percent farmers did not adhere to the contract (Table 3A.10). Both male and female cotton labour were found to be unemployed for around 9 weeks over the past 12 months (Table 3A.11). Female labour of Warangal and Jogulamba Gadwal districts were unemployed for a longer period compared to their male counterparts who had a lesser period of unemployment (up to 3 weeks).

Usually the whole family gets involved in the cotton production because of its labour intensive nature. Both men and women of the family take part in cotton cultivation operations. Besides, children are also occasionally involved. Children from small farmer households are mostly engaged in cotton farming to assist their families. Majority of the sampled farmers have reported that both male and female members of the family are involved in farm work all the time (Table 3A.12). Across all the districts, farmers have reported that children between 14 -18 and below are occasionally involved. Majority of small and big farmers have reported that they never take children below 18 years to work on cotton farms. Around 2.5 percent of small farmers in Nalgonda and 5 percent in Jogulamba have reported that they involved children of the family all the time in cotton activities. ("*Intollu pothene yelthadi, lekunte ledhu*") Kotam Maraiah of Chamalapalli village of Nalgonda district says unless children of the family work in cotton farms, it is difficult to run a household.

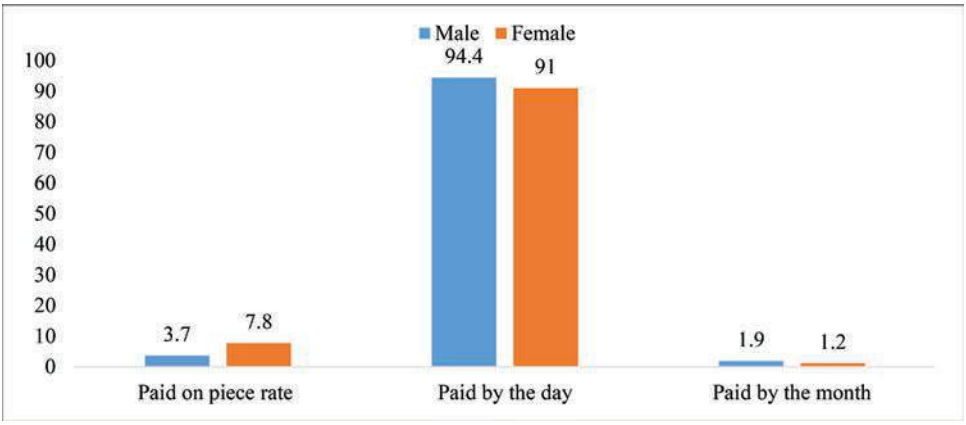


Figure 3.6 Distribution of labour by mode of payment of wage during 2020-21

Source: Worker schedules

Mode of payment is mostly in the form of daily wage. More than 90 percent of male and female cotton labour sampled was working on daily wage followed by a small percent on piece rate basis. Only 5 labourers were working on monthly wage in Adilabad district (Figure 3.6). Not a single sampled labour, either male or female, was working on yearly or permanent basis in any of the districts, though it was found that a few sample farmers employed labour on annual basis.

3.2.6 Activities in cotton and days required

Often the whole family, men, women and children, take part in different cotton farming operations. Participation of the family members varies by gender and age with regard to different operations (Table 3A.12). Focused Group Discussions with farmers and labour (Table 3.5) revealed detailed distribution of work depending on age and sex. Some of the activities like land preparation, inter-cultivation, pesticide spraying, irrigation and transportation are mainly done by men while women are mainly involved in weeding, seed sowing, fertiliser application in commercial cotton production with seed crossing, cotton picking, gap filling and cross pollination being additional operations in case of cotton seed production. Operations on cotton farms are organized based on a clear division of labour across age and sex guided by factors of physical strength and laboriousness. These age and gender determined activities in cotton crop have been in practice traditionally.

There was more male labour involvement in land preparation taking an average of 13.24 days across all districts as compared to 10.64 days of women involvement. Seed sowing activity was dominated by female labour across all districts (Table 3.4). Inter-cultivation

Interview of women farmer in Tamsi (K) village, Adilabad District

activity is done using bullocks to clear the weeds in between plant rows. These bullocks are operated by men and hence there is no participation of women labour force. Weeding activity was primarily done by women across all districts. However substantial number of male labour was also involved in Adilabad, Warangal and Jogulamba Gadwal district. Pesticide spraying is mainly done by men labour while female labour supply water for the spraying operation. Only in Jogulamba Gadwal district, more women are involved in this operation as it is a cotton seed production area and pesticide spraying is continuously done on alternate days. Similarly, in Jogulamba district, equal number of men and women are involved in cross pollination work in seed production farms. Even in operations performed by both male and female labour there is a clearcut division of labour. For example in activities such as land preparation and pesticide spraying, women perform lighter work like carrying headweight loads of soil or carrying water, assisting male labour. Therefore male-female wage differentials exist even for similar operations. Cotton picking is primarily done by women. Heavy works like irrigation and transportation activities are mostly done by men . On an average, labour work for about 150 days on cotton farms per season; women work for 165 days on an average while men work for 143 days (Table 3.6).

Table 3.5 Details of tasks performed by women and men in cotton production in study area

Sl. No	Category of FGD	Tasks performed by women	Tasks performed by men	Tasks performed by both women and men
1	Women (Labour)	Fertiliser application, weeding, seed sowing, seed crossing, supplying water for pesticide spraying and cotton picking. The most strenous works include the seeding and weeding	Irrigation, ploughing , harrowing, inter-cultivation, pesticide spraying, cotton lifting and getting fodder for bullocks	Cotton picking
2	Men (Labour)	Weeding, cotton picking, seed sowing, supplying water for spraying and fertiliser application	Harrowing, pesticide spraying, cotton lifting, cotton transporting, removing weeded grass heaps and drawing lines for sowing.	Weeding, 30-40% of men are involved. Both get same wage
3	Small farmers	Weeding, seed sowing, top dressing of fertiliser, seed crossing, supplying water for spraying and cotton picking	Draw lines for sowing, irrigation, weeding, pesticide spraying, ploughing, inter-cultivation and seed crossing (20% of them are men) and cotton picking(only 15% are involved)	Cotton picking, weeding and fetiliser application
4	Big farmers	Seed sowing, weeding and fertiliser application behind plough, supplying water for spraying, cotton picking and cotton stubble uprooting	Ploughing, fetiliser application, pesticide spraying, lifting cotton from the field, stuffing in gunny bags, loading cotton in tractor and unloading at home	Cotton picking, fetiliser application, women assist men by bringing water for the preparation of fertiliser and pesticide and for its application. When there is a scarcity of labour men also take part in weeding and cotton picking

Source: Focused Group Discussions in Adilabad, Jogulamba Gadwal, Nalgonda and Warangal 2021

Table 3.6 Average number of days worked according to activity in cotton farm during 2020-21

Activity	Adilabad		Warangal		Nalgonda		Gadwal		All Districts	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Land preparation	16	12	11	10	13	9	11	7	13	10
Seed sowing	5	10	6	11	7	11	7	14	6	12
Gap filling	3	5	0	5	0	4	3	5	0	5
Thinning	0	0	0	0	0	0	0	3	2	1
Fertilization	17	8	14	10	20	9	12	5	16	8
Intercultivation with bullocks/ tractor	22	0	17	0	22	0	27	0	22	0
Manual weeding										
a. Daily wage	11	40	22	48	4	27	12	26	12	35
b. Contract (Gutta)	0	15	0	0	0	11	6	15	1	10
Pesticide spraying	20	3	20	0	38	6	15	8	24	4
Irrigation/ Supplemental irrigation	12	1	14	0	4	0	5	0	9	1
Cross pollination	0	0	0	0	0	0	10	35	3	9
Watch and ward	0	0	0	0	8	0	15	0	6	0
Cotton picking										
a. Piece rate	12	30	0	5	0	30	12	24	6	22
b. Daily wage	9	15	24	54	0	28	9	15	11	28
c. Contract rate (Gutta)	0	0	0	0	0	9	0	8	0	4
Post-harvest operations (drying and grading cotton)	4	0	5	0	9	1	1	0	5	1
Transporting	5	0	6	0	12	0	3	0	7	0
All	134	140	138	144	137	145	148	165	143	150

Source: Worker schedules

3.2.7 Labour forms and working hours

There are different labour forms/ contracts in the cotton fields which are mostly away from the legal and formal system. These include casual labour, contract labour (Gutta), commuting labour, migrant labour, family labour and those working on piece rate. Labour does not confine to casual form of labour always though that is the main form, but engages in different forms of contracts from time to time as means of negotiating in line with the opportunities available with changing demand. Different categories of labour have different working hours in the study villages (Table 3.7).

In majority of the study villages where FGDs were conducted, farmers preferred village labour as they would report early to work and do not need extra amount towards local travel by autos. Commuting labour generally goes to other villages when there is no wage work available in their own villages. They travel by autos which are highly crowded and pack as many as fifteen individuals. The reason for this as a commuting labour told is that ("*Auto lo thakkuva mandhi pothe rythuku loss ayithadhi, aayanaku kirayiy ekkuva paduthadhi, aayanaku chenu jarugadhi*") "if number of labour commuting for work in an auto is less, the travel charges will work out high for the farmer and more trips would be required to get the required labour." While travelling if any untoward incident happens it is the responsibility of the auto driver but not the farmer. ("*Gutta ante poddugaala povale, yabhai roopale yekkuva*") Mariamma of Pudur village says if the labourhave taken work on contract (gutta) they have to go early in the morning so as to get Rs.50 extra. Saidulu, a farmer of Yerrabelli village said ("*Coolie kivasthe meme neellu iyyali, lekunte valle thagutharu*") "if the labour work as daily wage, we farmers need to provide water to them at the point of work to save working time, but if they come on contract, they will get the water because completing the task on time is their botheration." Similarly, Kucher Yadaiah of the same village opined that ("*Coolieki thakkuva yerutharu, piece rate ayithe 60 kgs themputharu*") "if labour is picking cotton on daily wage basis they pick up less quantities of cotton, but when they work on piece rate, they pick around 60 Kgs of cotton per person." The variable rate makes all the difference for labour productivity. But working hours are prolonged under contract system.

During the FGDs the cotton labourhave informed that they like to take the work on contract when there is heavy demand for labour. Farmer Venkateshwarlu of Khasimpur village had a different opinion. He said ("*Panileni time la coolie kivastharu, lekunteguttaluadugutharu*") "when there is no demand for work, they come for daily wage work, but when the work is heavy, they ask for contracts." In addition to men and women in the family, children also accompany their parents for cotton farm work

and this is quite prevalent in the study area (Table 3.11). Children, especially girls are engaged in activities similar to women and boys, sometimes co-working with adult men. Migrant labour come to the study villages mainly during the cotton-picking time and for seed crossing, which is a critical operation in seed cotton cultivation. They come from far off places. Often, they are hired through a contractor. They work from morning 6 am to 6 pm. They are provided with facilities like house rent, food, coconut oil, soaps and hospital expenses. Stakeholder analysis with AITUC representative in Nalgonda revealed that these migrant labour are exploited by the contractor who pays Rs 1 or 2 less per kg of cotton picked than what the contractor is paid by the farmer.

Field operations in cotton are highly sex segregated as noted above. Wages in general vary across operations, mode of labour form and locations. Operations performed by women fetch 30-40 percent lower wages than operations performed by male labour. Wages paid for different operations also reflect low value for work performed by women. However, operations done on piece rate or on contract basis offer same wage to all labour. Timeliness of the operation, fear of natural calamities that may spoil the produce from the demand (farmers) side and indifferent attitude towards work in the casual form of labour in the face of fixed wages from supply side (labour) has led to procurement of contract form of labour that provides productivity linked wage incentive especially for operations like cotton picking.

There are occasions when one has to work more than the normal 8 hours in the cotton farms, under the casual wage system. Farmers sometimes compensate for the extra work done with extra amount or incentives in kind or both. The Study found they were always paid for the extra work done, as per 7.32 percent of male labour and 11.20 percent of female labour (Table 3A.13). Similarly, 21 percent of male labour and 28 percent of female labour said they were compensated sometimes only for the overtime. 67 percent of males and 56 percent of female labour said they were not paid for the extra time worked in cotton farms. More than 97 percent of women labour and 92 percent of male labour had a rest period ranging from 10 minutes to one hour (Table 3A.14). During the FGDs, the Cotton labour have informed that they are provided incentives in kind like soft drinks Thums up or snacks like mirchibajji (a hot savoury made with large green chillis), Gobi manchuria or alcohol , and (usually toddy) for the extra time put in. Majority of the male and female labour reported that they were paid wages after a week's time.

Table 3.7 Working hours of types of labour in cotton farms in study villages

Village	Category of FGD	Casual Labour	Contract Labour (Gutta)	Com-muting Labour	Migrant labour	Family labour
Chinnamada-ram	Women Labour	9.30 am to 5.30 pm		10 am to 5 pm		9.00 am to 5.30 pm
Pudur	Women Labour	9.30 am to 6 pm	For weeding (gutta)labour go early and get a maximum of Rs 50 more. When there is more work guttas system prevails[44]	--	--	Same as above. When work dmeands working hours are not regular
Mandalpuram	Men Labour	9 am to 5 pm	--	9.30 am to 5 pm	--	‘’
Thallavelma	Small farmers	10 am to 5 pm	--		6.0 am to 5.30 pm	‘’
Yerrabelli	Small farmers	9.0 am to 5 pm	--			‘’
Khasipur	Small farmers	10 am to 5 pm	--	11 am to 4.30 pm	--	‘’
Pagidimarri	Small farmers	10.0 am to 6.0 pm	9.0 am to 5.30 -6.00 pm. Rest for half an hour only	--	--	‘’
Chamalapalli	Big farmers	9.30 am to 5.30 pm	For picking 6.00 am to 6-7pm	--	--	‘’
Sangidi	Men labour	10 am to 6 pm	--	10 am to 5 pm	--	‘’
Jainad	Women labour		--	10 am to 6 pm	--	‘’
Somaram	Women labour	10 am to 5 pm	--	10 am to 6 pm	--	‘’
Katrapalle	Men labour	two types of work timings: 7 am to 2 pm and 10 am to 5 pm	--	--	--	‘’

Source: Focused Group Discussions, Adilabad, Jogulamba Gadwal and Nalgonda and Warangal 2021

44 Women in this village prefer working on daily wage basis due to the intensity of work in contract labour.

Table 3.8 provides information on the activity wise wages for men and women in the selected districts and the minimum wage[45]. The minimum wages vary across zones in the state and the highest wages prevail in zone 1 the North Telangana zone comprising of Adilabad district among the selected districts. Average wages vary across locations with lowest wages prevailing in Adilabad followed by Jogulamba Gadwal, Warangal and Nalgonda districts. Average wage for casual labour form is the lowest among all labour forms and average wage for operations performed by men is higher than those performed by women. Deviation from minimum wage is more in case of female labour vis-à-vis male labour. For contract labour, average wage exceeds minimum wage (Table 3.8). On average women getting employed on cotton farms for 120-130 days with an average daily wage of Rs 200 would earn around 6,500 per month. With more wages for contract labour it could be somewhat higher.

45 Minimum wages are published by the Labour department from time to time through Gazettes, these are linked to CPIAL (consumer price index for agriculture labour). Minimum wage (basic wage + VDA or variable dearness allowance) is compared to average wage.

Table 3.8 Activity wise average wages in the study districts (Rs)

Sl. No	Activity	Adilabad (NTZ)			Warangal (CTZ)			Nalgonda (STZ)			Jogulamba Gadwal (STZ)		
		Male	Female	Minimum wage	Male	Female	Minimum wage	Male	Female	Minimum wage	Male	Female	Minimum wage
1	Land preparation	293 (-19)	181 (-131)	312	355 (58)	194 (-103)	297	400 (149)	200 (49)	251	365 (114)	203 (-48)	251
2	Seed sowing	-	206 (-95)	301	-	216 (-81)	297	-	317 (66)	251	-	242 (-9)	251
3	Gap filling	-	205 (-96)	301	-	199 (-98)	297	-	277 (26)	251	-	221 (-30	251
4	Thinning	-	-	-	-	-	-	-	-	-	-	242 (-9)	251
5	Fertilization	269 (-31)	201 (-100)	301	341 (44)	204 (-93)	297	300 (49)	283 (32)	251	393 (142)	233 (-18)	251
6	Intercultivation with bullocks/ tractor	1000	-	-	1200	-	-	1200	-	-	800	-	-
7	Manual weeding	-	-	301	-	-	297	-	-	251	-	-	251
	a. Daily wage	-	200 (-101)	-	-	216 (-81)	-	-	244 (-7)		216 (-35)	216 (-35)	-
	b. Contract (Gutta)	-	349 (48)	-	0	-	-	-	343 (92)		331 (80)	331 (80)	-
8	Pesticide spraying	316 (-97)	200 (-213)	413	498 (135)	-	363	450 (127)	200 (-123)	323	424 (101)	211 (-112)	323

Sl. No	Activity	Adilabad (NTZ)			Warangal (CTZ)			Nalgonda (STZ)			Jogulamba Gadwal (STZ)		
		Male	Female	Minimum wage	Male	Female	Minimum wage	Male	Female	Minimum wage	Male	Female	Minimum wage
9	Irrigation/ Supplemental irrigation	282	200	-	548	-	-	-	-	-	600	-	-
10	Cross pollination	-	-	395	-	-	363		-	323	450 (127)	450 (127)	323
11	Watch and ward	-	-	380	-	-	296	500 (249)	-	251	-	-	251
12	Cotton picking	-	-	395	-	-	363	-	-	323	-	-	323
	a. Piece rate	281 (-114)	300 (-95)		-	-	-	-	584 (261)		500 (177)	513 (190)	
	b. Daily wage	200 (-195)	200 (-195)		272	199		-	240 (-83)		306 (-17)	232 (-91)	
	c.Contract rate (Gutta)	-	-	-	-	-	-	-	343 (20)			447 (124)	
13	Post-harvest operations (drying and grading cotton)	262	-	-	447	200	-	500	240	-	-	-	-
14	Transporting	260 (-34)	-	294	486 (219)	-	267	500 (249)	-	251	500 (249)	-	251

*Source: * Field Survey-worker schedules: Minimum Wages taken from Department of Labour Government of Telangana (2019)*
Note1: NTZ-Karimnagar, Nizamabad, Adilabad: CTZ- Warangal, Khammam, Medak: STZ-Mahabubnagar, Nalgonda, Rangareddy
Note2: Figures in parenthesis shows deviation from minimum wage in Rs

3.2.8 Challenges faced in cotton cultivation

Farmers and labour engaged in cotton cultivation face several challenges and risks. Both farmers and labour are not protected and they are at the mercy of fate. Farmers face high cost of cultivation, dependence on informal credit sources, and loss of yields due to erratic rains, labour shortages, accidents, labour disputes and absenteeism of the labour. While labour face risks of break in employment, health hazards, illness, and accidents. Workers and labour in seed production are more vulnerable to sickness and face health hazards. Loss of health, expenditure for healthcare as well as loss of wages due to exposure to hazardous conditions at work are considered labour's problem without any responsibility falling on the farmer.

Around 10 percent of small and big farmers, more particularly from Nalgonda and Jogulamba Jogulamba Gadwal, reported accidents as a major problem. Labour health, according to 50 percent of big and small farmers was also not a problem. But around 42 percent farmers reported labour health as a minor problem especially in Warangal district. This may be due to excess use of chemicals in the cotton farm in the district. However, for Big farmers across all the districts who depend mostly on outside labour, labour health was an issue. Around 20% of farmers across the districts have reported that labour disputes are a minor problem. Absenteeism was slightly more problematic for farmers of Jogulamba Jogulamba Gadwal where the committed time for 45 days during seed crossing period is an important issue for seed production farmers (Table 3.A. 16). Focused group discussions with various categories of farmers and labour have revealed climatic factors and pest infestation as two major challenges besides labour health. Major challenges being faced by farmers in the cotton cultivation of study districts of Telangana state are detailed in the Case Study in Box 2 and Table 3.9 below.

Box:2 System of Cotton Seed Production Business- Role of Organisers

The business of seed production operates through a structure of intermediaries between the seed company and the farmers. Organisers help farmers in getting their product purchased by the seed company and also by lending money to the farmers in need of investment. Seed production runs in two channels viz., Channel 1 comprising Seed Company - Organiser- Farmer, and Channel 2 comprising

Seed Company - Organiser- Suborganiser – Farmer. Mr. Laxman (name changed) is part of this system in Pudur village of Jogulamba Jogulamba Gadwal district.

Mr. Laxman owns a land of 5.5 acres. He was a Single Window Director and went on to become Director of District Cooperative Central Bank (DCCB). Earlier, he was field Assistant in MGNREGA during 2007-2009. Since two years, he took the role of an organizer in cotton seed production.According to Laxman the success of an organizer depends on ones capacity to invest, good contacts with the farmers, and ones experience as a seed production farmer.

As a sub-organiser, he supports 30 farmers in the village. Nearly 2000-3000 farmers are supported by big organizers. Smallest organizer may support 5 to 10 farmers.

Seed Companies directly deal with organizers. Both organizer and sub-organisers pay interest on the money advanced by the seed company to them. Last year in 2020 kharif some seed production farmers took advance of Rs30,000 to 1,00,000 for cultivation @ 24 percent interest per month. Seed Company sells 300 grams seed packets for Rs.420, which organizers get for Rs.390. The difference amount of Rs30 is shared between organizer and sub-organiser@Rs15each.

As a sub-organiser, Laxman handled 10,000 packets (300gms) of seed and earned Rs 1.5 lakhs in three to four months (Rs15X10,000= Rs 1.5lakhs). In the year 1994, Laxman had sold 5 acres of land to clear debts incurred when he donned the role of a big organizer.

There are fluctuations in their business. For instance in 2021, the area under seed production has come down and the organizers and sub-organisers reduced advancing loans to seed production farmers for production of seed. Seed Companies also reduced the amounts or commission to organizers because politicians started interfering in the business of seed production. An association of organizers which was operational earlier, now got closed due to politics.

These days politicians make calls to companies and demand them to give at least 150 Kgs of cotton seed (for seed production purpose) to a particular village. But the seed company cannot give such quantities to many villages as they cannot afford to buy back the seed produced by the farmers. Now there is an organization called “Nadigadda Rythu Porata Hakkula Samithi” (Nadigadda Struggle Forum

for Farmers' Rights) of seed production farmers headed by Mr. Ramu (name changed). As a result of this, the seed companies are scared and are slowly shifting to other states, and the big organizers have shifted their investments to real estate. Since the last 3-4 years, seed companies are not giving money to organizers for advancing to seed production farmers.

Around 80 acres of land is under cotton seed production in Pudur village out of a total of 600 acres of cotton crop.Total land area of the village is 3700 acres. Other crops grown in the village include Chilli (700acres), Redgram (600-700acres) and Castor (100 acres).

Cotton seed production is attracting even small farmers because of additional returns which these families are able to use, to send their children to private schools and also meet the cost of tuitions to clear Gurukul entrance examination. Small farmers engaged in seed production in half acre or so depend on family labour for all the major seed production tasks. During COVID-19 schools were closed and around 50 to 60 children worked in their family farms for cotton seed production.

Laxman lends money to farmers by writing the amount in a note book and taking their signature.If the amount is huge, he takes a promissory note from the farmer. "Generally the company is not at loss", says Laxman. Company procures seed from farmers' field only when seed formation after crossing is around 90%. There is one variety called poothapootha where seed setting should be at least 98%.

Once the farmers produce seed, the Company collects one Kg of seed from each farm and makes the seed lot into four quarters. Company takes 2 quarters and leaves one quarter each with sub-organiser and farmer. To cross check with failed lot, one quarter is given to organizer.The seed collected by company is sown to check the germination percentage and farmers can go in 15 days' time and see the results at company. Taking sample is compulsory in every farmers' field and sample size is the same irrespective of the area. Earlier the farmers used to sell on their own if the seed is rejected by company due to poor germination percentage. But now due to cases of spurious seed, the companies are not giving the failed seed to farmers and instead are converting the seed into animal feed.

***Source**: Stakeholder interview with Seed organisers, Jogulamba Gadwal 2021*

Table 3.9 Details of challenges in cotton production, yield and average price at which cotton is sold

Sl. No	District	Village	Category of FGD	Main challenges in cotton production	How people get hurt during cotton production tasks	Average Yield (qtl/acre)	Average Price cotton sold (Rs/qtl)
1	Nalgonda	Thalelma	Small farmers	Pink boll work incidence, lack of quality seed	Fever, temporary vision loss, body pains, numbness of tongue for 3-4days	6-7 In good quality black soils 10	4000-4500
2	Nalgonda	Yerrabelli	Small farmers	lack of quality seed, lack of labour and incidence of pink boll worm	Not much incidence	4-5	5100-5500
3	Jogulamba Gadwal	Pudur	Small farmers	Labour shortage and quality seed.	No incidence was seen	7 – 8	5,500
4	Jogulamba Gadwal	Khasipur	Small farmers	Incidence of pink boll worm is affecting cotton quality since last 3 years	Not much incidence	8-9	5300-5500
5	Nalgonda	Pagidimarri	Small farmers	Lambadi thegulu (it is disease where leaves turn red and plant dies)	No one is hurt in the village until now	6-8	5500
6	Nalgonda	Yerragandlapalli	Small farmers	improper distribution of rain and poor quality seed.	No incident	4	5000
7	Nalgonda	Chamalapalli	Big farmers	Main problem is rain. Either it is heavy rain or no rain.	Despite wearing protective wearing, workers are feeling sick on the day of pesticide spraying	8-10	5,500
8	Nalgonda	Chinnamadaram	Big farmers	Labour problem	Not much health issues	7 – 9	5400

Sl. No	District	Village	Category of FGD	Main challenges in cotton production	How people get hurt during cotton production tasks	Average Yield (qtl/acre)	Average Price cotton sold (Rs/qtl)
9	JogulambaGadwal	Pudur	Big farmers	Labour shortage and quality seed	Workers in Seed production farms fall invariably sick	6 – 8	5500
10	Adilabad	Sangidi	Small farmers	No finance from banks. Crop failed due to the attack of pink worm. They incurred heavy loss because of low yield.	Vomiting, fever and allergy are the coming health problems Insurance for animals and thunderbolt need to be provided	Irrigated – 10 Otherwise-8	5200
11	Adilabad	Kapri	Big farmers	Increasing cost of production particularly, pesticides, fertilizers and human labour	Get affected by spraying pesticides, snake bite and other seasonal health problems	Irrigated-10 Otherwise-8	5200
12	Warangal	Magdumpur	Small/ Big farmers	Untimely rainfall Over investment on inputs, pest attack	Throat infection	Irrigated-10 Otherwise-8	6000

Source: Focused Group Discussions, Adilabad, Jogulamba Gadwal and Nalgonda and Warangal 2021

3.3 Status of Four Pillars of FPRW

3.3.1 Work place Constraints (Forced Labour)

Majority of the farmers (more than 70 percent) were recruiting their labour based on reference from other cotton farmers and labour (Table 3A.20). To ensure the timely availability of labour during critical operations in cotton farming, the farmers were advancing loan to labour. Advancing loans to labour is to ensure they are available during seasons of peak demand for labour and also to build trust in the labour. Field data (Table 3A.21) indicated that of the total farmers of the study more number of male farmers (31.0 percent) were advancing loan as against the female farmers (21.3 percent). Less cases of female farmers advancing loans to labour may be attributed to less preparedness to handle risks like labour not turning up after taking the advance money. Similarly, around 30 percent of big farmers and 27.5 percent of small farmers were advancing loan to labour. The practice of giving advance is more predominant in Warangal and Adilabad districts. Table 3.10 indicates that around 30 percent of labour did not like (or were willing to do) the job they were doing. Major reasons expressed by labour for continuing to do the work against their will are threat of financial penalties, fear of non-renewal of work with the employer and need for salary (Table 3A.29).

Focused Group Discussion with Women Labour at Pudur Village, Jogulamba Gadwal District

Some female labour have reported that they were working beyond 12 hours (5.8 percent) and at less than minimum wages (11.6 percent). Seven percent of females reported to working for longer periods than agreed and 1.5 percent have said that they do not have freedom to terminate work contract (Table 3.10). The voluntary participation of work beyond normal hours is significantly less among literates than among non-

Focused Group Discussion with Women labour in Tamsi (K) Village, Adilabad District

literates[46]. Around 7 percent of farmers reported that their labour work overtime and 59 percent reported that they never work overtime (Table 3A.27). 10 percent of farmers that reported that they engaged labour overtime said that they always made payment for overtime work and 4.25 percent made payment of the time (Table 3A.28). During FGDs with farmers, they revealed that they provide incentives to labour for extra work of 15 - 30 minutes overtime by offering drinks like thums-up, and snacks like mirchibajji, Gobi Manchuria and toddy. Those who do not consume alcohol are paid Rs. 15 to 20 each.

Across All Districts, only four percent of farmers have reported that their labouris indebted to them (Table 3A.22). Out of those indebted, 1 to 3 percent have repaid their debts either through own free labour or labour of family members (Table 3A. 23). Focused Group Discussions with women and men labour and child labour also brought out this issue.

Some farmers (8.76 percent) even imposed restrictions on labour by wage deductions or withholding wages to see that the work agreed upon is completed. Around 7 percent reported that they did not pay extra for the overtime of the workers. Though labour did agree to being sometimes working unwillingly there have been no situations in which they are forced to work (Table 3A.30). However, compared to male workers, female workers have a very little freedom to leave the farmer[47].

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46 The two sample t test run between not-literate and literate workers shows a significant difference between these two groups in accepting the voluntary participation of working overtime with p value 0.048 and t value -1.98.

47 The two-sample t test reveal that there is a significant difference between male and female workers with respect to having freedom to leave with p value 0.02 and t value 2.34

Table 3.10 Distribution of labour by type of workplace constraints

Sl. No	Particulars	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
		Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	Sample	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
1	The job itself	4 (14.2)	13 (17.6)	17 (16.8)	8 (59.2)	20 (23.7)	30 (30.5)	0 (0)	30 (31.3)	31 (30.7)	8 (64.9)	34 (38.1)	41 (41.2)	20 (36.3)	97 (28.2)	119 (29.8)
2	Involuntary overtime (beyond 12 work-hrs/day) or on-call work (compensated)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.4)	1 (1.1)	0 (0)	20 (20.6)	20 (20.3)	1 (6.3)	5 (5.6)	6 (5.7)	1 (1.4)	26 (7.6)	27 (6.8)
3	Involuntary over-time (beyond 12 work-hrs/day) or on-call work (not compensated)	0 (0)	0 (0)	0 (0)	0 (0)	4 (4.4)	4 (3.5)	1 (30.3)	6 (6.1)	6 (6.4)	0 (0)	11 (12)	11 (10.6)	1 (1.7)	20 (5.9)	21 (5.1)
4	Involuntary work in hazardous conditions without protection	0 (0)	0 (0)	0 (0)	3 (18.6)	1 (1.3)	5 (4.6)	0 (0)	5 (5.2)	5 (5.1)	0 (0)	5 (5.6)	5 (5)	3 (4.8)	11 (3.2)	15 (3.7)
5	Work at less than minimum wages or with no wages	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.3)	1 (1)	1 (30.3)	16 (16.2)	16 (16.3)	2 (12.6)	28 (31.3)	29 (29.2)	2 (4.5)	44 (12.8)	47 (11.6)
6	Work under sub-standard living conditions linked to the job	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.3)	1 (1.3)	0 (0)	0 (0.5)	0 (0.5)	0 (0)	2 (0.5)	2 (0.4)
7	Work for longer period of time than agreed	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	24 (24.7)	24 (24.2)	0 (2.2)	10 (10.9)	10 (9.9)	0 (0.5)	34 (9.7)	34 (8.5)
8	Work with no or reduced freedom to terminate work contract	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (3.5)	3 (3.4)	0 (0)	3 (2.9)	3 (2.6)	0 (0)	6 (1.7)	6 (1.5)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

3.3.2 Child Labour

Table 3.11 Presence of child labour in study villages of study districts

Sl. No	District	Village	Category of FGD	Prevalence of child labour in Village	Prevalence of child labour in Family farms	Type of work done by children in family farms
1	Nalgonda	Chinnamadaram	Women (Labour)	Yes. Children mostly work during Sundays and also during Dusshera holidays. Children of 12-13 yrs age also work in this village.	Yes. Around 100 children work.	Cotton picking
2	Jogulamba Gadwal	Pudur	Women (Labour)	Yes. Even 12yrs old work. But they go on holidays only.	Yes	Weeding and cotton picking
3	Nalgonda	Thalelma	Small farmers	Very Less	Yes, 12-13years old	Mostly cotton picking
4	Nalgonda	Yerrabelli	Small farmers	Yes, mainly for cotton picking. Mostly girl children	Yes, 12-15years. Around 150 children work	Giving water to labour, carrying the cotton filled small bags to field bunds
5	Jogulamba Gadwal	Pudur	Small farmers	Yes	Yes, mainly girl children	For cotton picking. Boys some time help in irrigation
6	Jogulamba Gadwal	Khasipur	Small farmers	Very less. Only during holidays children go to other farms for cotton picking	Yes, mainly girl children	For cotton picking, weeding and carrying water for pesticide spraying
7	Nalgonda	Pagidimarri	Small farmers	Yes. But very less. 15yrs old mostly on holidays	Yes, 1 or 2 children in family come. Both boys and girls work	Cotton picking and giving water to labour
8	Nalgonda	Yerragandlapalli	Small farmers	Yes. During covid-100 to 200 children worked in cotton farms of village	Yes. 75% girl children and 25% boys.	Cotton sowing, cotton picking and little bit of weeding

Sl. No	District	Village	Category of FGD	Prevalence of child labour in Village	Prevalence of child labour in Family farms	Type of work done by children in family farms
9	Nalgonda	Chamalapalli	Big farmers	Yes. Last year below 18 yrs children around 100 children were there. Children mostly do tasks of cotton seed sowing and picking. But during school days, the teachers at times object.	Yes. When there is no school they come. Mostly girl child work. When they work, it will be helpful for family. What we pay to outside labour goes out, when family labour works, it is a saving to family.	Cotton picking and weeding
10	Nalgonda	Chinnamadaram	Big farmers	Yes	Yes	Cotton picking and weeding
11	Jogulamba Gadwal	Pudur	Big farmers	Yes	10 % of children working in family farms	Cotton sowing, weeding and picking.
12	Adilabad	Pipri	Child labour-Boys and girls	Both boys and girls work in the cotton fields in this village Boys perform fertiliser application and pesticide spraying activities along with picking while girls do seeding, weeding and picking activities Children below 14 years perform only picking while above 14 years old also perform weeding, sowing along with picking	--	--
13	Warangal	Gotlakonda	Child labour-Girls	The participation has increased during the lockdown period of Covid-19. They undertake sowing, weeding and picking	--	--

Source: Focused Group Discussions, Adilabad, Jogulamba Gadwal and Nalgonda and Warangal 2021

Cotton is a crop where child labour is prevalent since a long time. Vulnerability of the child labour is manifold compared to the risk faced by adult workers. Child labour is still common in cotton cultivation (Table 3.11). However, it is much less than what it used to be some years ago. Government policies to curb child labour and sensitization by NGOs have resulted in reduced prevalence of the child labour. Most of the child labour below 18 years is mainly involved in cotton picking and weeding across all districts. Some of the child labour in cotton farms also do all other activities that the adults do and are exposed to similar risks and hazards (Box 4). Some of this child labour also work overtime.

Child labour in Cotton seed production farm at Induvasi Village, Jogulamba Gadwal District

Stakeholder Interview with High School Teachers at Munugodu Village, Nalgonda District

Across All Districts, 29.56 percent of labour reported the prevalence of child labour under the age of 14 and 70.44 percent of labour reported the prevalence of child labour between 14-18 years (Figure 3.7). Female labour significantly reported more prevalence of child labour compared to male labour[48]. Farmers of the study informed that children sometimes accompany their parents to the cotton farms to work along with the adult labour. Field study indicated that 28.36 percent of the farmers reported that children under the age of 14 years accompany adult labour (Figure3.8). Around 19 percent of small farmers and 24 percent of big farmers informed that children accompanying adults are performing the same tasks as adults (Table 3A.31). Fifteen percent labour reported that children are working overtime (Table 3A.32)

Further investigation revealed multiple reasons for children below 18 years working in the cotton farms: a majority of them (83.9 percent) reported the main reason was the need to add to family incomes followed by farmer's preference for labour below 18 years for undertaking certain activities in cotton crop cultivation (Table 3.12). Lack of monitoring by school teachers on their absenteeism is also reported as another reason for children to work in the cotton fields (Box 3). Other important reasons include, i) advances taken by the adult labour of the family from cotton farmers (24.4 percent); ii) low wages of adult labour, and iii) children work mostly on holidays (22.0 percent).

48 The two sample t test on engaging children in the cotton picking shows a significant difference in the responses between male and female workers on this aspect. It is significant at p value 0.02 and t value -2.25.

Box 3 White Gold in the Shadow of Nimble Fingers

Cotton farming continues to employ children in varied operations. Although the number of children employed in cotton farming has reduced over the years, it is still prevalent across the districts and more prominently in seed production.

Poor households encourage children to work in cotton farms to supplement the family incomes. Main reason for sending children particularly to cotton farms is that children are not much aware of paddy transplanting and farm operations in other crops. As the government hostels are closed due to COVID-19, children are staying back in their native villages. Being in the village they are going for picking in cotton farms. Children in cotton farm engage in activities like seed sowing, weeding, flower bud pinching, seed crossing, and cotton picking. Seed sowing, flower bud nipping and seed crossing are disliked by labour because of the drudgery involved in these operations. Farmers prefer to engage children in seed crossing and flower bud pinching.

The daily wage given to children is Rs.200 for activities such as sowing, weeding and cotton picking. For activities such as flower bud nipping and seed crossing children are paid daily wage of Rs.450.

Many a time parents of the child labour take advance from seed production farmers to the extent of Rs.10,000. Children, during Focused Group Discussions told that their parents take advance and they bunk school to do seed crossing and bud pinching in cotton farms to clear the family loans". These two activities require two months of work. During the seed crossing, farmers sometimes make children work for an extra hour but do not give any incentives like cool drink Thumsup or snacks like.

Children reported that during seed crossing they are bound to bend near each flower, and as a result suffer back pain and stomach pain. During seed crossing, they work from 9.30 am to 6.30 pm or 7.00 pm. During seed crossing children work for two months and during cotton picking they work on Sundays, mostly.

Parents engaged in cotton farming first complete work in their own farm and then send the children to others' fields. During seed crossing time children are forced to work even in the rain unless it is a heavy shower. They get drenched as there is no shelter in the farms. So children often fall sick with cold and fever. Sometimes farmers put pressure on children to do the work fast and also at times use abusive

language. During the cotton-picking children are exposed to pesticide smell, allergy and fever. Often they vomit due to pesticides. As told by some children, "During last picking of cotton, fingers get hurt physically due to sharpness of cotton bolls and sometimes our fingers bleed. When we pick cotton in the hot sun, we are exhausted and don't feel like working". According to children, the cotton coming from last pick (Nov-Dec) smells a lot, and has pests and they feel scared. Children work in cotton farms for almost 3 months. During this time, they get fever, cold, cough, dizziness etc.Farmer does not take any responsibility for the illness of the children and do not pay their medical expenses.

Source: FGDs and interviews in Induvasi village, Jogulamba Gadwal district.

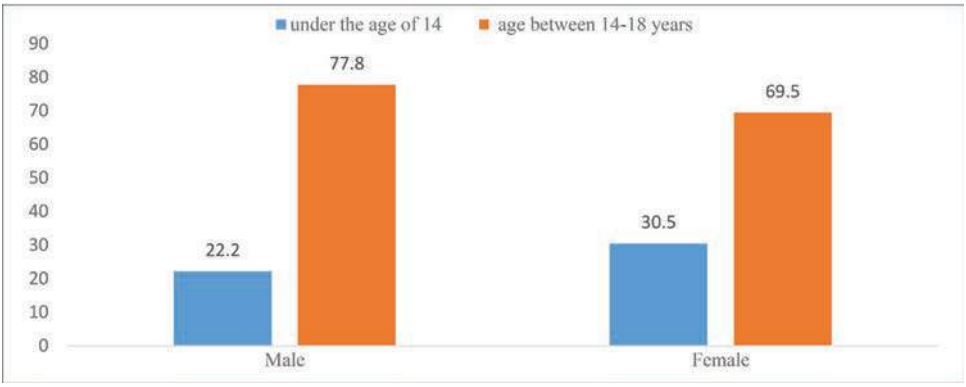

Figure 3.7 Labour reporting on presence of child labour

Source: Worker schedules

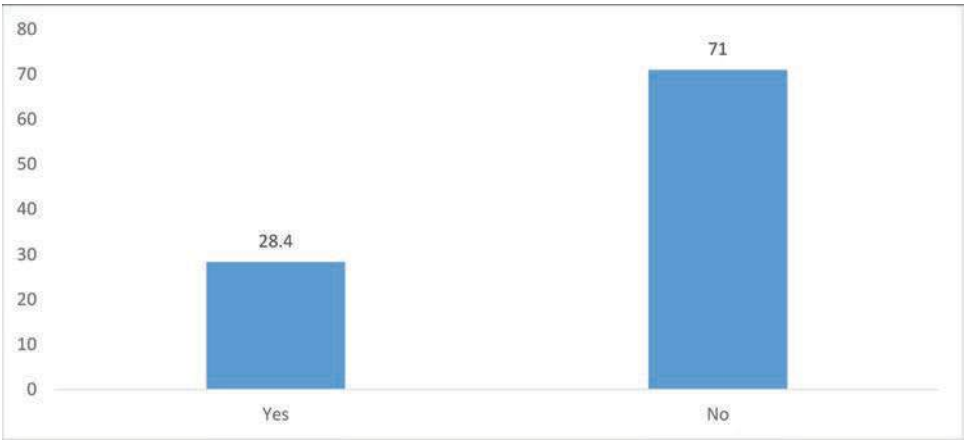

Figure 3.8 Farmers' response on children under 14 years accompanying the adult labour

Source: Farmer schedules

Table 3.12 Reasons for children below 18 years working in the cotton farms reported by labour

Sl. No	Particulars	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
		Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	Sample	19	51	71	4	56	58	2	80	81	10	62	72	34	266	302
1	Low wages for adult labour	6 (31.1)	1 (1.4)	7 (9.3)	3 (59.9)	16 (28.5)	19 (31.9)	0 (0)	22 (27.8)	22 (27.6)	0 (0)	13 (20.8)	13 (18.4)	9 (27.1)	58 (21.8)	67 (22.2)
2	Need to add to family incomes	15 (79.5)	47 (91.2)	62 (88.2)	5 (119.8)	47 (84.2)	52 (89.7)	2 (100)	73 (91.7)	75 (91.9)	10 (100)	49 (79.6)	60 (83.4)	33 (98.3)	220 (82.9)	253 (83.9)
3	No schools in the village or near the worker's residence	0 (1.9)	0 (0)	0 (0.5)	0 (0)	0 (0)	0 (0)	1 (45.4)	8 (10.6)	9 (11)	0 (0)	4 (6.1)	4 (5.4)	2 (5)	18 (6.8)	20 (6.7)
4	Absenteeism among the teachers at the schools	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (45.4)	31 (38.9)	32 (39)	9 (92.6)	14 (23)	22 (31.4)	8 (24.8)	67 (25.1)	76 (25)
5	Child not interested in studies	0 (1.9)	0 (0)	0 (0.5)	0 (0)	1 (2)	1 (1.9)	1 (45.4)	31 (38.8)	32 (38.9)	9 (84.3)	7 (11.3)	14 (20)	8 (24.2)	63 (23.8)	72 (23.8)
6	Preference for labour below 18 years for undertaking certain activities	0 (0)	1 (2.9)	2 (2.1)	0 (0)	6 (11.5)	6 (10.9)	0 (0)	51 (64.2)	52 (63.6)	4 (35.6)	25 (41.1)	29 (40.7)	3 (8.1)	115 (43.4)	124 (41.0)

Sl. No	Particulars	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
		Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
7	Advances taken by the adult labour of the family	1 (3.7)	1 (1.2)	1 (1.9)	0 (0)	6 (11)	6 (10.5)	1 (45.4)	31 (38.4)	31 (38.5)	8 (79.3)	6 (10)	13 (18.3)	8 (24.1)	65 (24.5)	74 (24.4)
8	Due to Covid-19	0 (0)	1 (1.4)	0 (0)	0 (0)	0 (0)	1 (1.7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	17 (23.6)	0 (0)	0 (0)	19 (6.3)
9	During holi-days only	0 (0)	36 (50.7)	0 (0)	0 (0)	0 (0)	27 (46.6)	0 (0)	0 (0)	3 (3.7)	0 (0)	0 (0)	1 (1.4)	0 (0)	0 (0)	67 (22.3)
10	For pocket money	0 (0)	5 (7.0)	0 (0)	0 (0)	0 (0)	4 (6.9)	0 (0)	0 (0)	3 (3.7)	0 (0)	0 (0)	2 (2.8)	0 (0)	0 (0)	14 (4.6)

Note: *Figures in parenthesis are percentage*
Source: Worker schedules

As shown in table 3A.33, majority of the workers (71.96) reported that children working in cotton farms are exposed to extreme cold and heat followed by exposure to chemicals (62.0), and exposure to dust and fumes (54.27). Cotton workers of Jogulamba Gadwal and Nalgonda felt that children are exposed to cold /heat and chemicals as compared to Warangal and Adilabad district workers. Across All Districts 19.23 percent workers felt that workers under the age of 18 work more than 8 hours and only 8.28 reported that children carried heavy loads at work (Table3A.34). Most of the workers under 18 commonly used four kinds of tools and the commonly used tools were shovel (*gaddapara*), spade (*para*), sickle or scythe (*kodavali*) and spraying pumps or sprayer.

Similar to the response of the labour, 46.84 percent of farmers across All Districts reported that children between 14 and 18 years accompany their family members to the cotton farm (Table 3A.35). Similarly, 40 percent of farmers reported that children between 14 and 18 are doing the same tasks as the adults (Table 3A.36). Across All Districts 24 percent of farmers have reported that children between 14 and 18 are working overtime in cotton farms (Table 3A.37).

Take 3.13 Labour response on average number of child labour in their work place

District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal		
Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Number of workers found on cotton farm (all age groups)	11	17	16	12	13	13	16	18	18	20	25	25
Number of workers in the age group14-18 found on the cotton farm	9	9	9	7	10	10	7	11	11	13	14	14

Source: Worker schedules

Data from Table 3.13 indicates that 18 children per workplace were working on an average in the cotton fields covered in the study (excluding adult labour). It can be seen that a minimum of 11 children and a maximum of 20 were reported by male labour and female labour reported a minimum of 13 and a maximum of 25. Whereas children in the age group of 14-18 were a significant number in the total children working in cotton farms, presence of child labour was more prominent in Jogulamba Gadwal district where seed production activity is prevalent and these children are engaged in seed crossing. Compared to male labour, female labour were more honest and have

reported a higher presence of children under 14 years cotton (Table 3A.38) and the same was revealed during the focused group discussions with women across all the study districts. Across All Districts, nearly 60 percent of children under 14 years of age working in cotton farms were found to be going to school as reported by labour (Table 3A.9). School teachers say that attendance of children in classes VI to X falls in the cotton picking season in general and during July through September in areas of seed cotton cultivation (Box 4)

Box 4 Dreary Schools and Cotton Farming- Schools Battling Against Falling Attendance in Cotton Season

Cotton farming is one of the important reasons for reduced school attendance in rural areas. One out of every four school children is absent for almost three months on account of cotton farming.

School attendance falls down by 20– 25 percent during cotton crop season, according to the school teachers in the study districts. It happens especially during weeding and cotton-picking season. In some schools the attendance falls by 50 percent since 25 percent children work in own farms and remaining 25percent children work in others field. Economically backward children also go to others fields to work. Attendance falls by 30 percent in Class VI to X during cotton picking time. Students of Class X are bit scared of teachers and don't bunk classes because they have to pass the Board exam to become something in life.

Children of 12 plus age go for work in farms. Students of class VI accompany their parents for work for weeding operation where each child earns Rs.350/day. During cotton picking season Class VII and VIII students pick 50-60 Kgs each. Schools have often have low attendance on Mondays after the weekly holiday on Sunday. InPudur village of Jogulamba Gadwal district where seed production is prevalent, "25% children don't go to school for three months, from July to September", according to the High School Teacher. Seed crossing also takes place during this period. Such children take notes from neigbouring students and record their notes. In the last period of the day, teachers focus more on such children. "To ensure that students don't miss classes during weeding and cotton picking, we speak to students every day in morning school assembly", said one teacher. Teachers in their respective class rooms, insist students not to bunk classes during weeding and cotton-picking time.Teachers also make phone calls to parents

asking them about the absence of their child from school. Teachers complained that parents are not listening in this regard. Teachers brings This issue of low attendance is brought to the notice of Mandal Education Officer (MEO) by the teachers in their review meetings.

"Farmers also give advance amounts during picking season to some families. To pay back this money, children are also taken to field. Everybody knows about this problem. Now, because of Covid, the government says don't force children to attend school and we are not asking them too", according to a school teacher. Now, some children in Class X are not coming to school. During Covid times children have worked more on cotton farms. Online classes were attended by only a few students.

Teachers'suggestions for improving the attendance and overcoming the problem of child labour are as follows.

1. Students with good attendance should be incentivized
2. Create awareness in parents about the importance of education
3. Hostel facilities should be strengthened
4. Hostels to be functional during COVID
5. Labour department officials should be more vigilant and monitor effectively
6. Monitoring by the Child Protection Department which is lacking at present should be done.

***Source**: Stake holder interviews with School teachers, Jogulamba Gadwal and Nalgonda 2021*

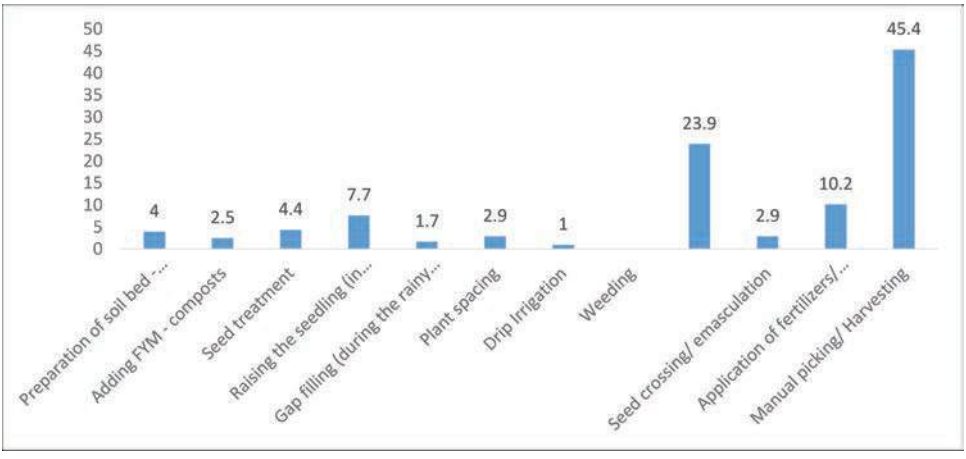

Figure 3.9 Tasks performed by children below 18 years in cotton farms reported by farmers

Source: Farmer schedules

Some of the children below 18 years are performing the same tasks as adult cotton labour. Activity wise involvement of children below 18 years indicates that across all districts they are mostly involved in cotton picking (45 .0 percent) and weeding (23.95 percent). It can also be seen from the same table that 10 percent of labour under 18 years are involved in application of fertiliser and pesticides which exposes them to harmful chemicals leading to long term health problems. Farmers of Jogulamba Gadwal reported that labour under the age of 18 is involved in seed crossing/emasculation (Figure 3.9).

Labour Inspectorate Committees: To address the issue of bonded labour, government of Telangana has constituted Vigilance Committee at district level (Box 5). The knowledge on the presence of and / or awareness about the Vigilance Committee among the farmers and labour is very low, particularly among female (almost nil) preventing them from effectively seek their intervention to address any issues related to child labour or bonded labour in the cotton farms[49]. However, the awareness level is high among literate workers and literate farmers as compared to that of non-literates[50]. Female labour of Jogulamba Gadwal district where the female literacy is known to be one of least in the country does not have any idea of Vigilance Committee. Field study revealed that only 3 to 6 percent of male labour was aware of Vigilance Committee and 1.5 to 4.5 percent

Stakeholder interview with input dealer (fertiliser and pesticides) Adilabad District

of females were aware of Vigilance Committee (Table 3.14). None of the labour had any idea about workplace visit by members of vigilance committee. Similarly, very few labourers have heard of District Task Force Committee (Table 3.15). As in the case of Vigilance Committee, awareness level about District Task Force Committee is high

49 The two-sample t tests conducted on the awareness about Vigilance Committee between male and female workers reveal the same. The p value is 0.00 and the t value is 3.07

50 The two-sample t tests conducted on the awareness about Vigilance Committee between literate and non-literate farmers and workers reveal the same. The p value is 0.00 and the t value is -2.84 in the case of farmers and p value is 0.00 and t value is -3.64 in the case of workers.

among male workers than among female workers[51]. Awareness among literate farmers and workers is high as compared to non-literates workers and farmers[52]. A very small number of labours in Warangal, Nalgonda and Jogulamba Gadwal districts reported knowing about a workplace visit by the District Task Force Committee.

Table 3.14 Awarenessof labour on District Vigilance and District Task Force Committees (Percent yes)

Sl. No	Committees	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal	
		Male	Female	Male	Female	Male	Female	Male	Female
1	Heard of the Vigilance committee for bonded labour	6.2	1.4	5.9	4.5	3.0	1.9	3.0	0.0
2	Heard of the District Task Force Committee for Child labour	24.0	13.1	8.7	12.9	4.0	1.4	6.3	4.1
3	Workplace visit by a District Task Force Committee member	0.0	0.0	0.0	6.2	0.0	1.2	5.4	4.0
3	District Task Force Committee members sought information about child labour, working conditions such as contract type, wage levels and working hours	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
4	District Task Force Committee members visit led to reduction in employing child labour in cotton farms	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0

Source: Worker schedules

Table 3.15 indicates that across all districts only 15 percent of farmers have known about District Vigilance Committee on bonded labour and out of this only 4.95 percent reported the workplace visit done by the Vigilance Committee and 4 percent reported the improvement in the working conditions of labour.

51 The two-sample t tests conducted on the awareness about District Task Force Committee between male and female workers reveal the same. The p value is 0.00 and the t value is 3.07

52 The two-sample t tests conducted on the awareness about District Task Force Committee between non-literate and literate farmers and non-literate workers and literate workers reveal the same. The p value is 0.00 and the t value is -5.51 in the case of farmers and p value is 0.00 and t value is -3.96 in the case of workers.

Table 3.15 Awareness of farmers on District Vigilance and District Task Force Committees (Percent yes)

Sl. No	Particulars	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
1	Heard of the Vigilance committee for bonded labour	14.42	14.27	19.73	9.69	15.13
2	Workplace visit by a vigilance committee member	0.00	15.09	5.14	4.04	4.95
3	Vigilance Committee members sought information about working conditions such as contract type, wage levels and working hours	0.00	15.09	5.43	3.15	10.60
4	Vigilance committee members visit led to improvement in working conditions of labour	0.00	8.0	3.00	2.0	4.00

Source: Farmer schedules

Box 5 Child labour in cotton farms - Role of Labour Department

Child labour in cotton farms continues to persist despite Law prohibiting their employment and instructions given to several departments to monitor and arrest child labour. Gaps in implementation and monitoring of child labour Laws reflectlack of adequate importance and attention paid to them and lapses in monitoring and reviewing the situation on a regular basis by the concerned officials. As per the latest Act of 1st April 2021 the minimum wage is Rs.360 which applies to even the agriculture sector. Assistant Commissioner of Labour Mr. Mahesh Kumar informed that the department did not receive any complaint with regard to violation of Minimum Wages Act in agriculture. The Labour Departmentof Jogulamba Gadwal district issues newspaper notification every year regarding Minimum Wages Act as part of the publicity to inform the labour. Cases are registered against people for employing child labour. In the year 2021 upto October, 114 cases have been registered regarding child labour in automobile sheds, hotels, cloth stores and cottons farms. The labour department rescues, rehabilitates and sends them to schools.

"We produce these children before the "Child Welfare Committee"(CWC) and impose penalty of Rs.5000 on mechanic shops and Rs.4000-5000 on farmers. When farmers employ their own children in cotton farms, we counsel and leave them but do not register a case", informed Mahesh Kumar, Assistant Commissioner Labour. He says labour departments' engagement in cotton farms is mainly related to monitoring the implementation of minimum wages, working conditions and

payment for the overtime to the labour by the employer. But nomonitoring by the Labour Department was reported by either farmers or labour during the field study in four districts of Adilabad, Warangal, Nalgonda and Jogulmba Jogulamba Gadwal.

Every year from Jan 1st to 31st July, operation "MUSKAN" and operation "SMILE" are taken up by the government of Telangana. Women and Child Welfare, Labour and Police Departments, 1098 ChildLine and NGOs work together as a team to visit field sites looking out for incidences of child labour. "If a person employs a child above 14 years we don't file a case", says Mahesh Kumar. Till now FIR has been registered in 53 cases. There are cases on cotton farmers but these are cases on ginning mills.

Now, under the "ease of doing business" (EoDB), a system has come into force in 2016 i.e for each inspection, permission is required and computer systems generate the details of inspections to be done. Any grievance received is sent to higher authorities for sanction of inspection. During the stakeholder interviews with officials of labour department in study districts, it was reported that the officials are constrained to make field visits since the past 3-4 years due to Ease of Doing Business (EoDB) restrictions by the State government.

"If workers associations are formed, registration certificates will be issued immediately if they apply according to provisions", as per Mr.M.Rajendra Prasad, Deputy Commissioner of Labour, Nalgonda. Whenever any workers union comes with collective bargaining appeals their proposals are encouraged.

Stakeholder interview with Joint Commissioner of Labour, Warangal District, Telangana State

For improving the FPRW situation in cotton farms, it was suggested that the education department should be involved to address the issue. School Head Master monitors attendance of children and has to inform village secretaries and also Mandal Education Officer about students' absence from school. Parents' meeting has to be conducted to ensure community participation in the improvement of school attendance and protection of child rights. District Panchayat Office should call for the meeting and discuss this issue every year.

***Source**: Stakeholders interviews with labour department officials, Jogulamba Gadwal and Nalgonda*

Awareness about District Task Force Committee on child labour among farmers is higher, compared to the awareness of labour. Around 22 percent of farmers reported that they have heard of District Task Force Committee on child labour (Table 3.16). Nearly 4 percent of farmers across all districts reported the workplace visit of District Task Force Committee members. Out of this 6 percent have reported that task force committee has sought information about child labour, working conditions, type of contract, wage and working hours, and 7 percent of the farmers reported such visits leading to reduction in employment of child labour in cotton farms.

Table 3. 16 Awareness of farmer on District Task Force Committee and its visits (Percentage yes)

Sl. No	Particulars	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
1	Heard of the District Task Force Committee for Child Labour	28.6	36.1	19.7	11.7	22.4
2	A workplace visit a by District Task Force Committee member	2.9	6.8	3.1	5.1	3.9
3	District Task Force Committee memberssought information about child labour, working conditions such as contract type, wage levels and working hours	1.6	6.8	3.1	28.7	6.0
4	District Task Force Committee membersvisit led to reduction in employing child labour in cotton farms	3.0	6.8	4.1	29.1	6.7

Source: Farmer schedules

3.3.3 Discrimination

The current study examined discriminatory practices existing in the cotton production in the study villages. Both farmers or employers and labour expressed presence of discrimination in recruiting labour to work on cotton farms. Data of Table 3.17 comprising responses of the sampled labour indicates that recruitment of labour is slightly biased on the basis of sex, physical disability and migratory status. Similar was the opinion of sampled farmers (Table 3A.41). Social discrimination was the least form of discrimination (3.42 percent) reported . The empirical findings are in quite contrast to the findings of the focused group discussions. None of the 20 plus FGDs across all four

districts with farmers and labour reported any kind of discrimination in recruitment except on the basis of physical disability, that too for selected tasks in cotton production. But they also informed that whenever a physically challenged person reports at the farm for work they are not sent back at least for that day. However, empirical data of table 3 A.41 reveals minor discrimination of labour in cotton farms with regards to sex, social background, migratory status, physical disability, sexual orientation and marital status. Female labour which constitutes 85 percent of labour in cotton farms have reported that farmers took into account the sex of the labour while employing them. It is evident that 85 percent of labour is female and there is a clear sex segregation of activities on cotton farms (Table 3.17). However, exposure to discriminatory situations will be less among literate workers[53].

53 The t test conducted on experiencing any kind of harassment between non-literate and literate workers shows that the difference is significantly difference from zero with p value 0.00 and t value is 2.92

Take 3.17 Response of labour on employer's discrimination in employing labour (Percentage, yes)

Sl. No	District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	N	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
1	Sex/gender	13 (50.4)	50 (66.8)	63 (63.0)	11 (77.2)	59 (68.6)	70 (70.1)	1 (36.4)	20 (20.8)	21 (20.9)	0 (0)	5 (5.2)	5 (4.6)	27 (50.1)	114 (32.8)	138 (34.5)
2	Social background	1 (4.2)	3 (3.7)	4 (3.8)	0 (0)	1 (0.7)	1 (0.5)	0 (0)	2 (2.4)	2 (2.3)	0 (2.2)	10 (11.1)	10 (10.1)	1 (2.2)	12 (3.6)	14 (3.4)
3	Migratory status	0 (0)	0 (0)	0 (0)	2 (13.1)	19 (21.5)	20 (19.8)	0 (0)	14 (14.0)	14 (13.8)	0 (2.2)	10 (11.8)	11 (10.7)	3 (4.7)	44 (12.8)	48 (12.0)
4	Disability	3 (13.9)	12 (15.5)	15 (15.1)	5 (36.1)	26 (29.1)	31 (31.2)	2 (66.7)	25 (26.2)	27 (26.6)	0 (4.1)	31 (34.8)	31 (31.3)	13 (23.7)	92 (26.5)	105 (26.3)
5	Sexual orientation	0 (0)	0 (0)	0 (0)	0 (0)	0 (0.4)	0 (0.3)	0 (0)	17 (17.1)	17 (16.8)	0 (0)	22 (24.8)	22 (22.0)	0 (0)	46 (13.3)	48 (12.0)
6	Marital status	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (9.1)	9 (8.9)	0 (0)	5 (5.82)	5 (5.15)	0 (0)	21 (6)	22 (5.4)

***Note**: Figures in parenthesis are percentages Source: Worker schedules*

Table 3.18 Types of discriminations reported by labour

Sl. No	Description	Adilabad			Warangal			Nalgonda			Gadwal			All Districts		
		Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
		25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
1	Workers from certain "age, gender and social category etc." are clustered in certain jobs/around specific tasks related to cotton farming	16 (65.8)	57 (75.8)	73 (73.5)	9 (62.4)	59 (68.6)	67 (67.2)	2 (66.7)	23 (23.8)	24 (24.3)	2 (13.7)	27 (30.6)	29 (28.6)	30 (56.4)	137 (39.6)	165 (41.2)
2	Cases of harassment, including of sexual nature in workplace	0 (0)	0 (0)	0 (0)	0 (0)	2 (1.9)	2 (1.5)	0 (0)	15 (15.4)	15 (15.1)	1 (6.3)	12 (13.2)	12 (12.4)	1 (1.1)	38 (11.0)	40 (10.0)
3	Workers in cotton farming who have been sacked for being HIV-positive	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.6)	1 (1.3)	0 (0)	2 (2.4)	2 (2.4)	0 (0)	0 (0)	0 (0)	0 (0)	6 (1.6)	6 (1.5)

Source: Worker schedules ***Note**: Figures in parenthesis are percentages*

41.20 percent of workers across all districts reported that workers from certain age, gender and social category are clustered around specific tasks such as ploughing, women working behind ploughs, transportation, seed crossing and pesticide spraying As seen from Table 3.18 above. This clustering was seen more in Adilabad and Warangal districts. Few cases of sexual harassment at workplace were reported in Nalgonda and Gadwal district. A couple of Cases of HIV positive labour being sacked from work was reported in Warangal and Nalgonda district.

However, less percentage of labour reported exercise of "consideration/descrition" in employing disabled labour, migrant labour or persons with a different sexual orientation. More female labour reported discrimination especially based on sexual orientation and bias against migrant labour. But social category or caste is not reported as a factor in employing labour, attributable to difficulty in getting labour itself as a factor.

Alevoina Shoba of Pagidimari village of Nalgonda said ("*Maaku yevarocchina sare. Aa time lo yevaru dorikithe varu*") they don't reject anybody who comes to work and, are happy with whoever comes on time when they are looking out for labour). Echoing her response were Chakali Jangaiah of Chinna Mandharam village, Nalgonda,who says, ("*Dorikedhe ma kashtamaaye*") that finding someone willing to work is itself a problem and they cannot think of rejecting anyone, which also indicates there is no scope for any discrimination in recruitment of labour. Another farmer of Thalemla village of Nalgonda adds that ("*arka vembadi nadichetollu vayasolluundale*") the women labour accompanying plough bullocks should be young.

Table 3 A.42, reveals that more than 13 percent of sampled farmers were recruiting physically challenged workers in their cotton farms. However, around only 2.8 percent of sampled farmers were considering hiring women pregnant and in the last trimester (Table 3A.43). Similarly around 6 percent of farmers were considering HIV/AIDS patient while recruiting for work in cotton farms (Table 3A.44). One of the farmers during the FGD with Big farmers in Pudur village of Jogulamba Gadwal district told ("*Pani chesetollanu pilustham, chenukadiki vacchinollanu pampamu*") that they invite those who are interested to work and don't send anybody who comes to the farm seeking work back. it might be mentioned that though not explicit, evidences of discrimination can be seen in employing labour which is more due to the nature of operations in cotton farms.

3.3.4 Freedom of Association and Collective Bargaining

Freedom of association and collective bargaining is a very important pillar of fundamental principles and rights at work (Box 6). This status of things at field level and the vulnerable situation of cotton farm labour in the study area. This field study investigated freedom of association and collective bargaining with respect to occupational health and safety conditions, working hours, leave, wages, social protection and non-discrimination. Table 3.19 indicates that majority of farmers (98.46 percent) have communicated face to face with their cotton farm labour followed by phone regarding these issues (62.23 percent). Out of the total sampled farmers, 27.76 percent male farmers have negotiated with their labour in the last three years (Table 3A.45). Only 0.90 percent of female farmers have negotiated with their labour**.** The two-sample t test conducted across farmers by gender revealed that there is a significant (10 percent level) gender based difference in negotiating. As per the figure 3.10, majority of the negotiations by male farmers were with respect to wages (24.32 percent) followed by working time (13.83 percent)**.** Among the workers, the negotiations on issues of wages, working time, dismissal conditions and inclusive of people with disabilities are higher among female workers as compared to male workers[54].

54 The two sample t test run shows that the means are significantly different with p value 0.002 and t value is -3.06 with respect to wages and p value 0.00, t value is -3.11 with respect of working time, p value 0.04, t value is -2.08 with respect to dismissal conditions and p value 0.04, t value is -2.08 with respect to inclusive of people with disabilities.

Table 3.19 Means of communication with the labour by farmers

Communicating with employees	Particulars	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
By holding meetings	Yes	1 (0.5)	1 (1.5)	0 (0)	1 (1.3)	2.49 (0.6)
	No	95 (97.4)	98 (98.5)	100 (100)	98 (98)	392 (98.6)
	DK-NA	2 (2.1)	0 (0)	0 (0)	1 (0.8)	3 (0.76)
	All	98 (100)	99 (100)	100 (100)	100 (100)	397 (100.0)
Face-to-face	Yes	95 (96.8)	99 (100)	99 (99.5)	98 (98)	391 (98.5)
	No	1 (1.1)	0 (0)	1 (0.5)	1 (1.3)	3.10 (0.8)
	DK-NA	2 (2.1)	0 (0)	0 (0)	1 (0.8)	3 (0.7)
	All	98 (100)	99 (100)	100 (100)	100 (100)	397 (100)
By phone	Yes	54 (55.3)	36 (36.3)	77 (77)	61 (60.7)	247 (62.2)
	No	42 (42.6)	62 (62.2)	23 (23)	39 (38.6)	146 (36.8)
	DK-NA	2 (2.1)	1 (1.5)	0 (0)	1 (0.8)	3.72 (0.9)
	All	98 (100)	99 (100)	100 (100)	100 (100)	397 (100)

Source: Farmer schedules

***Note**: Figures in parenthesis are percentages*

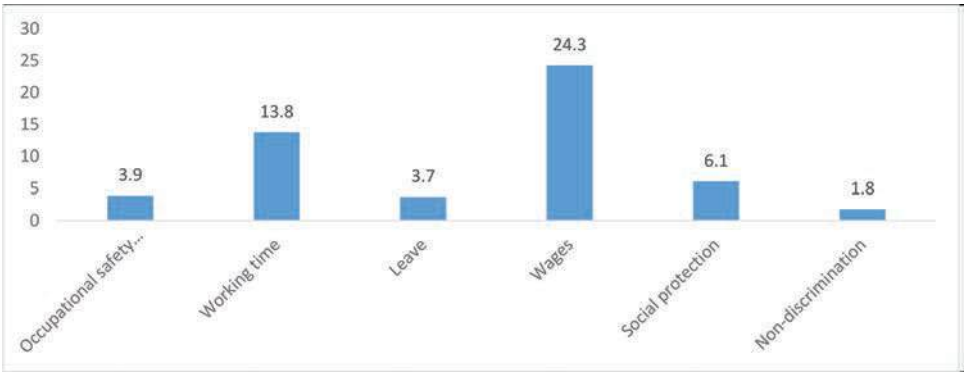

Figure 3.10 Type of negotiations conducted with labour by farmers

Source: Farmer schedules

Collective action of the farmers and labour is absent in the study districts. One of the reasons for lack of collective action cited by the stakeholders is the difficulty in separating the farmers and labour who are often the same. With farmers and labour being the same, chances of unions are bleak, according to farmers. There was an association in Jogulamba Gadwal till a few years ago, of the organisers working for the seed companies. While the future reveals the possibility of unions and collective action of farmers and labour separately, there are some attempts in the form of Farmers Producer Companies to help the farmers (Box 6).

Box 6 Farmers Producers Company: ***Agency for collective action and bargaining power of the labour and farmers***

MAREDU Farmers Producers Company (FPC) has 500 farmers as members, spread over 16 villages from four mandals (Chandur, Kangal, Nampally and Gurrapadu) of Nalgonda district. The FPC mostly caters to the needs of cotton farmers (70%) followed by paddy (20%) and redgram and vegetables (10%). The FPC is presently focusing on distribution of quality inputs such as fertilizers, pesticides and seed to its members. The FPC is also promoting organic products for improvement of soil health. In the coming days they are also planning to buy cotton from farmers so as to avoid manipulation by brokers.

"With this collectivization of farmers through FPC formation, we will be in a position to buy good quality cotton from farmers and make them cash payment immediately without any delay. The middleman takes away 2 kgs of cotton towards wastage but we, through FPO have decided to reduce it to 1 Kg only. We also deduct gunny back weight. All these measures will benefit the cotton farmers significantly. From 2022 the FPO plans door deliveryof the fertilizers to farmers. On the guarantee of FPC director, the FPO is planning to give credit card to best farmers to access the crop inputs from FPC without any money. Still modalities are being worked out in this regard", explained the CEO of the FPC, Kattangur.

The FPC is planning to tie up with Samunnathi Finance and lend cash to farmers to reduce farmers's dependence on banks for crop loans. The FPO directors have attended a sensitisation meeting organized by the District Collector regarding child labour. Regarding the need for forming unions for cotton labour, Bemonapalli Sreenivasulu, Chairman of Maredu FPC, says. (Rythu, rythu coolie okkare, sangatitham cheyadam kastam)farmer and agricultural labour are one and the same many a time and it is difficult to organize them into union as they cannot be distinguished into exclusive common interest group from the other). He implied that small and marginal farmers don a dual role of farmer and labour and hence union formation may be difficult due to conflicting interests. According to the Chief Executive Officer (C.E.O) of FPC in Kattangur, input cost reduction and marketing of produce are big challenges faced by farmers of the Nalgonda district. "After forming into FPC we are being treated with respect by the district officials including the agriculture department. This is an example of the benefit of the freedom of forming an association", said Madhavgoni Nagamani, one of the directors of MAREDU FPC.

***Source**: Stakeholder interview with FPOs Farmers and Directors, Nalgonda*

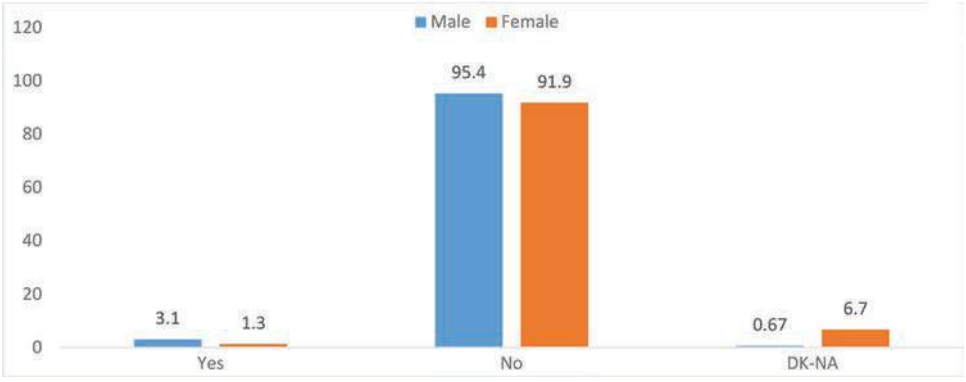

Figure 3.11 Distribution of the labour by membership in workers' union

Source: Worker schedules

Cotton farming sector is unorganised with least presence of unions and agency for collective action (Box 8). Around 92 percent of labour across the districts did not join a union and 6 percent did not respond to the question (figure 3.11). Around 74 percent of labour reported that they were approached regarding joining a union and 12 percent of labour was not aware of the benefits of joining union (figure 3.12). When a situation comes where farmer can decide the price of his produce, there is a possibility of labour

getting united into union says a big farmer of Pudur village in Jogulamba Gadwal district ("*Rythu ki dhara nirnayinche adhikaram vacchinappudu labour atlaa unit ga undesthithi vasthadhi*").

When labour was asked about how farmers react to their labour being member of union, only 42 labour responded out of 400 labour.Out of this 42 labour only 14.6 percent across all districts reported that they were fired from work and farmers have refused to renew work contracts, rest of them have not responded to the question (Table 3A 46). Again a majority (62 percent) labour reported that labour disputes in workplace were non-existent and (36 percent) reported they rarely existed (Table 3A 47). Similar to what farmers have reported (Table3A.48), the majority of labour also reported (Table 3A.48) that they negotiated mostly with respect to wages and work time (Box 9). Majority labour (44.97 percent) said negotiation was partially successful and around 28 percent said it was successful and only 21 percent said it was not successful. Speaking about the unionization for labour, Yeramalu Laxmi, says, ("*Meme rythulam, meme koololllam*"), they are both farmer and labour. She meant that this would amount to unionising to fight against their own issues as labour and members of SHGs were doing much better than farmers as members of FPOs (Box 7).

Box 7 Efficient delivery of inputs and Credit: Farmer Producer Organisations or Self-HelpGroups?

Board members and member farmers of selected FPOs in Adilabad and Warangal districts are not happy with their functioning. Jaiseva Farmer Producer Company in Jamini village in Jainad Mandal, Adilabad district is dealing with cotton and redgram crops and having 203 member farmers. The FPO is located in the less irrigated and tribal concentrated area. The CEO, P.Suresh explained that due to lack of financial support they are supplying seeds and fertilisers in a rented shop and expressed that there is no co-operation from the members. As these inputs are supported in the village itself, this reduces the transportation cost by Rs. 10-20 per bag. "We are not able to engage in marketing of these crops due to lack of proper storage facility" the CEO said. Member farmers argue that seeds and fertilizer are being supplied by the FPO but the rates charged are not same for all. "Fertilisers are not being given to us directly and different brands are supplied and hence there are different prices' Board members said. The farmer members argue that at present they are not getting any loans from the FPO and completely depend on commission agents for credit at a high rate of interest for taking up

crop cultivation activities. They are caught in a vicious circle that due to non-payment of old debts with the bank they cannot get new loans and hence depend on non-institutional sources which charge high rates of interest. In case of failure of crop due to weather or pest attack they run into huge losses and fall in to the debt-trap. "If irrigation is provided we can take up crops in rabi season and earn additional income"- they added. Irrigation and institutional credit are the primary demands of the farmers of this FPO.

Eruvaka Farmer Producer Company has a branch office in Dammannapet village, Warangal district, which is about 25 km away from the main office. Because of this, farmer members are getting seeds and fertilisers from the district head-quarter which is 11 km away from the village. However, the information has not reached all the members properly and on-time. The flip side is that while there are 400 members in this branch office, they are not contributing anything to FPO.

Jai Bhavani Raitu Sangham in Khairdatwa village in Adilabad district run by ST farmers provides a better case of SHGs in solving the finance and input problems of farmers residing in that village. It started as a SHG during 2004 with 20-50 members and later registered as Raithu Sangham. Mr.Krishna is the head of the organization and there are 75 farmers as members. The Sangham has one Director, Secretary and 12 board members. Monthly they collect Rs.100 from each member. They meet on 12th of every month to pay the subscription fee and also discuss matters related to cultivation. It has capital of Rs.25 lakhs and provides loans to member farmers and non-member also at 2 percent rate of interest. The average loan per farmers is about Rs. 45,000. None of the cultivators from this village have taken loans from banks. It also supplies seed, pesticides and fertilisers. It has a tie-up with Praja Mitra, an NGO located in Utnoor for the supply of inputs. The Sangham also collects cotton and sells in the Adilabad market or to the CCI wherever the price is high. It takes minimum commission for this and utilizes this for the purpose of transportation. It also started another association Sri Anjaneya Committee to provide loans for health and other issues. "Differences and disputes may not arise as there is a system of transparency in the activities of the society as accounts are read during the annual meetings of the society" the accountant Mr. Tukaram said. With the supply of loans, inputs and procurement of cotton for sale, the farmers are able to save their transportation charges and invest in cultivation activities.

Source: Focused Group Discussion with member farmers and executive members, Adilabad and Warangal

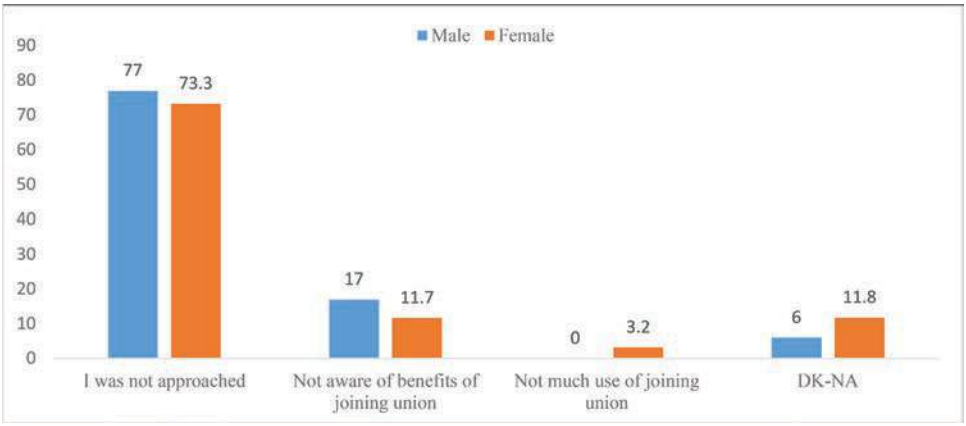

Figure 3.12 Reasons for not joining the workers union

Source: Worker schedules

Box 8 Trade Unions – Awareness on FPRW issues

According to Devender Reddy, All India Trade Union Congress (AITUC) district coordinator, Nalgonda "the ILO project on FPRW has given trade unions a good opportunity to focus on forming associations for agriculture labour". They have learned in-depth about the issues in cotton crop because of ILO project. It was a good and different experience for these trade unions with new relations developing with people in villages. Devender Reddy says, "Nobody is resisting joining cotton workers union". They are called as "Vyavasaya Karmika Sangham" (Agriculture Labour Association). AITUC in Nalgonda district is creating awareness on issues of FPRW, wages, need to form labour associations and the facilities for migrant labour and so on. This is carried out in 25 villages in various mandals. However these villages are not the villages selected by CESS for its empirical study on FPRW issues on cotton. The district coordinator informed that, despite informing about *Aam Aadmi Bhima Yojana*, no one is showing interest in it. He feels that *bearing transport charges(auto charges) of labour is becoming a burden for small and marginal farmers.*Similarly, women in agriculture with small kids are facing problem due to lack of care facilities. The Anganwadi centre is only for 3 years old kids. He suggests that there should be a crèche in the village atleast during cotton picking time to take care of kids below three years. In villages wherever unionization has taken place, the wage rate has increased by Rs.50. He reports that whenever migrant labour comes to the district for cotton picking, they are exploited by the labour contractor who brings them here. He collects Re.1 per 1/

kg of cotton picked by the migrant labour. In a day the group he coordinates picks 1500 kgs of cotton and he gets Rs.1500 from them. AITUC is coordinating with District Child Protection Officer, agricultural department and labour department officials to create awareness on FPRW issues among small and marginal farmers and agricultural labour. In addition to organizing physical meetings, AITUC has published brochures, posters and pamphlets to create awareness. They are also using cultural units to create awareness on FPRW issues. Mr.Devender Reddy feels that this work of creating awareness about FPRW and forming unions for agicultural labour has to be continued for some more time to get the desired outcome. Similarly it has to be expanded to new villages and the agricultural labour unions in the existing villages should also be strengthened.

Stakeholder interview with AITUC Trade Union District Co-ordinator, Nalgonda

***Source**: Stakeholder interview with trade union, Nalgonda District*

Box 9 When do labour negotiate?

1. When the sky becomes cloudy and it is likely to rain, the labour negotiates with farmers, as carrying out operation on time becomes important.
2. When there is a standing crop with bumper yield, labour bargains for increasing the picking price by a rupee or two so as to finish the harvest quickly.
3. During daily wage work, when the task cannot be completed by working for 8 hours, labour negotiates for more wage amount or extra payment

4. During the weeding operation time when there is heavy grass, they negotiate with farmer.
5. During the cotton seed sowing time, they ask for more wage (because the farmer will be in a hurry to sow before soil moisture exhausts, and timely sowing is done to get a better crop yield).
6. Whenever the hire charges of plough bullock (with accompanying person) are increased, the labour working on daily wage also seek an increase in their wage.

Source: *Focused Group Discussions, Jogulamba Gadwal and Nalgonda*

3.5 Prevention

Cotton production tasks are likely to pose occupational health risks for the labour in cotton farms. Moreover, labour also face risks from co-workers or employers related to violence or harassment. The study probed into whether the farmers had any idea of these issues. More than 60 percent of small and big farmers had good understanding of health effects of cotton farming on their labour (Table 3A.49). However, substantial number of farmers (more than 36 percent) still does not have any idea of health risks for labour in cotton farming. Only 19.52 percent of small farmers and 23.20 percent of big farmers said that employees or labour working with them received training or information from them about work-related health risks and their prevention (Table 3A.17). Data also revealed that 17.42 percent of small farmers and 13.39 percent of big farmers have given any information to their labour about risks related to violence and harassment at work place and how to prevent them (Table 3A.18). Cotton is a crop where continuous spraying of pesticides is done to contain the pests. Spraying is more regular in cotton seed production also. Workers and farmers in these farms face huge risk from the deadly pesticides being sprayed on the farm. Hence, the provision of various kinds of protective equipment assumes importance to safeguard labour health. The present study revealed sad findings about the provision of this protective equipment across four study districts of Adilabad, Warangal, Nalgonda and Jogulamba Gadwal. According to the table 3.20, 4.98 percent farmers provided gloves, safety shoes (0.40 percent), work trousers (0.12 percent), 6.8 percent provided breathing mask, protective glasses (2.0 percent), and hearing protection (2.50 percent). It can be seen from table 3.21 that a higher percent of labour were wearing protective equipment than what the employers have provided. Data shows that 3 percent were gloves, 1percent safety shoes,

23 percent work overalls, 29.7 percent work trousers, 4 percent protective glass, and 18 percent hearing protection. This clearly shows that labour are more concerned about their health and safety and keen on using this equipment even though the farmer has not provided them (Table 3A.55).Majority (92.4 percent) of farmers have insisted on wearing only work overalls and did not insist much on wearing remaining protective equipment (Table 3A.55). Only 11.0 percent males and 5.5 percent females labour received training from the farmer on how to use the protective equipment (Table 3A.56).

Table 3.20 Provision of equipment to labour by farmer

Equipment	Response	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Gloves	Yes	9 (9.2)	6 (6.4)	1 (1.4)	5 (4.7)	20 (5.0)
	No	89 (88.8)	93 (92.6)	98 (97.6)	95 (94.5)	375 (93.77)
	DK-NA	2 (2)	1 (1)	1 (1)	1 (0.8)	5 (1.2)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Safety shoes	Yes	1 (1.4)	0 (0)	0 (0)	0 (0)	2 (0.40)
	No	97 (96.5)	99 (99)	98 (99.4)	99 (99.3)	393 (98.8)
	DK-NA	2 (2)	1 (1)	1 (0.6)	1 (0.8)	4.4 (1.1)
	All	100 (100)	100 (100)	99 (100)	100 (100)	400 (100)
Work trousers	Yes	0 (0)	0 (0.2)	0 (0)	0 (0.3)	0.47 (0.1)
	No	98 (98)	99 (98.8)	98 (97.9)	99 (98.9)	397 (98.4)
	DK-NA	2 (2)	1 (1)	2 (2.1)	1 (0.8)	6 (1.5)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Breathing mask	Yes	8 (8.2)	10 (9.8)	3 (3)	7 (6.6)	28 (6.9)
	No	90 (89.8)	89 (89.2)	95 (94.9)	93 (92.6)	367 (91.6)
	DK-NA	2 (2)	1 (1)	2 (2.1)	1 (0.8)	5 (1.47)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400 (100)

Equipment	Response	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Protective glasses	Yes	4 (4.1)	2 (1.6)	1 (1)	1 (1.3)	8 (2.0)
	No	94 (93.9)	97 (97.4)	98 (97.9)	98 (97.9)	387 (96.7)
	DK-NA	2 (2)	1 (1)	1 (1.1)	1 (0.8)	4.89 (1.22)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Hearing protection	Yes	6 (6.2)	2 (1.7)	0 (0)	2 (2.4)	10.0 (2.5)
	No	92 (91.7)	97 (97.4)	98 (98.4)	97 (96.9)	384 (96.3)
	DK-NA	2 (2)	1 (1)	2 (1.6)	1 (0.8)	5.4 (1.36)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Helmet	Yes	7 (6.7)	3 (3)	1 (0.8)	1 (1.4)	11 (2.9)
	No	91 (91.3)	96 (96)	98 (98.2)	98 (97.9)	384 (95.9)
	DK-NA	2 (2)	1 (1)	1 (1)	1 (0.8)	5 (1.2)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400 (100)

***Note**: Figures in parenthesis are percentages*

Source: Farmer schedules

Nearly 77 percent of farmers reported that their labour (both male and female) did not receive any training or information regarding the use of protective equipment (Table 3A.19). Similarly, 77 percent of farmers reported that they did not insist their workers to use the protective equipment. However, more than 50 percent are taking care of upkeep and cleaning of the equipment on cotton farm.

Table 3.21 Labour wearing protective equipmentwhile working in cotton farms

Sl. No	District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
1	Gloves	4 (15.4)	2 (3.3)	6 (6.1)	3 (24.5)	5 (5.5)	9 (9.3)	0 (0)	0 (0.5)	0 (0.5)	0 (2.2)	0 (0.5)	1 (0.7)	8 (15.4)	6 (1.7)	12 (3)
2	Safety shoes	3 (12.6)	0 (0)	3 (2.9)	2 (14.2)	0 (0)	3 (2.8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (10.3)	0 (0)	4 (1)
3	Work overalls	0 (0)	1 (1.5)	1 (1.1)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.7)	1 (0.7)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0.6)	2 (0.6)
4	Jacket or work coat	10 (39.3)	44 (59.3)	55 (54.7)	5 (36)	39 (46.6)	43 (44.5)	0 (0)	7 (7.8)	7 (7.7)	0 (2.2)	13 (14.9)	13 (13.5)	16 (30)	76 (22.4)	90 (23.1)
5	Work trousers	14 (57)	61 (81.2)	75 (76)	9 (61.9)	52 (63.7)	61 (63.3)	0 (0)	10 (10.9)	10 (10.8)	0 (0)	1 (1.5)	1 (1.3)	24 (45.7)	95 (28.1)	116 (29.7)
6	Breath-ing mask	18 (73.2)	70 (93.8)	89 (89)	14 (100)	71 (85.7)	86 (88.6)	0 (0)	17 (18.2)	17 (18)	2 (12.6)	20 (22.4)	21 (21.3)	36 (68.4)	136 (40.3)	168 (42.9)
7	Pro-tective glasses	7 (28.7)	5 (6.6)	12 (11.7)	4 (25.8)	2 (3)	7 (7.6)	0 (0)	1 (1.2)	1 (1.2)	0 (0)	0 (0)	0 (0)	11 (21.4)	7 (2.1)	16 (4)
8	Hearing protec-tion	10 (38.2)	25 (32.9)	34 (34.1)	10 (71.1)	27 (33.1)	39 (40.9)	0 (0)	6 (6.7)	6 (6.6)	1 (6.3)	15 (16.8)	16 (15.5)	22 (42)	53 (15.9)	72 (18.4)
9	Helmet	3 (12)	0 (0)	3 (2.8)	0 (0)	0 (0)	0 (0)	1 (54.6)	0 (0)	0 (0.5)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	3 (0.8)

Source: Worker schedules **Note**: Figures in parenthesis are percentages

Facilities provided at Farm to cotton labour: More than 97 percent of farmers are providing drinking water and non-potable water to labour in their cotton farm (Table 3.22). The empirical data from table 3.23 matches with the response in table 3.22.

Table 3.22 Facilities provided at work place as reported by farmers

Category		Adilabad	Warangal	Nalgonda	Jogu-lamba Gadwal	All Districts
Drinking water	Yes	93 (93.5)	98 (98.3)	100 (100)	99 (99.3)	391 (97.80)
	No	4 (4.5)	2 (1.7)	0 (0)	0 (0)	6 (1.46)
	DK-NA	2 (2)	0 (0)	0 (0)	1 (0.8)	3 (0.75)
		100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Non-potable water	Yes	92 (92.1)	98 (98.3)	100 (100)	99 (99.1)	389 (97.37)
	No	6 (5.9)	2 (1.7)	0 (0)	0 (0.1)	8 (1.89)
	DK-NA	2 (2)	0 (0)	0 (0)	1 (0.8)	3 (0.75)
		100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Creche	Yes	2 (2.3)	0 (0)	7 (7.5)	14 (14)	26.72 (6.68)
	No	96 (95.6)	100 (100)	91 (90.6)	85 (85.2)	367 (91.86)
	DK-NA	2 (2)	0 (0)	2 (2)	1 (0.8)	6 (1.46)
		100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Shade and floor sheet for labour	Yes	29 (28.9)	29 (29)	50 (50.4)	14 (14.1)	133 (33.17)
	No	69 (69.1)	71 (71)	50 (49.6)	85 (85.2)	264 (66.08)
	DK-NA	2 (2)	0 (0)	0 (0)	1 (0.8)	3 (0.75)
		100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
First aid	Yes	1 (1)	0 (0.1)	19 (18.5)	8 (8.3)	36 (8.96)
	No	97 (96.9)	100 (100)	80 (80)	91 (91)	359 (89.76)
	DK-NA	2 (2)	0 (0)	1 (1)	1 (1)	5 (1.28)
		100 (100)	100 (100)	100 (100)	100 (100)	400 (100)

Category		Adilabad	Warangal	Nalgonda	Jogu-lamba Gadwal	All Districts
Separate latrines or toilets for women and men labour	No	98 (98.0)	97 (96.6)	100 (100)	99 (99.3)	395 (98.84)
	DK-NA	2 (2)	3 (3.4)	0 (0)	1 (0.8)	5 (1.16)
		100 (100)	100 (100)	100 (100)	100 (100)	400 (100)
Hygienic bathrooms with appropriate lighting, and with locks on their doors	No	98 (98.0)	95 (94.8)	100 (100)	99 (99.3)	394 (98)
	DK-NA	2 (2)	5 (5.2)	0 (0)	1 (0.8)	6 (1.38)
		100 (100)	100 (100)	100 (100)	100 (100)	400 (100.0)

Source: Worker schedules ***Note****: Figures in parenthesis are percentages*

Shade and floor sheet was provided by 33 percent of farmers. However, other important facilities were not provided to the labour. These include crèche (91.86 percent), first aid (89.76 percent), separate toilets for women and men (98.84 percent) and hygienic bathrooms (98 percent). The major reasons reported by farmers for not providing creche, shade and floor mat and first aid are that the labour manage on their own (Table 3A.57). While the main reason for not providing separate latrine for men and women and hygienic bathrooms are that it is expensive and beyond the means of the farmer. Similarly, only 6.30 percent of farmers facilitated pregnant women to adapt to their work in cotton farms (Table 3A.58)

3.5.1 Safety at Work in Cotton Farms

Safety of labour assumes importance given the production risks involved in commercial cotton production and cotton seed production. The study found that (Table 3.24) according to 73.3 percent of labours, work in cotton farms is somewhat hazardous followed by 8.6 percent who reported it as hazardous. The reasons expressed by labour for this are that it affects the overall health according to 32.4 percent and causes skin cuts according to 47.1 percent. Only 14.3 percent reported that it is not hazardous to work in cotton farms. Accidents happening due to exposure to chemicals, commuting and transportation were reported as minor problems by labour (Table 3A.58). Across all districts 65 percent labour informed that they can withdraw from dangerous work situation (Table 3A.39). Negligible number of labour has reported that they have lost working days due to all such accidents.

Table 3.23 Faciltiesprovided at work place as reported by labour

Sl. No	District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
1	Drinking water	25 (98.4)	69 (91.4)	93 (93)	14 (100)	82 (98.9)	96 (99.1)	2 (100)	92 (99.5)	94 (99.5)	12 (100)	86 (97.7)	98 (97.9)	53 (99.3)	331 (97.9)	383 (98)
2	Non-potable water	25 (100)	71 (95.1)	96 (96.2)	14 (100)	82 (99.2)	96 (99.4)	2 (100)	92 (99.7)	94 (99.7)	12 (100)	84 (95.8)	96 (96.2)	53 (100)	333 (98.4)	385 (98.5)
3	Creche	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (6.9)	6 (6.9)	0 (4.1)	14 (15.4)	14 (14.1)	0 (0.7)	20 (6)	22 (5.5)
4	Shade and floor sheet for labour	4 (14.2)	19 (25.1)	23 (22.6)	3 (18.6)	14 (17.3)	17 (17.5)	1 (45.4)	42 (45.5)	43 (45.5)	2 (12.6)	19 (22.2)	21 (21.1)	9 (16.9)	118 (35)	130 (33.3)
5	First aid	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	14 (15.4)	14 (15.3)	0 (3.9)	6 (6.6)	6 (6.3)	0 (0.7)	32 (9.6)	34 (8.7)

Source: Worker schedules

***Note**: Figures in parenthesis are percentages*

Table 3.24 Response of labour on safety of work in cotton farms

Sl. No	District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	Sample	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
1	Do you consider your work in cotton farms to be...															
	Not hazardous	4 (17)	15 (20.1)	19 (19.4)	2 (11.1)	13 (15)	14 (14.2)	0 (0)	15 (15.3)	15 (15)	0 (0)	4 (4.7)	4 (4.1)	6 (11)	51 (14.6)	57 (14.3)
	A little hazardous	17 (69.6)	47 (63.1)	65 (64.6)	6 (43.9)	53 (61.6)	58 (57.9)	2 (66.7)	73 (75.2)	75 (74.7)	12 (100)	78 (88.3)	90 (89.6)	36 (66.3)	256 (74)	293 (73.3)
	Hazardous	3 (13.5)	13 (16.9)	16 (16.1)	6 (45)	15 (17.6)	23 (22.9)	0 (0)	3 (3.1)	3 (3.1)	0 (0)	3 (2.9)	3 (2.6)	11 (20.8)	25 (7.3)	35 (8.6)
	Very hazardous	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0.3)	0 (0.3)	0 (0)	3 (3)	3 (2.6)	0 (0)	2 (0.6)	2 (0.5)
2	The nature of work is hazardous because.....															
	It affects overall health	20 (79.6)	45 (59.8)	64 (64.4)	5 (36.7)	35 (41.1)	40 (40.2)	2 (66.7)	19 (19.7)	20 (20.3)	5 (37.5)	19 (21.6)	23 (23.4)	32 (58.4)	102 (29.6)	130 (32.4)
	It causes skin cuts	1 (4.4)	13 (17.6)	15 (14.6)	6 (41.9)	29 (34.3)	36 (35.7)	0 (0)	54 (55.6)	55 (54.8)	7 (62.5)	60 (68.2)	68 (67.6)	14 (26.8)	170 (49.1)	188 (47.1)
	It affects vision	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.3)	1 (1.1)	0 (0)	3 (3)	3 (3)	0 (0)	0 (0)	0 (0)	0 (0)	7 (1.9)	7 (1.8)

Source: Worker schedules

Note: Figures in parenthesis are percentages

Table 3.25 shows that, 7.7 percent of farmers have reported incidence of harassment of labour at workplace followed by accidents due to snake bite/insect bite (4.8 percent) and violence (0.7 percent). On an average across all districts, 2 cases of accidents, 2 cases of harassment and one case of violence were reported (Table 3A.60). According to farmers (Table 3A.61), most of the accidents in cotton cultivation are due to mis-handling or exposure to chemicals (32.59 percent), accidents while commuting for work (35.69 percent) and accidents occurring while transporting cotton (7.73 percent).

Table 3.25 Response of farmers on the occurrence of accidents in the past 12 months (Yes percentage)

Sl. No	Type accidents	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
1	Accidents (including snake bite and insect bite)	2.5	5.8	4.9	6.7	4.8
2	Violence	0.0	0.0	1.9	0.00	0.7
3	Harassment	0.0	0.0	17.4	5.8	7.7

Source: Farmer schedules

Across all study districts 83.3 percent of farmers said that labour received compensation, cost of hospitalization and treatment in case of workplace accidents. Another method of compensationrecorded was 'partly by farmers' while the rest is borne by the labour according to 7.7 percent of farmers (Table 3.26).

Table 3.26 Response of farmers on covering treatment or hospitalization expenses (percent yes)

Sl. No	Source	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
1	Farmer	100	98.3	78.0	72.1	83.3
2	Insurance company	0.0	0.0	10.6	4.3	6.5
3	Other (Farmer and Labour)	0.0	0.0	7.3	23.7	7.7
4	DK-NA	0.0	1.7	4.2	0.0	2.5

Source: Farmer schedules

3.5.2 Occupational Health

Given their regular involvement in cotton production activities there is a possible impact on the health of cotton farm labour. This study made an attempt to get an idea of the general health of the labour as perceived by them. Field data (Table 3.27) indicated that 62.9 percent of the labour across all districts perceived they had good health followed by 16.9 percent felt it was fair and 11.2 percent who perceived that they had very good

health. Majority (82.4 percent) of labour reported that work in cotton farms harms health a bit (Table 3A.62). Complaints of fatigue by the cotton labour are a frequent problem. Problems faced occasionally by majority labour are muscle and bone pain, skin diseases, allergies, fever and head ache/dizziness (Box 10). Muscle and bone pain is reported more by male than female workers[55]. On the other hand, fever and fatigue are health complaints reported more by female than male workers[56]. However, majority of the labour did not report problems such as sleep disorders, hearing problem, digestive problems, blood disorders, visual disturbances and breathing problems (Table 3A.63). Problems such as skin diseases, allergies and fatigue were mainly related to working in cotton farms (Table 3A.64). Majority of the labour (94.0 percent) reported that their employers do not provide for any medical checkup for emergency treatment (Table 3A.65).

55 The two sample t test yields significant difference between male and female in this regard with p value 0.01 and t value is 2.53.

56 The two sample t test yields significant difference between male and female in the case of fever with p value 0.01 and t value is -2.47. The two sample t test yields significant difference between male and female in the case of fatigue with p value 0.01 and t value is -2.36.

Table 3.27 Response of labour on their general health

Sl. No	District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	N	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
1	Very good	7 (28.8)	7 (9)	14 (13.6)	1 (5.9)	3 (3)	3 (3.5)	0 (0)	13 (13.4)	13 (13.2)	0 (0)	8 (8.9)	8 (7.9)	8 (14.6)	37 (10.8)	45 (11.2)
2	Good	13 (50.4)	53 (70.7)	66 (65.9)	11 (75.5)	57 (66.5)	68 (67.9)	1 (30.3)	57 (59.2)	59 (58.6)	12 (100)	50 (57.1)	62 (62)	35 (65.6)	217 (62.6)	252 (62.9)
3	Fair	2 (6.4)	9 (11.5)	10 (10.3)	3 (18.6)	3 (3.8)	7 (6.6)	1 (36.4)	19 (19.1)	19 (19.3)	0 (0)	26 (30)	27 (26.6)	6 (11.5)	61 (17.5)	68 (16.9)
4	Poor	3 (10.3)	1 (1.5)	4 (3.5)	0 (0)	14 (16.8)	14 (13.5)	0 (0)	0 (0)	0 (0)	0 (0)	3 (2.9)	3 (2.6)	2 (4.5)	11 (3.1)	13 (3.2)
5	Very poor	0 (0)	5 (7.3)	6 (5.6)	0 (0)	2 (1.9)	1 (1.5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (1.4)	5 (1.2)

Source: Worker schedules

***Note**: Figures in parenthesis are percentages*

Table 3.28 Average number of days of sickness and days absent due to sickness

Duration	Adilabad	Warangal	Nalgonda	Gadwal	All Districts
Average days of sickness in last year	35	51	29	36	34
Average days absent due to sickness in last 3 months	9	12	11	13	11

Source: Worker schedules

Across all districts on an average 34 days of sickness was reported by labour during last 3 to 12 months. Warangal labour where pesticide spraying is very high has fallen sick for more number of days (Table 3.28) during last year. On an average labour were absent for 11 days due to sickness in the last 3 months, the main reasons being minor ailments (57.2 percent) followed by hospitalization (5.4 percent).Thirty percent of labour have reported minor ailments and hospitalization as the major reasons for absence from work (Table 3.29).

Table 3.29 Response of labour on reasons for absence from work (percentages)

Sl. No	Responses	Adilabad	Warangal	Nalgonda	Gadwal	All Districts
	Sample	**100**	**96**	**92**	**100**	**388**
1	Only sickness/minor ailments	65.4	54.1	55.8	54.8	57.2
2	Only hospitalization	6.0	5.0	5.6	4.6	5.4
3	Both	22.2	36.7	31.7	28.9	30.3
4	Other (specify)	6.4	4.2	6.9	11.7	7.1

Source: Worker schedules

Box 10 Occupational Safety and Health

Health problems experienced by farmers/workers related to cotton farming activities: Vomiting, burning of eyes, muscle pains and fatigue are the health risks expressed by both cotton farmers and cotton workers in FGDs conducted in Adilabad and Warangal districts.

Vomiting sensation (nausea) was reported when they take up weeding and picking of cotton under hot weather conditions. Body and muscle pains and fatigue are other health issues related to working in hot weather conditions. Some complained of skin allergy while picking cotton and burning of eyes while spraying pesticides.

Provision of protective equipment by the farmer is nil and the equipment and care that has been taken by the workers are traditional/home alternatives such as wearing a shirt and covering the nose and head with a cloth.

Apart from seasonal ailments such as cold and fever, snake bite and thunderbolt strike are the other serious occupational hazards.

Role of Agricultural Department

Technical officers at district/mandal level instruct the farmers and demonstrate to the method of spraying pesticides and the precautions to be taken. They also advise them to stop using hemicals with high toxicity ('red label') and encourage them to use those with low toxicity ('green label').

Training/Information sharing on health hazards in cultivation activities is done at Rythu Vedika where all farmers attend. They inform them about fertilizer application and what and how to use them. They monitor and control fertilizer mechanism.

The Agricultural Department conducts training programmes to provide inputs to dealers also about agriculture related activities in collaboration with MANAGE, Hyderabad. They conduct demonstrations and explain diagrammatically which organs will be affected while doing various cultivation activities.

Source: FGDs with farmers and Agriculture Department officials, Adilabad and Warangal

Box 11 Reduced area under seed production in Telangana- Shifting of Seed Companies to neighbouring States

Many farmers in Jogulamba Gadwal are into cotton seed production. Organisers and sub-organisers are important stakeholders in the system of seed production and face risks too. The total area under seed production in Jogulamba Gadwal is around 30,000 to 40,000 acres. There may be around 150 main/sub organizers in Jogulamba Gadwal alone and around 300 in the whole district. The biggest organiser covers an area of 2500-3000 acres while the small organizer covers around 50 acres. Generally seed companies advance money to organisers and in turn they advance to farmers cultivating seed cotton. Sub-organisers invest their own money to lend to farmers. Mr Vishnu supports 200 farmers for seed production covering an area of 250 acres.

Sowing for seed production is completed during the first fortnight of June. Farmers are provided with 750 gms of foundation seed out of which 450-500 gms are female lines and 150-200 gms are male lines. The cost of this 750 gms seed is between Rs.400 to Rs.430. A minimum of 70,000 to 80,000 rupees/acre is needed

for cultivation of seed cotton. The family saves around Rs.30,000 - 40,000 when they depend on family labour. For each migrant labour working in cotton farms, the farmer has to pay Rs15,000/ per month. When local labour is employed they are paid Rs300-400 per day for crossing. As there is heavy demand for labour, the seed production farmers invite labour from other places. For seed production farmers, Vishnu pays advance ranging between Rs.20,000 to Rs.70,000. However in in recent times, the advance amount paid to farmers is coming down due to fear of political interference. This is done to keep seed farmers in their grip and using them as their vote bank. Recently a big political leader of the district has become an organizer himself. This helps them to have contacts with farmers. He supports the farmers by lending money for marriage of their children, house construction and for health needs.

Cases were registered against the companies by conducting raids when the 'seed lots' of farmers were rejected due to poor germination percentage. Due to this companies faced problems. This year the organizers did not get money from seed companies. The interest paid to companies is between 1.5 to 2% per month. Sometimes farmers mix the commercial cotton seed with cotton seeds produced in his farm. As a result of this seed gets rejected. "Some people are playing politics by instigating the farmers whose seed is rejected" says, Vishnu.

Cotton seed production has environment concerns as well. A lawyer has recently filed a case to arrest environment pollution caused due to cotton seed production. After the court verdict, the seed companies have stopped delinting (where diluted HCL and H2So4 acid was being used). However, as a result of this, the transport charges have increased, to get cotton delinted.

The quantum of seed given to farmers for seed production is getting reduced. While area under seed production was 40,000 acres in 2020, it has reduced to around 30,000 acres in 2021 and is likely to further reduce to around 20,000 in 2022.Of late the politicians are asking the seed companies to provide seed to their party workers in different villages. Due to various agitations with regard to issues in seed production and political interference, the seed companies are moving to places like Katulak (Tamil Nadu) and Gadag (in Karnataka).

***Source**: Stake holder interview with organiser and Officials of Department of Agriculture, Jogulamba Gadwal*

Around 77.6 percent farmers said workers are affected by high temperature in workplace, 64.5 percent said they suffered stress, 54 percent said they are affected by physical effort and fatigue and 53.9 percent said they are affected by exposure to chemicals or biological products while working in cotton farm (Table 3.30). Overall 48 percent farmers felt that labour health is a minor problem in running the cotton farm (Table 3A.66). However, 47.9 percent farmers reported labourer health is not a problem in running the cotton farm. Majority (53.9 percent) of farmers felt that labour health problems are only partly due to working in cotton farms (Table 3A.67). Around 35 percent of farmers felt that it has no link to working in cotton farms. Around 52 percent of farmers felt that some cotton production tasks could be detrimental to labour health (Table 3A.68). Across All Districts, 96 percent farmers reported that they do not pay wages to labour if they absent themselves due to sickness (Table 3A.69).

Table 3.30 Response of farmers on labour getting affected by work place hazards

Sl. No	Particulars	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
1	Exposure to chemicals or biological products	58.06	58.89	51.60	50.35	53.93
2	Bad air quality in the workplace	11.17	1.57	19.62	6.50	11.93
3	High temperature in the workplace or dehydration	73.78	90.30	88.77	58.92	77.60
4	Physical effort and fatigue	50.76	61.63	52.90	55.89	54.01
5	Stress	47.68	56.67	70.80	79.19	64.53
6	Lack of hygiene	0.00	0.53	1.10	3.84	1.37
7	Consumption of alcohol or other drugs	0.00	0.00	6.53	2.49	2.97

Source: Farmer schedules

3.6 Summary

Cotton farmers and labour seem to be susceptible to poor working conditions and fallouts of non- compliance with Fundamental Principles and Rights at Work (FPRW). Cotton farming is characterized by workers predominantly comprising women working for mostly male farmers who are about six years older on an average. Labour is engaged mostly on daily wages by both small and big farmers across the study districts. Majority belonged to Backward Classes followed by Scheduled Castes. Small and big farmers were majorly self-employed in cotton farms. None of the big farmers was working as casual labour in agriculture or non-agriculture operations.

Male and female sampled cotton labour was predominantly working on daily wage basis followed by a small percent, working on piece rate basis. Around 50 percent of small and big farmers have leased in considerable amount of land for the cultivation of cotton, which enables them to be self-employed on their cotton farms.

None of the farmers are covered under Aam Aadmi Bhima Yojana but a small percent of small farmers were covered under other schemes such as Prime Minister Suraksha Bima Yojana (PMSBY) and Prime Minister Jeevan Jyoti Bima Yojana (PMPJBY). Labour in cotton farming across the districts is most deprived, being excluded from the benefits of social security measures. Main reasons for non-coverage of farmers under Aam Aadmi Bhima Yojana were lack of awareness of the scheme and inability on part of the farmers to pay the premium. Across all study districts, most of the farmers were recruiting labour on temporary basis. Majority of farmers did not have any oral or written contract. Around 40 percent of these farmers had oral contract with temporary labour.

Both men and women of the family take part in the cotton cultivation operations. Children between 14-18 and those below 14 years are involved occasionally and it is more in the case of small farmers. Children mostly work in cotton farms during Sundays and festival holidays. One of the important reason for children below 18 years working in cotton seed farms is due to the advances taken by the adult labour of the family from cotton farmers. Children working in cotton farms are exposed to extreme cold and heat and also to chemicals.

There are occasions when labour has to work more than the normal 8 hours in the cotton farms and farmers sometime compensate for the extra work done by incentives in kind or cash. Farmers and labour engaged in cotton cultivation face several challenges and risks. Farmers are faced with loss of yields due to erratic rains, labour shortages, accidents, labour disputes and absenteeism of the labour. While labour are faced with risks of break in employment, health hazards, illness, and accidents. Labour in seed production are more vulnerable to falling sick and health hazards.

There are different types of labour forms/ contracts in the cotton fields which are away from the legal and formal system. These include casual labour, contract labour (Gutta), commuting labour, migrant labour, family labour and those working for piece rate. Labour do not confine to sole form of contracts always, but engage in different forms of labour contracts from time to time as means of negotiating with the opportunities available with changing demand for the labour. Migrant labour are mainly found during the cotton picking time and seed crossing in seed cotton cultivation. Often

they are hired through a contractor who exploits them economically. They work from morning 6 am to 6 pm.

To ensure the timely availability of labour during critical operations in cotton farming, the farmers were advancing loan to labour. However incidence of indebtedness to farmers leading to forced labour is negligible. Very small number of labour and farmers are aware of District Vigilance Committee on bonded labour and District Task Force Committee on Child Labour. Their visits to agricultural farms are not to the extent desired.

Some bias was reported by labour based on sexual orientation towards few women labour and against physical disability and migrant labour while hiring them to work on cotton farms. Only, 28 percent male sampled farmers have conducted negotiations with their labour in the last three years and negotiations were negligible by female farmers. Around 92 percent of labour across the districts did not join any union. Around 74 percent of labour reported that they were approached to join a union and 12 percent of labour was not aware of the benefits of joining a union. Negotiations were mostly with respect to wages and work time.

Empirical data clearly indicated that labour was wearing more protective equipment than what their employers had provided. Labour did not receive any training or information regarding the use of protective equipment. Drinking water was an important facility provided by farmers. Majority labour in cotton farms reported that work in cotton farms is a little hazardous. Accidents due to exposure to chemicals, commuting and transportation were reported as minor problems by labour.

Complaint of fatigue by the cotton labour is a frequent problem. Problems faced occasionally by majority labour include muscle and bone pain, skin diseases, allergies, fever and head ache/dizziness. High temperature in work place, stress, physical effort and fatigue and exposure to chemicals or biological products are the main reasons for work getting affected while working in cotton farm. Employers of the cotton labour did not provide medical checkup for emergency treatment. Creating awareness on formation of unions for cotton farm labour can solve many problems faced by labour working in the cotton farms.

CHAPTER 4
Vulnerabilities for non-compliance of Fundamental Principles and Rights at Work among cotton producing communities

4.1 Context of Vulnerability

Vulnerability in the development and poverty-oriented literature emphasises on measuring global human well-being (encompassing current social, economic and political conditions) in a manner that incorporates exposure to potentially harmful social, economic, environmental or political events (Bohle et al 1994). Social vulnerability in the literature mostly talks about the social structure, cultural values and institutions that are cause of or exacerbate the natural hazards and exposes people differentially to the outcomes of the hazards. Social vulnerability is defined as exposure to multiple stressors and shocks including abuse, social exclusion, besides natural hazards. It refers to the inability of the people, organisations and societies to withstand adverse impacts from multiple stressors to which they are exposed. It is the potential to be harmed physically or psychologically.

Social vulnerability is created through the interaction of social forces and multiple stressors, and it is resolved through social (as opposed to individual) means. While individuals within a socially vulnerable context may break through the "vicious cycle", social vulnerability itself can persist because of structural (i.e., social and political) influences that reinforce vulnerability. Social vulnerability is partially the product of social inequalities—those social factors that influence or shape the susceptibility of various groups to harm and that also govern their ability to respond (Cutter et al., 2003). It is, however, important to note that social vulnerability is not registered by exposure to hazards alone but also resides in the sensitivity and resilience of the system to prepare, cope, and recover from such hazards (Turner et al., 2003). Social resilience is the other side of the social vulnerability, it is the capacity of groups or communities to adapt to, or learn to handle, stresses and external political, social, economic or environmental perturbations (Ager 2002).

4.1.1 Vulnerability assessment

A vulnerability assessment is the process of identifying, quantifying and prioritising or ranking the vulnerabilities in any production system. Social vulnerability is differentiated

by age, gender, education levels, income, poverty rate, social capital, extent of livelihood diversification, land holding, race/ ethnicity, class, caste (in Indian context), health status and disability, and access to physical and non-physical resources. The broad indicators of social vulnerability include gender, demographic attributes, disability and special needs (Science Direct.com).

Agriculture is susceptible to climate change, more so in recent times having environment, social and economic challenges in production and supply chains. India which is the world's highest cotton producing country is also witnessing climate change impacts like extreme heat and floods which affect cotton productivity and the economic conditions of population depending on cotton production, impacting their food security and livelihoods. The rise in the number of days over 42 degrees centigrade and changes in monsoon pattern are resulting in extremes of flood and drought. In farming and also in cotton production vulnerability is socially differentiated across farmer categories (big farmers and small farmers) and workers. Other social indicators like caste, gender especially women and children, age, disability, location also contribute to vulnerability.

4.1.2 Indicators of vulnerability in cotton production

Vulnerability indicators specific to cotton production systems across the world comprise climate change events like increased temperature and climate induced pest attack which result in high cost of production affecting the revenues of farmers and wages of workers. This in turns affects human capital factors like health and education.

The 'Physical Climate risk and vulnerability assessment: India Analysis' report highlights the vulnerability in cotton production systems across major cotton growing states in India (Pal, Uma; Rycerz, Amanda; Linares, Alvaro et al 2021). The state of Telangana is projected to experience greater increase in flood risk and precipitation – induced risk relative to other states. While increased temperature is a risk factor for all cotton producing districts, the districts located in Telangana are projected to experience the greatest increase in the number of days when temperature exceeds a threshold of 34°C – a temperature threshold at which, according to the ILO, labour productivity is reduced by 50 percent, being vulnerable to heat stress and increased temperatures. The vulnerability indicators across major cotton growing states according to the report are gender pay gap and absolute wages of cotton growers in Maharashtra, while the characteristic vulnerability indicators for Telangana State include low percentage of irrigated cotton, high percentage of small agriculture holdings, high percentage of female headed households, and significantly low male and female literacy rates. The key drivers of vulnerability for the Gujarat state are high projected water stress, and

low organic carbon stocks. Extreme rainfall reduced cotton farmers' income by around 13.7percent in the kharif season and 5.5 percent in rabi season in the 2017-18 year (Economic Survey, Govt. of India 2017-18). Some other vulnerability indicators are female work participation rates; male-female literacy rates; access to banking services, and; access to technology and information (Forum for the Future Cotton 2040 June 2021- Physical Climate Risk for Global Cotton production, Global Analysis Report).

4.1.3 Social Vulnerability Assessment Framework for non-compliance of FPRW in Cotton production system in Telangana State

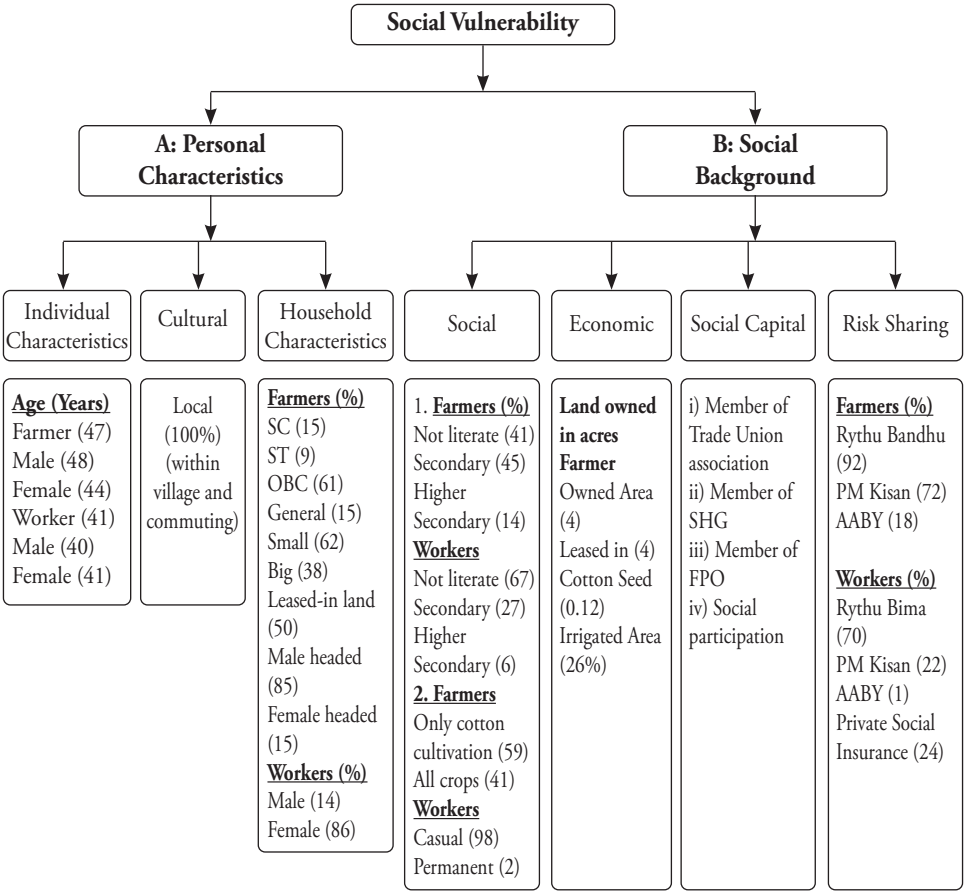

Figure 4.1 Social Vulnerability of Farmers and Workers in Cotton Production

Note: *(i) Framework modified to reflect the conditions prevailing in Cotton Production Sector in the Major Cotton cultivating districts of Telangana State*
(ii) *More disaggregated data is presented in Tables 4.1 and Table 4.2*

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Table 4.1 Socio-economic indicators of Farmers

Particulars	**Small**	**Big**	**All**
Average age (years)	47	48	47
Gender (percentage)			
Male	83.25	91.06	85.45
Female	16.75	8.94	14.55
Level of Education (percentage)			
Never attended school	45.21	29.36	40.75
Up to Secondary	41.49	54.36	45.12
Above Secondary	13.30	16.28	14.14
Social Category (percentage)			
Scheduled Caste (SC)	18.54	7.34	15.38
Scheduled Tribe (ST)	9.32	6.11	8.41
Backward/Other Backward Class (OBC/BC)	61.03	60.85	60.98
General	11.11	25.70	15.22
Land using Pattern (area in acres)			
Average land owned by Farmer	3.02	9.86	4.95
Average area under cotton in own land	2.56	6.34	3.63
Average area under seed production in cotton	0.12	0.11	0.12
Average area leased in for cotton cultivation	3.87	5.93	4.47
Total area under cotton cultivation	6.55	12.38	8.21
Percentage of cotton area under irrigation	26.31	26.60	28.68
Dependency on cotton cultivation only	61.96	50.56	58.75
Percentage of farmers received amount under Rythu Bandhu scheme in 2020-21	89.75	96.57	91.67
Percentage of farmers received amount under PM-KISAN scheme in 2020-21	70.39	75.38	71.80
Percentage of farmers covered under Aam Aadmi Bima Yojana	21.46	9.04	17.96

Source: Farmer Schedules

Table 4.2 Socio-economic indicators of Workers

Particulars	**Male**	**Female**	**all**
Average age (years)	40	41	41
Gender	13.55	86.45	100
Level of Education (percentage)			
Illiterate	53.96	68.44	67.05
Up to Secondary	36.53	25.76	26.79
Above Secondary	9.51	5.80	6.16
Status of work			
Permanent employee	1.26	1.55	1.52

Particulars	Male	Female	all
Temporary employee	98.74	98.45	98.48
Percentage of workers covered by a social security scheme	49.42	30.78	32.36
Percentage of workers covered by PM-KISAN scheme	49.71	18.55	22.11
Percentage of workers covered by Rythu Bima scheme	100.00	66.33	70.17
Percentage of workers covered by Aam Aadmi Bima Yojana	0.00	1.05	0.93
Percentage of workers covered by Private social insurance	5.99	26.47	24.11
Average number of days worked by a worker in cotton farm	143	165	154

Source: Worker Schedules

4.2 Vulnerabilities in cotton production system

4.2.1 Farmer / Employer vulnerability

Cotton is a predominant crop in Telangana state and cultivated by small and marginal farmers. Livelihood risks are high for small and marginal farmers engaged in cotton farming as monoculture. The average land holding size is 3 acres for small farmers and 9.9 acres for big farmers. The average size of own cotton farm is 2.5 acres for the small farmers and 6.3 acres for big farmers, which shows small farmers allocated 86 percent of cultivated area to cotton while big farmers allocated 63 percent land. Average size of operated area cotton (comprising of own plus leased in area) is high at 6.4 acres for small farmers and 12.3 acres for big farmers. Leased in area constitutes 60 percent of operated area under cotton for small farmers, while it is 50 percent in case of the big farmers. 62 percent of small farmers depended on cotton farming for their livelihood (according to time criterion) while this was 51 percent for the big farmers. Average land allotted to seed production in Jogulamba Gadwal district is one acre. Small farmers allocated around 1/5th of the land to seed production while big farmers allocated only around 8 percent of the land for seed cotton.

Irrigation provides some hedge to cotton cultivation. Irrigated area as percentage of total land under cotton is 26 percent. Small farmers allocated more irrigated own land for cotton (32.8 %) compared to big farmers (19.7%). Big farmers have diversified cultivated area which is a possible way of hedging risk of loss in the single crop of cotton.

Experience in cotton farming is important for adapting to risks. Overall big farmers have more number of years of experience (20.7 years) compared to small farmers who have 16.5 years of experience. Farmers of Jogulamba Gadwal district are least experienced, with an average of 11 years in cotton farming and these also include cultivation of seed cotton. Labour allocation to cotton farms in farmer households according to members

of household adults and children, men and women throws up interesting findings. Women (95%) from small farmer households spent all the time on cotton farms, as against a lower percentage men (91%). In case of big farmers 84 percent of men and equal percent (83%) women spent all time in cotton farms. Grown up children are more likely to supplement family labour than younger children in cotton farms. Around 9.9 percent farmers said that children under 14 years worked (occasionally and often); and 13.5 percent farmers said children aged 14-18 worked (occasionally and often) in their cotton farms in 2020-21. Vulnerability arises from the small size of cotton farms, due to which land is leased in for economic viability. Risks and returns are two-sides of the coin in cotton crop, with higher area bringing with it more risk and vulnerability but also a higher probability of returns. Caste or social category is not a significant cause of vulnerability in cotton cultivation. Small farmers also have entered into cultivation of cotton seed. The economics of seed cultivation and commercial cotton cultivation shows cost is more in case of seed cotton.

Female farmers constitute 15 percent of all farmers. The correlation of women farmers are: average age is lower than male farmers by 4 years, low level of education; number of years of experience in cotton cultivation is 14 (4 years less than male farmers); average land owned is 4 acres which is lower than the male farmers (5 acres); and area under cotton is less (3 acres) compared to male farmers (4 acres). Women farmers here also leased in land for cotton cultivation an average of 3 acres while male farmers have leased in on an average, 5 acres of land. Women are better placed in area under irrigation, their main occupation is self-employed in cotton (51 %), 43% are self-employed in other agriculture activities, while self-employed men in cotton are 60 % and 37% are engaged in other agriculture activities. Around 94 percent farmers have title deeds, without difference between men and women farmers. Women farmers have not entered seed cultivation in Jogulamba Gadwal district. Women are relatively less experienced compared to male farmers and are also better placed than men farmers in terms of risks in cotton seed production, as evident from the above findings.

4.2.2 Labour vulnerability

Labour in cotton sector work in different capacities: as casual labour and contract labour (depending on the cotton production activities); Male workers, female workers, and child workers segregated into specific labour activities; local, circulating and migrant workers, and; workers as members of producer organizations, associations and others.

Women workers dominate cotton sector in the study districts of the state. Of the 400 workers from the 40 sample villages 85 percent are women, they are aged around 41

years (average age is a couple of years higher than the male workers). Women workers are predominantly illiterate (70%). Around one third of them are educated up to primary (23%) or secondary level (6%). A higher percentage of women workers in Jogulamba Gadwal (81%) are illiterate, a major factor contributing to their vulnerability. Labour in cotton farms are employed on daily wage basis, with 98 percent of them working as temporary workers or as casual labour paid by the day (88%) or as piece rate workers (10.7%). From all women workers, 85.6% worked as casual labour paid by the day and by piece work (11%); while only 3% male workers worked on piece rate basis and 94% worked as casual labour paid by the day.

Around 95 percent workers do not have any family connection with employer. A majority of workers do not work on any contract basis, while 29 percent worked on verbal contracts. A higher percentage of women workers worked on verbal contracts maybe due to the trust they carried with employers. The verbal contracts are mostly adhered to by the employers according to 68 percent of workers. The employers also honour the verbal contracts to ensure the labour works for them to build trust with them. Wages are paid in cash only although all workers have bank accounts on their name. Wages are paid a week after the wage work is completed. Very few are paid the same day and only 11 percent workers said they received wages after a month's time. In a way the labour market is not conflict oriented but functions in a congenial way as cotton crop is a labour intensive crop.

Labour market segmentation is common across the districts in cotton crop cultivation. Female labour works in four activities; predominantly in sowing seed, weeding, cotton picking and to a small extent in the spraying of fertiliser assisting the person spraying. The average number of days of work generated per labour on cotton farms is 132. Average employment days in Jogulamba Gadwal district is higher at 158 which is due to seed cotton cultivation. Weeding is mostly performed on daily basis and cotton picking is done on piece rate basis. Average number of working hours is slightly higher in case of piece rate at 8 hours to 10 hours per day while for casual labour it is 8 hours per day. Wage earned in contract system for weeding is Rs.120, higher than daily labour. Sowing and gap filling operations fetch equal wages for men and women workers. Women workers earn more than male workers in picking activity done through piece-rate and almost equal with men in cotton picking on daily wage basis.

Workers sometimes work overtime but they may or may not be compensated for the extra hours of work. A majority of workers are vulnerable to non-payment for any extra work on cotton farms (57%) while in case of 28 percent workers wage was paid

sometimes and possibility of paying for extra work always is in case of 11 percent of workers only. Majority farmers (59%) said they have not employed workers for overtime work in cotton. But around 10 percent said that they always paid overtime to workers and another 26 percent said they paid for overtime work 'sometimes'.

Female workers reported better compliance of payment for overtime work: 11 percent said they are always paid against 7 percent reported by male workers, and 28 percent said they are sometimes paid (for male it is 21%) and 60 percent said they are never paid while this is 67 percent for male workers. Across districts labour in Jogulamba Gadwal, Nalgonda and Adilabad in that order are vulnerable for non-payment which is not so much in Warangal district as reported by them.

Wage varies across operations and average wage for activities performed by women is lower than those performed by male labour. However, wage for operations done under contract system fetch more than work done under casual labour system. Child labour are paid on par with women labourers. Female labour earned a daily wage of not less than Rs 200 working as casual labour in commercial cotton farms and little higher in seed cotton farms. Casual labour wages fall short of minimum wage, but contract labour wages generally exceeded the minimum wages. The deviation from minimum wage is more for the women labour. Women labour which constitutes 85 percent of labour on cotton farms is vulnerable to non-compliance to minimum wage.

4.3 Vulnerability for non-compliance of FPRW

4.3.1 Forced labour

Work in cotton farms is something one takes up out of lack of choice. Work in cotton farms is not preferred by most labour due to the drudgery, but is taken up reluctantly for want of any option for wage labour. Around 30 percent cotton labour reported the job itself is unappealing and is taken up unwillingly. Around 7 percent were not agreeable for overtime work (beyond 8 work hours) even though it is compensated. Unwillingness is more towards overtime or working for longer period than agreed (9%), or working at less than minimum wages (12%), as reported by women labour. Unwillingness is reported more from Jogulamba Gadwal and Nalgonda and relatively more by male workers.

Besides dislike for the cotton farm work, coercion of labourers by some farmers to work overtime borders on infringement of the labourers' choice. Though there is unwillingness to work in any form, curtailing the freedom to refuse to work was expressed by few

workers (19%) only. Workers, unable to refuse doing unwilling activities (20%) or facing forced situations (22%) (where employer resorted to methods like demanding workers to stay in workplace beyond working hours), continued to work under forced circumstances just for the salary, or threat of financial penalties, or fear of non-renewal of work with employer. Workers facing situations where employers forced them to stay beyond working hours was found more in the case of women labour (23%). Neither debt bondage[43] type of forced labour, nor loss of wages for work already done, nor physical threats was found as reasons for refusal to work or facing difficult situations at work. The silver lining is that only 15 percent of all labour said they do not have the freedom to leave the employer; male labour have more freedom to leave compared to women labour[44]; and female labour from Nalgonda and Jogulamba Gadwal in that order reported having relatively lesser freedom vis-à-vis those in Adilabad and Warangal districts. There is some unwillingness to work in cotton farms especially for longer hours, but a majority could also refuse to work in such unwilling situations. Unwillingness towards their current employers was mainly because they demanded additional work hours, and the reasons to carry on with their work were predominantly due to financial need or sustenance, but the option to leave the employer was always there. Women labour are more vulnerable in some aspects of the forced situations.

Though labour work unwillingly in cotton farms as an alternative to remaining unemployed, they are in no way to be categorized as forced labour as they are not compelled to work against their will and volition of or under unacceptable conditions of work and wages.

4.3.2 Child labour

Child labour[45] constitute all those below 14 years of age as per the Child Labour (Prohibition & Regulation) Amendment Act, 2016. The amendment also prohibits the employment of adolescents in the age group of 14 to 18 years in hazardous occupations and processes and regulates their working conditions where they are not prohibited. However, the definition of child labour being relative or contextual with regard to

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43 It may be noted that percentage of labour indebted to employers is very small at 4 % as reported by farmers

44 Data shows that 97% of male labour expressed they are free to leave while this is 83% in case of female labour

45 However, there are exemptions of children taking part in work depending on their participation in school, as well as for whom they work and whether the enterprise is hazardous. The Child Labour (Prohibition and Regulation) Amendment Act, 2016 does not include a child when he "helps his family or family enterprise, which is other than any hazardous occupations or processes set forth in the Schedule, after his school hours or during vacations"

participation in school and nature of the enterprise, allows diverse interpretations and contestations. Child labour tends to continue especially in rural areas with the justification that the child is not out of school and is working as part of the family enterprise. Child labour is one of the vulnerable categories especially in seed cotton cultivation. Not only around one fourth of the farmers (22%) have varying number of child labour employed in their cotton farms, some of them are also below 14 years age in the study areas. However, presence of child labour is not admitted explicitly due to threat of legal sanctions and penalties.

A lot of effort also has been put by state, and civil society towards awareness on the legal sanctions against child labour and mobilising public opinion in favour of arresting the practice of child labour. COVID-19 pandemic has exacerbated the situations to employ children from economically poor households in cotton cultivation as family labour or wage labour. Measures are also weak in the face of schools being closed coupled with virtual classroom not effective in its outreach or in engaging the children in online schooling in rural areas. Most of the school going children in the state have not attended school as they were closed completely for more than a year – for the academic year 2020-21 and up to September 2021, due to the pandemic. Child's disinterest in studies is not a major reason for child labour, but teachers' lack of interest in teaching and teacher absenteeism often push children towards work as the child is anyway not attending the school and is 'outside the school' (FGD with Labour and Farmers in the four selected districts).

Children in the age group of 14-18 are more vulnerable to work on cotton farms. Landlessness and addiction to liquor by parents are pushing children to work, where their earnings or supplementation to household income becomes significant. Girl children from small farmer households work along with their mothers in cotton picking, which is an important constituent of family worker. Adolescent children (14-18) from farmer households also work in order to support their education expenditure like buying books or for other personal needs[46]. Child labour in cotton farms come from two major streams; first the landless, poorer, parents not contributing adequately to family income, and secondly; from farmer households working mostly in intervals to support themselves in pursuing education. Work segregation applies to child labour also along the lines of adult male and female, where they are exposed to hazardous chemicals

46 FGD conducted in Pimpri village, Bazar hathnoor Mandal, Adilabad revealed that the children participate in cotton weeding and picking to support their family income and also to meet their education and other expenses.

during spraying and fertiliser application. Lack of onsite basic health services to address occupational health problems like stomach pain, body aches, nausea, working under extreme weather conditions (rain, cold, hot, dry, dust) result in increased out of pocket health expenditure thus adding to the economic vulnerability. Around 60 percent of labour working in cotton farms reported that children under 14 years working on cotton farms also attend school.

Around 22 percent of farmers admitted that labour under 14 years age are taken into employment in their farms. Around 10.8 percent farmers in Jogulamba Gadwal district admitted presence of children below 14 years and 9.6 percent of children aged 14-18 years in their cotton farms, while in the districts of Adilabad and Warangal a lower presence of children under 18 years was reported to be working in their cotton farms[47]. The reported incidence of adolescent child workers (14-18 years) is more than 50 percent (11 in number) on an average cotton worksite consisting of 18 workers. The average number of workers and adolescent workers is the highest in Jogulamba Gadwal district owing to their requirement in seed cotton farms. Child labour is relatively more where activities like seed sowing, nipping, seed crossing and cotton picking are required. High labour requirement results in higher involvement of children and adolescents in cotton seed farms. Children working in the farms are more secure when they are accompanying their parents. Absence of adult co-worker has been reported by the children as a potentially vulnerable situation, because the fear of scolding and abuse is high when their pace of work slows down.

4.3.3 Equality and Discrimination

Discrimination in employing labour for cotton crop on the basis of age, sex, disability, marital status and sexual orientation prevails to some extent. Of these types of discrimination, the most prevalent one according to the cotton labour is sex/gender-based discrimination (34%), disability (26%) and migratory status (12%) and also based on sexual favours (12%). Male labour perceived more gender-based discrimination while female labour perceived discrimination based on migratory status and sexual favours by employers and also to some extent on marital status. Discrimination based on religion, and political background is not present at all as reported by the labour.

Cotton crop is labour intensive and due to its high demand, circulating labour coexists with local village labour. Given the labour supply, the scope for the farmers to exercise

47 Farmers in the districts of Warangal, (9) Adilabad (8) and Nalgonda (10.6) reported children below 18 years worked in their cotton farms.

any discrimination is very limited. The discussions with farmers also revealed that farmers do not have much choice in selecting the labour for work. Even persons with disability are not turned away when they come all the way to the farm seeking work, they are allowed to work at least for that day. As employers, farmers may treat some labour differently than others based on the labour differentiation. Labour felt that farmers' treated disabled labour differently because of their disability and women labour felt farmers treat differently some female labour based on sexual favours.

Labour market segmentation is very much prevalent in cotton crop in general. Men, women labour and child labour are clustered around specific operations labelled as male work and female work. Gender discrimination in terms of wages for adult labour was not reported, but distinction of male and female tasks is very much visible. Tasks which are performed by female labour fetch relatively lower wage compared to those done by male labour. This may be also due to the perceptions of physical endurance of the two genders where women's work is termed lighter despite the fact that it needs diligence and patience. The contract or piece rate system of work prevails for certain operations like weeding or picking of cotton. In such modes of labour, women earn wages equal to men (if some men are participating) and certainly more than what the casual labour are paid on daily basis. Generally younger women are preferred in such labour modes. Labour market segmentation around age, gender, highlights the specific operations and the form of labour has economic implications for different categories of labour.

Around 41 percent labour said that labour of certain age, gender, are clustered in certain specific tasks in cotton crop and this was reported more by male labour. Around 10 percent of female labour reported sexual harassment at workplace. Farmers also have reported that the labour working with them had complaints of such harassment and these might have occurred within the labour group itself. Generally, farmers preferred local labour as it is easy to call them for work and also because of the trust they repose on them. In case of commuting labour they depend on middlemen like auto drivers and also incur additional expenditure on their travel. There is heavy interdependence between farmer and labour and conflicts between them are not found much.

4.3.4 Freedom of association and collective bargaining

Presence of workers unions gives an opportunity for workers to voice their problems and challenges. Absence of unions of farm labour is common across the districts and the labour are deprived of the strength of support of the collective and the scope of demanding their legal entitlements like wages, working conditions, facilities at workplace, mechanisms for dispute resolution and so on. The labour in cotton farms

are not an organised group. Change for improvement and dispute resolution is slow because every time there is an issue, they have to begin the dialogue among the labour for common understanding on the issues and demands.

The presence of active workers' unions in the workplaces of the cotton labour is minimal, only around 11 (3 %) labour of the 400 sample said there are workers' unions. Only 6 (14 percent) labour have membership in a workers' union[48]. Union membership is found to be relatively higher in Adilabad followed by Warangal - while male membership is high in Adilabad, female membership is high in Warangal districts.

A majority of cotton labour are not members of any trade union. They said that they are not aware about them as they have not been approached by trade unions. , A minority of non-members (10%) said they were not aware of the benefits of joining a union. Representatives of labour have access to workers as reported by 19 percent of labour. Labour disputes are rare in workplace, 36 percent said it happens rarely. There are two most common methods followed in dispute resolution. In case of a dispute it is mostly resolved collectively directly involving the workers concerned; and the farmers also resolve disputes individually one on one with the concerned labour. Mediation by workers representatives or Union representatives in resolving disputes has not been reported. Role of authorities in labour disputes is almost absent, and the Labour Inspectorate is non-existent in any dispute resolution.

Negotiations for issues such as wages, work timing, workplace safety or workers health between labour and farmers is a continuous process. Issues most commonly negotiated relate to wages and working time and such negotiations were done mostly in a collective manner by the labour and the farmer. The other issues that were also on the negotiation table were workplace safety, labour dismissal conditions, integration of people with disabilities, continuing education, social security and workers health, in that order. Majority of the negotiations were partially successful, but some were fully successful too, according to the labour.

A majority of the farmers (66%) perceived that labour disputes were non-existent, while some farmers (30%) said that disputes do exist but rarely require any serious effort for resolution. Communication about the need and demand for work is discussed often face to face or over phone by the concerned farmer and the labour. They call to

48 Out of the 400 labour sample 11 (1.5) said there were active workers' unions in their workplace. Of the 400 sample 42 have responded that they are either member of trade union or they have not answered the question. From 42, 6 (14%) said they were members of trade Union

find out when to report and what the payment is. Around 27 percent farmers hold collective bargaining negotiations with farmers focusing mostly on wages and work timing followed by social protection, occupational safety and health. Most of the negotiations were held with workers' representatives not affiliated to any union. Labour generally bargained for raise in wages and regulations of work timings. When work is not completed on time under contract system they negotiate for extra wages. The incentives or perks given by farmers in the form of intoxicants lure male labour. This is a potential way of squeezing male labour to the detriment of the labour household by way of lost cash payments.

Only a quarter of farmers have said farmers and labour arrived at collective agreement on wages and working time. Around 42 percent farmers said that labour working with them can join union but they said that none of the labour working with them are members of trade unions. It is interesting to note that around 30 percent farmers felt it is good in the interest of their farm to be able to interact with union organisations on various issues concerned with labour.

4.4 Potential factors to address vulnerabilities

4.4.1 Farmers

Small farmers face the challenge of dependence on informal credit for investment in cotton crop. Almost all farmers with own land receive cash as income support under the Rythu Bandhu scheme, which, for the cotton crop is insufficient. The scale of finance[49] for cotton crop is Rs 35,000 to 38,000 for commercial cotton, and around Rs.110,000 to 140,000 for seed cotton. However, most of the farmers do not access formal credit and depend on informal credit by paying interest rate (25%) which is higher than for the formal credit. Even cotton seed farmers get crop loan similar to that of commercial cotton thus making them dependent on informal credit purveyors, commission agents, who also double up as traders and organisers between Seed Company and seed cultivating farmers. This is a potential factor of vulnerability of farmers as the entire process lands the farmers into indebtedness, with the many risk factors (biotic, abiotic stress and climate factors like excess rain or deficit rain) during the crop cycle. Adequate formal credit needs to be accessible to small farmers as well as seed cotton farmers[50]. Presently

49 Scale of finance is finance required to raise a crop per unit cultivated area. The scale of finance for different crops in a district is decided every year by District Level Technical Committee.

50 Field Officer, Telangana Grameen Bank in Adilabad (Karanji Branch) informed that they advance loans to farmers cultivating commercial cotton to the extent of Rs 40,000 to Rs 56,000 at 7% rate of interest, which is repayable in one year.

Banks insist on 'agreements' between farmers and Seed Company while advancing loans to cotton seed farmers, but such agreements are not in vogue. Tripartite agreements between Seed Company, Organisers (licensed) and farmers with agriculture department officials as mediators could be a potential solution. Banks can also adopt the Bank Correspondent (BC) method which facilitates farmers to access loans, monitor their use and make easy repayments.

Discussion with Farmer Producer Organisations (FPOs) in Warangal district shows that farmers as members of FPCs get inputs at lower prices, besides getting quality seed and marketing facility with the CCI. Farmers as members also receive the benefits of risk coverage, trainings, extension and so on which help in reducing cost of cultivation as well as to increase the productivity. FPOs have the potential to address farmers' challenges collectively; exclusive FPOs for cotton seed farmers can address their special challenges like negotiating between Seed Companies and seed cultivating farmers for agreements.

Other challenges faced by farmers like marketing (remunerative price), agriculture extension, crop insurance, quality inputs especially seed, need to be addressed, besides implementing some best practices in cotton cultivation to improve the returns of farmers. This enhances the scope for better working conditions and compliance of producing communities with FPRW.

4.4.2 Labour

Child labour and learning loss: Children from landless and land-poor households work on cotton farms as family and wage labour hence are losing education. Exclusive residential schools can be started in seed cotton cultivation areas to wean children working as wage labour on seed cotton farms. Working adolescents may be offered scholarships to carry on with higher education. Working along with study option for these students along with special arrangements will help compensate for learning losses. Land distribution to landless households, improving livelihood of landless households, involving School Management Committees and SHG networks for monitoring the situation and tracking the children could be some mid-term measures to address this challenge. Female literacy in Jogulamba Gadwal is the lowest (0.2%) - special effort needs to be undertaken to address this by starting adult literacy centres and evening schools.

Drudgery in cotton operations: Women are the predominant workforce on cotton farms and the drudgery laden activities reported are associated with weeding, cotton

picking, and fertiliser application in cotton seed farms. Agriculture Extension Officers in some places have introduced innovative practices developed by State Agriculture University, to reduce drudgery of manual labour and increase the labour productivity[51]. Worksite facilities on cotton farms: like shade, first aid kit, water and toilets would also enhance labour productivity. Rythu Samnvaya Samithis (RSS) through Rythu Vedikas (RV) can arrange for supply of essential equipment for safety of workers.

Some of the vulnerabilities and challenges of the farmers and labour lie in the broader supply chain and do not fall within the scope of the study. A larger and holistic perspective can address these challenges.

51 For example fertilizer can be applied in standing posture with a brush with the help of a stick; or a side sling bags used for picking cotton.

CHAPTER 5
Conclusions and Policy Recommendations

5.1 Context, Objectives and Methods of the Study

Telangana State is third largest cotton producer in the country. Area under cotton has been on a fast rise, during the period 2000 – 2010 and reached the peak during 2015-16 but has been decelerating since then. Cotton crop accounts for around 36 percent of net cropped area in the state. But the state ranks in medium range in terms of productivity (460 kg/ hectare) vis-à-vis other major cotton growing states of Gujarat, Karnataka and AP. Cotton is the major rain fed crop cultivated in the state, it is also cultivated under protected irrigation systems; in both black soils as well as light soils. The South Telangana zone in the state has the highest share in total cotton area followed by central and northern zones. But the central zone ranks first in share in total cotton production. Around 99 percent area is under cultivation of BT variety in the state.

Around 33.7 percent or one third of total agricultural holdings cultivated cotton in the state. The rise in cotton area is due to a rapid increase in the area cultivated by small and marginal farmers. Around half of the holdings of cotton are less than 2.5 acres. Cost of cultivation of cotton crop across major cotton growing states in 2018-19 shows Telangana having the highest per acre cost due to high use of fertilizer. On the other hand the value of output in the state ranks second from the lowest. This scenario shows either low or negative returns having implications for decent work conditions of small farmers and labour in cotton crop.

Telangana State is also known for seed production in which cotton seed plays an important role. Family labour including childrens' work participation in seed cotton crop is high. Labour market is highly segmented in cotton across gender. Sowing, weeding and picking are predominantly female operations. Varied forms of labour like the contract, piece work, and casual prevail, having implications on wages and earnings. These conditions pose challenges in the implementation of FPRW in cotton cultivation in the state.

The present study has assessed the status of the four pillars of FPRW- the freedom of association and effective recognition of right to collective bargaining; elimination of forced labour; abolition of child labour and elimination of labour market discrimination with

respect to producers/farmers and workers in cotton sector. The study aimed to produce evidence-based knowledge on the FPRW among cotton cultivating communities and assessed the vulnerabilities of non-compliance with fundamental rights at work and working conditions in the state of Telangana.

FPRW has been assessed in the four districts selected for the study, viz. Adilabad, Warangal, Jogulamba Gadwal and Nalgonda. These districts not only represent the importance of cotton crop in the state but also belong to different agro-climatic zones. The sample villages for the study have been selected from all the villages of a district using the principle of **probability proportionate to size (PPS) giving weight to area under cotton crop.** Based on the information obtained through listing of households on particulars such as size of the land holding and occupational status i.e. farmer/ labourer, the sample for small, big farmers and agricultural labour was selected. Major time criterion has been applied to categorise the farmer into owner-cultivator or labour. Small and big farmers were categorised based on land holding of five acres. The study selected 10 farmers (4 large and 6 small farmers) and 10 agricultural labourers from each village. The total sample size of four study districts is 800 i.e. 200 each from 4 sample districts covering both cotton farmers and labourers working in cotton farms.

The study employed both quantitative and qualitative tools such as questionnaire, and group discussions & interviews to collect hard data as well as to assess farmer and labour vulnerabilities.

5.2 Major Findings from the field survey

5.2.1 Nature and conditions of work in cotton cultivation

Female labour, constituting 85 percent of labour, occupies predominant position in cotton cultivation in the State. Labour is engaged mostly on daily wages. Majority belonged to Backward Castes followed by Scheduled Castes. Male and female cotton labour predominantly worked on daily wage followed by a small percent on piece rate basis.

Small and big farmers were mostly self-employed in cotton farms. None of the big farmers was working as casual labour in agriculture or non-agriculture. Around 50 percent of small and big farmers have leased in considerable amount of land for the cultivation of cotton, which enables them to be self-employed on their cotton farms.

Labour in cotton farming across the districts is excluded from the benefits of social security measures. Social security programmes like the Aam Aaadmi BhimaYojana are

neither popular among farmers nor labour, even if the scheme is known they are faced with inability to pay the premium.

Farmers did not have any written contract with the labour they employed, but around 40 percent of the farmers had oral contract with temporary labour.

Work on cotton farms takes different forms subject to operations and also factors like yield and climatic variations. Cotton picking and weeding are done through contracts while other activities are performed through casual labour forms. Cotton picking may be on a piece rate or area based contract. Work day stretches beyond the 8 hours in labour forms such as contract and piece rate. Labour do not confine to sole form of contracts always, but engage in different forms of labour contracts from time to time, as means of negotiating with the available opportunities vary with the changing demand for labour. Migrant labour is mainly found during the cotton picking time and seed crossing in seed cotton cultivation.

Worksites in cotton fields as in any other crop fields are not conducive to labour with respect to facilities. Apart from providing drinking water other amenities like shade, toilets are found nowhere.

5.2.2 Status of FPRW in cotton cultivation in Telangana

As labour availability is a problem, farmers advance loan to them to ensure their timely availability during critical operations in cotton farming, but instances of forced labour under conditions of indebtedness is a rare situation.

An important reason for children below 18 years working in cotton seed farms is due to the monetary advance taken by the adult labour of the family from cotton farmers. Farmers and labour working on cotton farms are not much aware of the presence of District Vigilance Committee on bonded labour and District Task Force Committee on Child Labour.

All adult members of the farmer family engage in cotton cultivation operations. Children between 14-18 and those below 14 years are involved occasionally and it is more in the case of small farmers. Children work on cotton farms for two main reasons - due to poverty as adult members' earnings are unavailable or insufficient and secondly to support their own educational expenses.

Wages for work on cotton farms varies across geographic locations, by gender as well as by forms of labour.. While daily causal wage falls behind the minimum wage in

most operations, wage for contract labour exceeds the minimum wage stipulated by the Labour department. At the same time it can be seen that wages comply with minimum wage than the female wages.

Collective action on part of the labour is not seen much. An overwhelming percentage (92 percent) of labour does not have membership in any trade union. More than 70 percent of the labour were never approached by anybody regarding joining the union for agricultural labour. Those who were approached did not join due to lack of awareness on the benefits of membership and as a result, many are not yet part of the union. Only28 percent male farmers have conducted negotiations with their labour in the last three years and negotiations were mostly with respect to wages and work timings.

5.2.3 Health and occupation hazards in cotton cultivation

Majority labour perceived work in cotton farms as hazardous, though accidents due to exposure to chemicals, commuting and transportation were seen as a minor problem by labour. Labour was wearing some protective clothing like work trousers or a cloth mask. Labour did not receive any training or information regarding the use of protective equipment.

Complaints of fatigue by the cotton labour are a frequent problem. Problems faced occasionally by majority labour include muscle and bone pain, skin diseases, allergies, fever and head ache/dizziness. High temperature in the work place, stress, physical effort, fatigue and exposure to chemicals or biological products are the main reasons for work in cotton farm getting affected. Farmers have not provided medical checkup for emergency treatment.

5.3 Policy Recommendations

The policy recommendations made in this section flow from the findings of the study on the status of the four pillars of the FPRW and the vulnerabilities to non-compliance of the FPRW.

5.3.1 Farmers or employers in the Cotton sector

Farmers face risk on many fronts like climatic, environmental risks due to high use of plant protection chemicals and economic risks due to high dependence on informal and high cost credit. Though the scope of the present study does not cover some of these issues they have implications for compliance with FPRW. Hence recommendations are made which indirectly support the FPRW principles in the cotton production.

1. Proactive steps have been taken by some banking institutions to reduce dependence on informal credit markets or interlinked input and product markets. The Kakatiya Grameena Bank (KGB), Karanji (B) Branch[43] in Utnoor Mandal in Adilabad district and the District Cooperative Credit Bannk (DCCB), Nekkonda mandal in Warangal district have been giving credit to cotton farmers. But such low cost credit is unavailable to tenant farmers. Farmer Producer Organisations can enter into agreements with formal credit institutions to stand guarantee for their member farmers. Banking institutions can also setup Business Correspondent[44] (BC) system to service credit needs of farmers. Banks also can encourage cotton farmers to form SHGs and lend them on joint liability basis. Banks can conduct financial literacy campaigns. FPOs can have agreements with agri-tech enterprises for agri-finance and agri-commerce services to pass on benefits like lower input costs and efficient marketing channels to their member farmers. Institutions like the Agriculture department, NABARD (National Bank for Rural Development), TRICOR (Tribal Cooperative Finance Corporation) to proactively form cotton crop focused FPOs for the benefit of small farmers.

2. In the case of cotton seed producers, seed companies deny buy-back of cotton seeds, in case of slightest variation from the agreed quality standards. This renders the cotton seed growers highly vulnerable to comply with the quality standards set by the companies. This situation can be addressed if there is an institutional mechanism like the system of 'tripartite agreement' between seed companies, organisers and the farmers - where organisers are recognized and given licenses with a fixed commission to organize production by farmers and the farmers have agreements with them or directly with seed companies. These agreements would nudge the need for linking groups of small farmers for credit support - ensure financial institutions like NABARD to link small farmers to institutional credit through farmers groups, FPCs and so on. With the district administration playing a facilitating role in the process of these tripartite agreements, it is expected that *de jure* there will be relevant clauses in the agreements for ensuring FPRW in cotton

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43 The KGB, Karanji Branch in Utnoor lends to the extent of Rs 40,000 to 56,000 at 7% rate of interest and after a year enhances to 12.5%; this branch has conducted financial literacy campaigns for the benefit of farmers and also is planning to provide marketing facility to farmers. Similarly District Cooperative Credit Bank (DCCB), Nekkonda mandal in Warangal district also has provided loans in the range of Rs 15000- 66000 at 5.5% rate of interest.

44 This model was launched in 2006 to provide banking services to poor and those who cannot access such services at reasonable cost

farming. These learnings may be useful for other cotton growing areas in the country.

3. It may be pertinent to explore the possibility of developing a platform involving line departments with the Agriculture Department in the lead, for ensuring FPRW in seed cotton farming. Agriculture Department also can oversee the tripartite agreements, ensuring that clauses on FPRW are mentioned in the agreements. Working closely with the labour department, and bringing in the sectoral knowledge, including the health-related challenges for cotton farm workers, the agriculture department can significantly contribute to the agenda of FPRW. Alternatively the Telangana Seeds Corporation that has been actively engaged in providing seeds to the cotton farmers, apart from the private seeds suppliers like (Nuzhivedu, Kaveri etc), may be vested with the responsibility of initiating dialogue (through the agriculture department) with the private seed producers to work jointly on ensuring FPRW in the cotton seeds farming sector.

4. Yet another institutional mechanism is that seed farmers are to be organized into 'Farmer Producer Companies' where the FPC will negotiate with seed companies, and play the role of organisers in organizing seed production. The number of days of employment generated in seed cotton is higher than commercial cotton and also due to the processing and value addition more employment is available. In recent times due to various economic and non-economic reasons the cotton seed sector has been on the decline in Gadwal district and the larger undivided Mahbubnagar district of which Gadwal has been carved out.

5. The Government of Telangana, through a February 2021 notification has provided for self-certification in respect of the compliances under various labour laws such as Contract Labour (Prohibition and Regulation) Act, 1970; Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 and the Minimum Wages Act, 1948, among others as part of Ease of Doing Business (EoDB). The labour department may not be relieved of the regulatory role to inspect and take punitive action against voilation of bonded and child labour in cotton production. Alternative measures such as the tripartite agreements in the presence of Agriculture Department as mentioned above may also be effective against discriminatory labour practices.

6. Agriculture Officers can advise farmers to organize farms with proper pathways in order to use equipment like wheeled carts to transport cotton while picking,

allocate space for construction of sheds for shade for workers, have first aid kits and make provision for facilities like drinking water and so on. MGNREGS funds can be allocated to farmers for creation of such amenities on farmers' lands. All these steps lead to enhancement of labour productivity.

7. The State has constructed Rythu Vedika[45] for a cluster of 5000 hectares under the purview of an Agriculture Extension Officer (AEO). This institutional setup can be used for discussing and addressing FPRW issues also.

5.3.2 Labour in cotton sector

1. Awareness on legal provisions of labour in regard to entitlements, protection and rights of collective action is vital to the empowerment and exercise of their rights necessary for 'Decent Work for All". A coordinated and concerted effort by all concerned government departments is required to ensure that labour in cotton farms is aware and capable to defend their entitlements and rights. Responsibility for informing and capacity building of the labour with regard to their legal protections rests primarily with Women and Child Welfare Department, School Education Department, Agriculture Department and Labour department. The study recommends promotion of awareness among the labour in cotton farms with special reference to the Minimum Wages Act, Child Labour, Insurance, Bonded Labour, Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act. A common platform with these departments can be evolved for undertaking the task.

2. Forms of labour being vulnerable with predominance of women and children in cotton farming, it is recommended that special measures are required to create awareness among the labour about their freedom of association and the right to refuse coerced work. Trade unions in the district must be enlisted to spread awareness among the labour about their freedom of association and collective bargaining so as to ensure they are not exploited. Labour department must take proactive measures in encouraging the trade unions in the district to bring awareness about the role of trade unions. Similarly, the civil society, more particularly the local NGOs may be formed into a forum to voice the concerns of the child labour and cotton farm labor. NGO forums and SAKHI Centres should also be supported financially for campaigns and advocacy to address issues of child labour and sexual harassment in cotton farms.

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45 Rythu Vedika is a structure (building) constructed to facilitate discussion by farmers on the various challenges faced by the farmers. The AEO guides the farmers in solving the challenges.

3. In order to leverage the 1098 dial-in facilities under ChildLine for child protection and women's safety issues for the women and children engaged in cotton farming, it is important to create awareness about the facility among the adult workers and children.

4. Training in safe handling of chemicals and protective gear/ equipment must be mandatory. Agriculture Extension Officers must conduct training programmes at the beginning of the cotton season and train a batch of farmers and labour in every village where cotton is cultivated. Such trained people would function as peer educators to train their co-workers and farmers.

5. Labour department may supply protective gear to agriculture labour once in two years consisting of a pair of shoes, gloves, work trouser and mask. Funds required maybe budgeted in the Annual budgets of the State.

6. Drudgery reducing devices developed by Agriculture Universities for operations like cotton picking, weeding need to be popularised by AEOs (Agriculture Extension Officers) and such technologies/equipment made available through Custom Hiring Centres. Labour productivity increases by use of such devices and wages and earnings also can be enhanced.

7. Legal measures prescribed for prevention of sexual harassment at workplace in MGNREGA and farm sites must be enforced in cotton farms. Labour department must be entrusted with the task of forming Internal Complaint Committees in every village for the protection of women and child labour from sexual harassment. SAKHI centers in the districts must be enlisted to spread awareness among the women labour about legal portions related to their safety

8. Labour department must explore the space for organising labour and farmers into Self-Help Groups and Common Interest Groups and Workers Representatives so that the labour is capable of responding to their needs based on their collective strength.

9. Towards arresting child labour in cotton farming, government must start residential schools for the children in areas where seed cotton farming is prevalent. Attractive scholarships for children aged between 14 and 18 would help in stopping them from being pulled into child labour.

10. There is a need to explore opportunities within the current EoDB (Ease of Doing Business) related provisions in the state for enabling monitoring by the labour

department on the compliance of FPRW in the cotton farming sector. Formation of workers' associations and encouraging trade unions to deepen their engagement on labour issues in cotton farming appear suitable measures for ensuring better compliance of FPRW in cotton farming.

11. The issue of child labour needs to be addressed at multiple levels: one set of children is working due to 'push factors' the reasons range from parent's (father) addiction to liquor, poor economic conditions, single parent and so on. Linking such households to existing livelihood enhancement programmes, counselling parents to be taken up. The other set of children work based on the 'pull factor', i.e., in order to supplement their own education expenditure, these children could be provided special scholarships to compensate their need.

12. The existing School Management Committees (SMC) consisting of parents, an elected representative and a member from Mahila Samakhya should activate, to identify working children and customize solutions to address the specific challenges faced.

13. Sub Centres at the village level and Primary Health Centres should have detoxifying kits/medicines so that labour and farmers affected by spraying of pesticides can be treated immediately.

14. Schools located in areas with high incidence of child labour in cotton farms need to organize health camps to address health issues of children

15. Literacy level is low for women agriculture labour especially in Jogulamba district. Efforts are to be taken to enroll them in Adult Education Centres under Sakshar Bharat Mission

16. A majority of the sample labour and small farmers falling in the BPL category (which is the eligibility criterion for AABY) have not enrolled for the Aam Admi Bima Yojana. Despite the beneficiary-friendly provision of 50 % subsidy on premium is subsidized by the Social Security Fund and the other 50% can be paid by State Government, there is no awareness about this. The Labour department through trade unions can enroll all eligible labour and farmers into AABY. This will cover accident risk faced by labour face in commuting to workplace.

17. Payment of incentives in the form of intoxicants is not only depriving part of their incomes into unproductive as well as harmful practices but is also making them vulnerable to unhealthy practices. It is recommended that farmers associations and

authorities must make payments in cash instead of kind, and in any case not in the form of toddy and liquor, which is of no help for the labour or their family.

18. To enable women labour with infants to work, it is recommended to have crèche/ child care centres in the village at Anganwadi Centre/ Panchayat office building. MGNREGS funds may be allocated for organizing such creches.

19. Shade and sheds for protection from weather extremes in agriculture farms must be included in list of activities under the MGNREGA.

20. Road Transport Authorities must check autos carrying more passengers than the permissible limit to arrest any grave accidents and tragedies for the labour in cotton farms.

21. Cotton farmers in major cotton producing countries spend about US$ 2 billion on agricultural pesticides every year. About 41 percent of this is spent on *deltamethrin* and *endosulphan*, the most widely used insecticides on cotton, declared as hazardous chemicals by World Health Organisation. Knowing the adverse health and environmental risks posed by these chemicals, 17 countries imposed a ban on the top ten hazardous chemicals in cotton production but among them only two are major cotton producing countries. None of the top ten hazardous chemicals declared by WHO are banned in India except Parathion. Pesticide use in cotton farming poses a threat to water resources. High pesticide use also impacts health of farmers and labour due to lack of awareness about safety rules, lack of access to protective equipment, non-literacy, lack of proper labeling of pesticides. A variety of international practices are being developed to change the way in which the cotton is produced making it farmer friendly with safety as priority which may have to be followed in India also (EJF 2007).

5.3.3 FPRW and SDGs

FPRW are key to the achievement of SDG 8 on Economic Growth and Decent Work for All. Along with this, FPRW are crucial in achieving SDGs 1, 4, 5, 10 and 16. Alliance 8.7 which was launched in 2016 aims at reduction of forced and child labour. The Global Pay Coalition was launched in 2017 to promote SDG target 8.5 on equal pay for work of equal value. ILO's Governance and Tripartism Department too emphasized some key issues viz., access to education, investment in social protection which target vulnerable population, decent work for youth, promotion of justice and rule of law (ILO, 2016).

The field data in the context of cotton farmers and workers reveals certain gender gaps in the performance of indicators such as literacy, wage differentials, empowerment aspects like negotiations with employers or membership in unions, and coverage under social security schemes (Table 5.1). Closing the gender and social group gaps entails wider inter-departmental coordination and monitoring at local level, which also enables achievement of some of these SDG indicators.

Table 5.1: SDG related indicators-Farmers and Workers

Indicator	Male	Female
	Farmers	
Non-literates (%)	37.5	59.9
Average size of land owned (in acres)	5.19	3.51
Conducted Collective Bargaining Negotiations during last three years (% Yes)	32.0	7.2
	Workers	
Non-literate (%)	53.9	68.4
Received wages on same day (%)	86.2	74.9
Membership in a Union (%)	3.9	1.4
Daily wage for cotton picking (Rs.)	259	218 (0.84)*

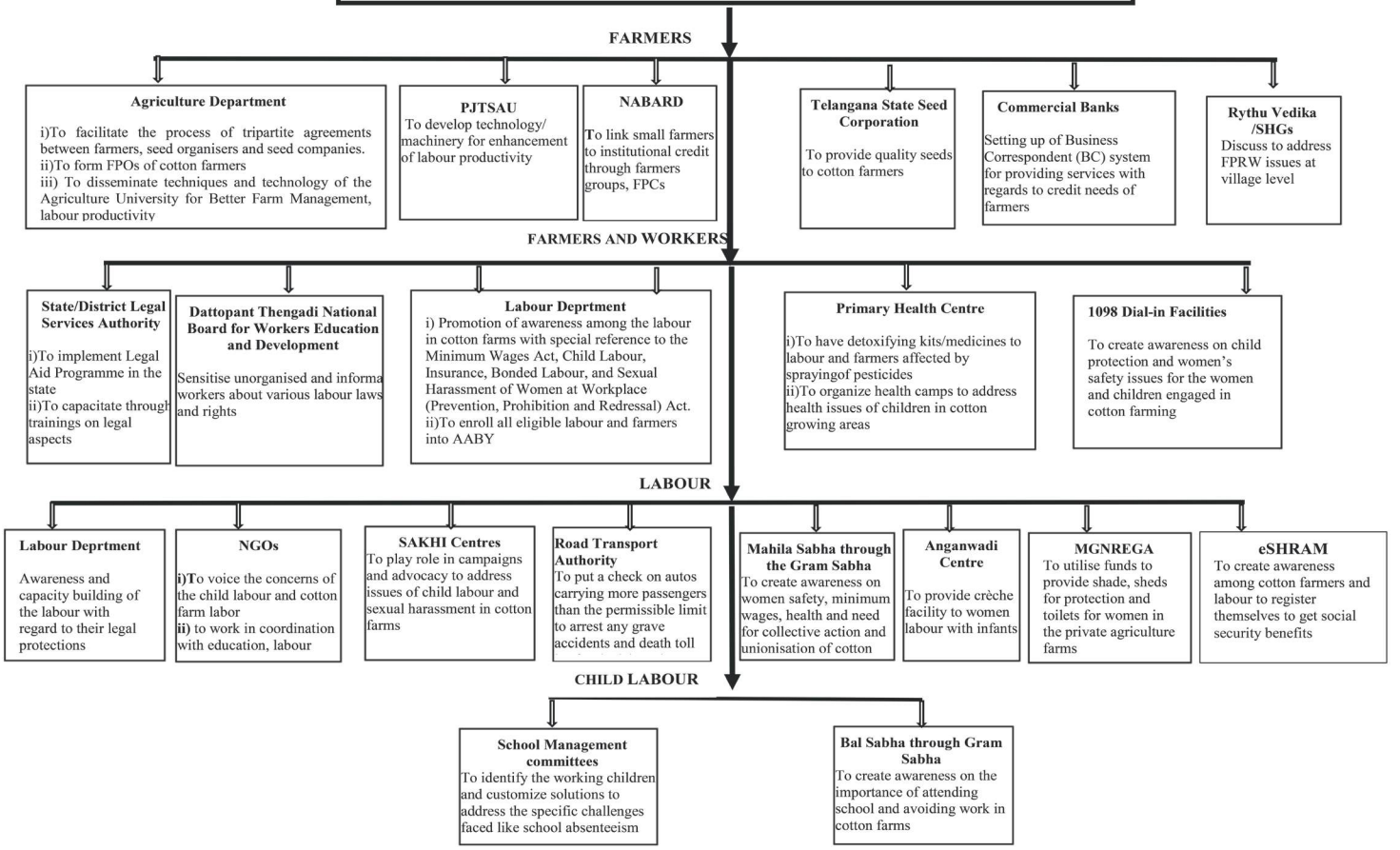
Source: Farmers and Workers schedules

*Note: * Female casual wage is 84% of male casual wage for cotton picking*

FPRW being a cross-cutting agenda calls for a broader alliance across the departments of Labour, Agriculture, Education, Health and Social Welfare. Given that the ILO works closely with workers, employers and the government, it may be prudent to bring all the three constituents together to emphasise how adherence to FPRW can build a more symbiotic relationship between all three and improve the working conditions in cotton farming in the state.

The institutional mechanism indicating intra-departmental coordination with specific goals for each department is given below (Figure 5.1). This may result not only in effective compliance of FPRW for the cotton growing communities but also in achieving SDGs as they are multi-nodal in character.

Figure 5.1 Institutional framework for FPRW compliance of cotton growing communities (farmers and workers) in Telangana state



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GLOSSARY

Aadhaar card- It is a verifiable 12-digit identification number issued by UIDAI (Unique Identification Authority of India) to the resident of India for free of cost.

Aam Aadmi Bima Yojana: It is a social security scheme to unorganized sector workers. The scheme provides insurance cover of INR 30,000/- on natural death; INR 75,000/- on death due to accident; INR 37,500 for partial permanent disability due to accident ad INR 75,000/- for total permanent disability due to accident , to such persons in the age group of 15-59 years for a premium of INR 200, of which the 50 per cent is paid by the Government of India and the rest is paid by the state government /nodal agencies/ individuals, as the case may be.

Commuting Labour- Labour go to other villages for work and return on the same day to their villages

Gutta (Contract Labour)- Work is done on the basis of area and not on daily basis

Migrant Labour-Labour go to other places such as villages, districts, states for work and stay there till the completion of the work

Minimum wages- ILO defined minimum wage as "the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract

Mirchi bajji, gobi Manchuria- Snack items

PM-KISAN-The Government of India's Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) would provide an annual grant of INR 6,000 to farmers.PM-KISAN has a cap of two hectares to make a farmer eligible for the scheme. The farm support is in three equal instalments in a given year.

Rythu Bandhu-In 2018, Telangana government launched the Rythu Bandhu (friend of farmers) Scheme, an investment support scheme to support livelihood of farmers. It is first of its kind investment support scheme for farmers to be launched by any state in India. Under this scheme, farmers directly get financial support twice every year,

to maximise agricultural production and productivity. They get investment support of INR 8,000 per acre every year (INR. 4,000 each for monsoon and Rabi season) as crop investment support. About 5.8 million farmers who till approximately5.6million hectares of land in the state are expected to be benefitted from the initiative.

Seed Organisers- The seed organisers generally belong from the same locality who can identify small holders willing to cultivate seed production and acts as a link between seed companies and farmers. They facilitate seed production for firms by taking finance from the seed companies and in turn provide inputs and finance to the farmers as per the deal between them.

Sub-organisers- These people will be in the chain –seed company-organiser-sub-organiser-and the farmer. He works under the organiser and sometimes work on his own finances.

Thums-up- Soft drink

Toddy- Country liquor

ANNEXURE 1

Procedure for selection of villages:

The procedure for the selection of 10 villages from 225 villages in Warangal District for example is discussed as under

Sample Interval (SI) = Total cotton area of the district/ sample number of villages
171341/10=17134

Random Start (RS) = Random number between 1 and 17134=2061

The sample village 1 is the one that contains area 2061 acres in the cumulative area. Thus, Panikera village in Nekkonda mandal is selected. The second village is selected by adding RS i.e. 2061 to 1*SI i.e. 17134 which is equal to 19195. Accordingly, Makdumpur village in Narsampet mandal is selected as the second sample village. Thus, series are generated as RS+2*SI, RS+3*SI, RS+4*SI.....RS+9*SI for the selection of the other sample villages.

Table 1A.1List of Sample Villages in the selected Districts

District Code	District Name	Mandal Name	Sl.No of Village	Village Name	Cotton Area (acres)	Cumulative Cotton Area (acres)
1	Adilabad	Bela	1	Guda	276	14546
1	Adilabad	Ichoda	2	Adegaon (Buzurg)	463	51681
1	Adilabad	Jainad	3	Khapri	575	86702
1	Adilabad	Narnoor	4	Mahadapur	737	122310
1	Adilabad	Jainad	5	Gimma (Khurd)	834	157571
1	Adilabad	Narnoor	6	Khairdatwa	942	191070
1	Adilabad	Bheempur	7	Tamsi (K)	1,098	227603
1	Adilabad	Bela	8	Sangdi	1,339	261034
1	Adilabad	Bazarhathnoor	9	Pipri	1,630	295135
1	Adilabad	Gudihathnur	10	Seetagondi	2,295	329893
2	Warangal	Nekkonda	1	Panikera	233	2256
2	Warangal	Narsampet	2	Makdumpur	433	19278
2	Warangal	Nekkonda	3	Gotlakonda	566	36749
2	Warangal	Shayampet	4	Katrapalle	750	53749
2	Warangal	Raiparthy	5	Sannur	850	71337
2	Warangal	Narsampet	6	Rajupet	985	87879
2	Warangal	Parvathagiri	7	Somaram	1,128	105991
2	Warangal	Nadikuda	8	Varikole	1,310	122105
2	Warangal	Damera	9	Mustyalapalle	1,550	139411

District Code	District Name	Mandal Name	Sl.No of Village	Village Name	Cotton Area (acres)	Cumulative Cotton Area (acres)
2	Warangal	Narsampet	10	Gurijal	1,930	156788
3	Nalgonda	Nakrekal	1	Mandalapur	250	9035
3	Nalgonda	Kangal	2	Pagidi Marri	610	64721
3	Nalgonda	Kangal	3	Chinna Madharam	885	120934
3	Nalgonda	Damarcherla	4	Vadapalle	1150	176803
3	Nalgonda	Chandur	5	Chamala Palle	1460	232217
3	Nalgonda	Chityala	6	Talla Yellemla	1845	287308
3	Nalgonda	Nidamanur	7	Yerraballi	2250	348894
3	Nalgonda	Marriguda	8	Yergandlapalle	2713	400543
3	Nalgonda	Devarakonda	9	Iddam Palle	3302	455684
3	Nalgonda	Munugode	10	Munugode	5272	513734
4	Jogulamba Gadwal	Alampur	1	Kasipur	319	10164
4	Jogulamba Gadwal	Kaloor_ Timmanadoddi	2	Erlabanda	555	25320
4	Jogulamba Gadwal	Maldakal	3	Uligepalle	756	39796
4	Jogulamba Gadwal	Manopad	4	Pallepadu	997	55047
4	Jogulamba Gadwal	Undavelli	5	Undavelli	1200	69350
4	Jogulamba Gadwal	Alampur	6	Alampur (P)	1561	84483
4	Jogulamba Gadwal	Ghattu	7	Induvasi	1760	99468
4	Jogulamba Gadwal	Kaloor_ Timmanadoddi	8	Kuchinerla	2061	113003
4	Jogulamba Gadwal	Maldakal	9	Yelkur	2695	129594
4	Jogulamba Gadwal	Gadwal	10	Pudur	6093	146451

Table 1A.2 Hamlet Group Formation

Approximate present population of the sample FSU	No. of hamlet groups to be formed
less than 300 (no hamlet-groups/sub-blocks)	1
300 to 449	3
450 to 599	4
600 to 749	5
750 to 900	6
……..and so on	.

Table 1 A.3 Listing of Households

Sl.No HH	Name of the HH Head	Did you cultivate cotton or worked as wage labour in cotton farm during 2020-21 (Yes/No) If No go to next HH. If cultivating cotton, major time as cultivator or labour. (If cultivator put C" in col 2 and ask for land owned and go to col 3 or 4 accordingly). If worked as Wage labour go to col 5)	Stratum I <=5 acres (put '√' and go to next HH)	Stratum II >5 acres (put '√' and go to next HH)	Stratum 3 Casual labour in cotton cultivation (put '√' and go to next HH)
	Col.1	*Col.2*	*Col.3*	*Col.4*	*Col.5*

Table 1A.4 Details of sample for the FPRW study in four districts of Telangana

District	Villages	Sample in each village				District Total
		Marginal/ Small Farmers	Medium/ Large Farmers	Agricultural Labour working in cotton farms	Total	
Adilabad	10	6	4	10	20	200
Warangal Rural	10	6	4	10	20	200
Jogulamba Gadwal	10	6	4	10	20	200
Nalgonda	10	6	4	10	20	200
Total	40	-	-	-	-	**800**

ANNEXURE 2

Table 2A.1 Mandal-wise percentage share of cotton area in NSA in Adilabad District-2018-19

Mandal	% Share in NSA
Talamadugu	86.0
Tamsi	81.8
Bheempoor	75.0
Gadiguda	74.4
Adilabad Rural	73.6
Sirikonda	73.5
Utnur	73.5
Neradigonda	72.6
Narnoor	72.0
Bazarhathnoor	71.7
Gudihathnur	71.4
Mavala	70.4
Ichoda	68.7
Bela	67.7
Adilabad Urban	67.5
Inderavelly	66.1
Boath	62.7
Jainad	53.6
District's Total	70.0

***Note**: Mandals highlighted are sample Mandals Source: https://eands.dacnet.nic.in*

Table 2A.2 Mandal-wise percentage share of cotton area in NSA in Nalgonda District-2018-19

Mandal	% Share in NSA
Devarakonda	95.2
Chandampet	94.6
Chandur	92.0
Neredugommu	91.4
Marriguda	90.3
Munugode	89.3
Kondamallapally	87.0
Nampalle	84.8
Chinthapalle	84.7
Gurrampode	83.7
Chityala	77.9
Peddavura	74.1
Adavidevulapalli	66.2

Mandal	% Share in NSA
Narketpalle	66.1
Saligouraram	65.7
Tirumalagiri_Sagar	64.4
Nalgonda	60.4
Madugulapally	58.3
Anumula_Haliya	53.6
Thipparthi	53.3
Nakrekal	50.5
Kethepalle	49.7
Kangal	49.4
Pedda_adiserlapalle	48.8
Kattangoor	44.8
Gundlapalle	44.4
Damaracherla	35.7
Nidamanur	33.2
Thripuraram	16.7
Vemulapalle	15.3
Miryalaguda	1.5
District's Total	63.8

***Note**: Mandals highlighted are sample Mandals Source: https://eands.dacnet.nic.in*

Table 2A.3 Madal-wise percentage share of cotton area in NSA in Warangal District-2018-19

Mandal	% Share in NSA
Damera	67.7
Nadikuda	58.0
Raiparthy	57.6
Parkal	54.1
Atmakur	53.5
Sangem	53.5
Parvathagiri	53.1
Geesugonda	47.9
Nekkonda	47.5
Duggondi	45.9
Shayampet	42.8
Wardhannapet	41.2
Nallabelly	37.3
Chennaraopeta	34.3
Narsampet	34.2
Khanapur	19.4
District's Total	46.6

***Note**: Mandals highlighted are sample Mandals Source: https://eands.dacnet.nic.in*

Table 2A.4 Mandla-wise percentage share of cotton area in NSA in Jogulamba Gadwal District-2018-19

Mandal	% Share in NSA
Manopad	74.7
Maldakal	60.1
Aiza	54.1
Undavelli	48.1
Ghattu	45.4
Kaloor_Timmanadoddi	40.7
Waddepalle	38.1
Itikyal	34.6
Gadwal	32.5
Rajoli	27.1
Dharur	26.0
Alampur	14.4
District's Total	43.2

***Note**: Mandals highlighted are sample Mandals Source: https://eands.dacnet.nic.in*

Table 2A.5 Total Area under cotton across sample villages in Adilabad-2018-19

Mandal	Mandal Sl. No	Village	Total Cotton Area in Acres
Bela	1	Guda	276
Bela	1	Sangdi	1,339
Jainad	2	Khapri	575
Jainad	2	Gimma (Khurd)	834
Narnoor	3	Mahadapur	737
Narnoor	3	Khairdatwa	942
Ichoda	4	Adegaon (Buzurg)	463
Bheempur	5	Tamsi (K)	1,098
Bazarhathnoor	6	Pipri	1,630
Gudihathnur	7	Seetagondi	2,295

Source: https://eands.dacnet.nic.in

Table 2A.6 Total Area under cotton across sample villages in Nalgonda-2018-19

Mandal	Mandal Sl. No.	Village	Total Cotton Area in Acres
Nakrekal	1	Mandalapur	250
Kangal	2	PagidiMarri	610
Kangal	2	Chinna Madharam	885
Damaracherla	3	Vadapalle	1150
Chandur	4	ChamalaPalle	1460
Chityala	5	TallaYellemla	1845
Nidamanur	6	Yerraballi	2250

Mandal	Mandal Sl. No.	Village	Total Cotton Area in Acres
Marriguda	7	Yergandlapalle	2713
Devarakonda	8	IddamPalle	3302
Munugode	9	Munugode	5272

Source: https://eands.dacnet.nic.in

Table 2A.7 Total Area under cotton across sample villages in Warangal -2018-19

Mandal	Mandal Sl.No.	Village	Total Cotton Area in Acres
Nekkonda	1	Panikera	233
Nekkonda	1	Gotlakonda	566
Narsampet	2	Makdumpur	433
Narsampet	2	Rajupet	985
Narsampet	2	Gurijal	1,930
Shayampet	3	Katrapalle	750
Raiparthy	4	Sannur	850
Parvathagiri	5	Somaram	1,128
Nadikuda	6	Varikole	1,310
Damera	7	Mustyalapalle	1,550

Source: https://eands.dacnet.nic.in

Table 2A.8 Total Area under cotton across sample villages in Jogulamba Gadwal -2018-19

Mandal	Mandal Sl.No.	Village	Total Cotton Acres
Alampur	1	Kasipur	319
Alampur	1	Alampur	1561
Kaloor_Timmanadoddi	2	Erlabanda	555
Kaloor_Timmanadoddi	2	Kuchinerla	2061
Maldakal	3	Uligepalle	756
Maldakal	3	Yelkur	2695
Manopad	4	Pallepadu	997
Undavelli	5	Undavelli	1200
Ghattu	6	Induvasi	1760
Gadwal	7	Pudur	6093

Source: https://eands.dacnet.nic.in

ANNEXURE 3

Table 3A.1 Average number of years of experience of farmers by size category

Size of the holding	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Small	18	18	19	11	17
Big	26	26	20	12	21
All	21	18	19	11	18

Source: Farmer schedules

Table3A.2 Distribution of workers having a bank account during 2020-21

Possession of bank account	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Yes	24 (97.2)	72 (95.5)	14 (100)	85 (98.6)	3 (100)	96 (99.4)	11 (93.6)	87 (98.5)	52.52 (97.25)	339.41 (98.10)
No	1 (2.8)	3 (4.5)	0 (0)	1 (1.4)	0 (0)	1 (0.6)	1 (6.4)	1 (1.5)	1.48 (2.75)	6.59 (1.90)
DK-NA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0.00 (0)	0.00 (0)
All	25 (100)	75 (100)	14 (100)	86 (100)	3 (100)	97 (100)	12 (100)	88 (100)	54.00 (100.0)	346.00 (100.0)

***Source**: Worker schedules, **Note**: Figures in parenthesis are percentages*

Table 3A.3 Reasons for farmers not covered under Aam Aadmi Bima Yojana during 2020-21

Reasons	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Small	Big	Small	Big	Small	Big	Small	Big	Small	Big
Not aware of the scheme	42 (71.6)	32 (78.5)	48 (69)	21 (69.2)	44 (72.9)	31 (74.5)	47 (79.2)	38 (92.1)	182 (73.6)	121 (79.2)
Could not afford Premium	3 (4.7)	1 (1.9)	1 (1.6)	4 (12.9)	4 (5.9)	7 (17.1)	9 (14.4)	2 (3.9)	16.02 (6.5)	13.25 (8.7)
Not much use of scheme	1 (2.2)	1 (3)	2 (3.2)	3 (10.6)	10 (16.6)	1 (2.8)	1 (1.2)	0 (0)	14.41 (5.8)	5.54 (3.6)
DK-NA	13 (21.5)	7 (16.7)	18 (26.1)	2 (7.3)	1 (1.3)	2 (5.6)	3 (5.2)	2 (4)	34.84 (14.1)	12.97 (8.5)
All	59 (100)	41 (100)	70 (100)	30 (100)	61 (100)	41 (100)	59 (100)	41 (100)	247 (100)	153 (100)

***Source**: Farmer schedules **Note:** Figures in parenthesis are percentages*

Table 3A.4 Distribution of farmers covered their workers under Aam Aadmi Bima Yojana during 2020-21

Workers covered under *Aam Aadmi Bima Yojana* by farmers	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Small	Big	Small	Big	Small	Big	Small	Big	Small	Big
Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0.0)	0 (0.0)
No	48 (81.3)	36 (87.9)	55 (79.1)	22 (74.6)	32 (54.7)	20 (48.3)	35 (59)	22 (54.4)	170.5 69.0)	101 (66.0)
DK-NA	11 (18.7)	5 (12.1)	15 (20.9)	7 (23.7)	27 (45.3)	21 (51.7)	24 (41)	19 (45.6)	76.5 31.0)	52.0 (34.0)
All	59 (100)	41 (100)	70 (100)	30 (100)	59 (100)	41 (100)	59 (100)	41 (100)	247 (100)	153 100)

Source: Farmer schedules, ***Note:*** *Figures in parenthesis are percentages*

Table 3A.5 Distribution of farmers contributed to wokers' Aam Aadmi Bima Yojana during 2020-21

Farmers contributied to workers'*Aam Aadmi Bima Y ojana*	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Small	Big	Small	Big	Small	Big	Small	Big	Small	Big
Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
No	56 (95)	40 (97.4)	67 (95.2)	30 (100)	51 (86.5)	29 (71.7)	50 (84.7)	37 (90)	224 (90.8)	136 (89.1)
DK-NA	3 (5)	1 (2.6)	3 (4.8)	0 (0)	8 (13.5)	12 (28.3)	8 (14.1)	4 (10)	24 (9.2)	17 (11.0)
All	59 (100)	41 (100)	70 (100)	30 (100)	59 (100)	41 (100)	59 (100)	41 (100)	247 (100)	153 (100)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table3A. 6 Distribution of farmers having contract with permanent employees during 2020-21

Work contract agreement	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Small	Big	Small	Big	Small	Big	Small	Big	Small	Big
Yes, written	0 (0)	2 (17.2)	1 (46.3)	1 (24.5)	0 (0)	0 (0)	0 (0)	0 (0)	1 (23.7)	3 (15.4)
Yes, oral	1 (100)	10 (71.1)	2 (53.7)	3 (75.5)	1 (100)	1 (100)	1 (100)	3 (100)	5 (76.4)	17 (77.3)

No, none	0 (0)	2 (11.7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (7.4)
DK-NA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
All	1 (100)	14 (100)	3 (100)	4 (100)	1 (100)	1 (100)	1 (100)	3 (100)	6 (100.)	22 (100)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table3A. 7 District-wise distribution of workers by level of education

District	Level of Education	Male	Female
Adilabad	Not Literate	11.77 (51.04)	55.23 (71.78)
	Up to Secondary	10.11 (43.84)	17.89
	Above Secondary	1.59 (6.89)	3.41
	All	23.06	76.94
Warangal	Not Literate	9.50 (49.0)	51.50 (66.35)
	Up to Secondary	8.19	21.81
	Above Secondary	1.72	4.28
	All	19.39	77.61
Nalgonda	Not Literate	0.39 (45.34)	59.61 (64.0)
	Up to Secondary	0.00	23.00
	Above Secondary	0.79	10.21
	All	0.86	93.14
Jogulamba Gadwal	Not Literate	8.31 (72.51)	72.69 (82.09)
	Up to Secondary	2.42	10.58
	Above Secondary	0.36	5.64
	All	11.46	88.54
All Districts	Not Literate	20.71 (53.91)	248.29 (70.22)
	Up to Secondary	12.27 (32.79)	81.73 (23.11)
	Above Secondary	4.14 (11.07)	23.86 (6.75)
	All	37.41 (100.0)	353.59 (100.0)

Source: Worker schedules ***Note****: Figures in parenthesis are percentages*

Table 3 A.8 Distribution of farmers having contract with temporary/seasonal workers during 2020-21

Work contract	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Small	Big	Small	Big	Small	Big	Small	Big	Small	Big
Yes, written	0 (0)	0 (0)	0 (0)	0 (0)	1.22 (2.1)	0 (0)	0 (0)	0.62 (1.5)	1.22 (0.49)	0.62 (0.40)
Yes, oral	23 (38.4)	21 (51.7)	29 (41.4)	14 (47.8)	36 (61.6)	19 (45.4)	15 (24.9)	8 (19.4)	102.70 (41.58)	62.08 (40.58)
No, none	36 (61.6)	20 (48.3)	41 (58.6)	16 (52.2)	21 (36.4)	22 (54.6)	44 (74)	32 (79.1)	142.47 (57.68)	90.30 (59.02)
DK-NA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.1)	0 (0)	0.62 (0.25)	0.00 (0.00)
All	59 (100)	41 (100)	70 (100)	30 (100)	59 (100)	41 (100)	59 (100)	41 (100)	247.00 (100.0)	153.00 (100.0)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3 A.9 Distribution of workers of having work contract

Work contract	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Yes, a written contract	0 (0)	0 (0)	0 (0)	1 (0.7)	0 (0)	0 (0.4)	0 (0)	0 (0)	0.00 (0.00)	0.97 (0.28)
Yes, a verbal contract	12 (46.5)	24 (32.5)	1 (8.6)	12 (13.4)	0 (0)	32 (32.6)	1 (6.3)	22 (25.4)	13.59 (25.17)	89.88 (25.98)
No, no contract	13 (53.5)	51 (67.5)	13 (91.4)	74 (85.9)	3 (100)	65 (67)	11 (93.8)	66 (74.6)	40.41 (74.83)	255.15 (73.74)
DK-NA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0.00 (0.00)	0.00 (0.00)
All	25 (100)	75 (100)	14 (100)	86 (100)	3 (100)	97 (100)	12 (100)	88 (100)	54.00 (100.0)	346.00 (100.0)

Source: Worker schedules ***Note****: Figures in parenthesis are percentages*

Table 3 A.10 Response of workers on the adherence of farmer to the contract

Adherence of employer to the written or oral contract	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal	
	Male	Female	Male	Female	Male	Female	Male	Female
Yes	8.63 (74.20)	18.00 73.80)	1.21 100.0)	10.10 83.47)	0.00 (0.00)	26.03 81.34)	1.00 100.0)	10.91 48.79)
No	2.00 17.19)	2.39 (9.80)	0.00 (0.00)	1.00 (8.26)	0.00 (0.00)	4.98 (15.56)	0.00 (0.00)	11.45 51.21)
DK-NA	1.00 (8.59)	4.00 16.40)	0.00 (0.00)	1.00 (8.26)	0.00 (0.00)	0.99 (3.09)	0.00 (0.00)	0.00 (0.00)
	11.63 (100.0)	24.39 (100.0)	1.21 100.0)	12.10 100.0)	0.00 (0.00)	32.0 100.0)	1.00 100.0)	22.36 100.0)

Source: Worker schedules ***Note****: Figures in parenthesis are percentages*

Table 3 A.11 Average number of unemployed weeks during last 12 months

Gender	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Male	8.45	11.00	7.16	7.46	9.08
Female	8.35	14.21	7.77	11.20	9.22
All	8.37	13.57	7.76	10.70	9.21

Source: Worker schedules

Table 3 A.12 Resonse of farmers on the intensity of family members' participation in cotton farm during 2020-21

Adilabad										
Intensity of working in the farm	**Men**		**Women**		**Children<14**		**Children 14-18**		**All**	
	Small	**Big**	**Small**	**Big**	**Small**	**Big**	**Small**	**Big**	**Small**	**Big**
All the time	55	38	57	34	-	1	-	2	113	75
Often	-	2	1	2	1	1	1	2	2	7
Occasionally	3	-	-	5	5	1	6	2	14	7
Never	-	1	1	-	45	33	40	29	86	63
DK-NA	1	-			8	6	11	6	20	12
Warangal										
Intensity of working in the farm	**Men**		**Women**		**Children<14**		**Children 14-18**		**All**	
	Small	**Big**	**Small**	**Big**	**Small**	**Big**	**Small**	**Big**	**Small**	**Big**
All the time	63	30	63	29	1	0	0	0	127	59
Often	4	0	5	1	0	0	5	0	14	2
Occasionally	0	0	2	0	5	3	3	6	10	9
Never	3	0	0	0	60	25	59	23	122	49
DK-NA	0	0			4	0	3	0	7	0
Nalgonda										
Intensity of working in the farm	**Men**		**Women**		**Children<14**		**Children 14-18**		**All**	
	Small	**Big**	**Small**	**Big**	**Small**	**Big**	**Small**	**Big**	**Small**	**Big**
All the time	52	35	52	33	1	1	1	0	105	69
Often	6	4	7	3	3	0	6	0	22	7
Occasionally	1	0	0	1	3	2	2	2	6	5
Never	1	2	1	4	43	30	41	32	85	68
DK-NA	0	0	0	0	0	0	0	0	0	0

Jogulamba Gadwal District										
Intensity of working in the farm	Men		Women		Children<14		Children 14-18		All	
	Small	Big	Small	Big	Small	Big	Small	Big	Small	Big
All the time	51	33	58	38	3	0	4	0	116	72
Often	1	2	1	2	1	0	4	0	7	5
Occasionally	1	1	0	0	4	0	2	6	7	7
Never	6	5	1	0	47	40	48	35	102	80
DK-NA	0	0	0	0	0	0	0	0	0	0

Source: Farmer schedules

Table.3A.13 Response of workers on the payment of extra wages for overtime worked

Response of the workers	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Yes, always	4 (16.5)	7 (9.5)	11 (11.1)	0 (0)	0 (0)	0 (0)	0 (0)	15 (16.4)	15 (16.2)	0 (0)	3 (3.7)	3 (3.3)	3.88 (7.32)	37.76 (11.20)	42 (10.8)
Yes, sometimes	7 (28.8)	13 (17.5)	20 (20.1)	3 (22.5)	36 (43.8)	38 (39.5)	0 (0)	22 (23.6)	22 (23.4)	0 (4.1)	37 (42.8)	38 (38.4)	11.15 (21.04)	95.08 28.21)	107 (27.5)
No, never	11 (44.1)	41 (55.3)	53 (52.7)	11 (77.5)	36 (42.9)	48 (49.8)	2 (100)	55 (60)	57 (60.4)	12 (95.9)	47 (53.5)	58 (58.3)	35.49 (66.96)	188.36 55.89)	222 (57)
DK-NA	3 (10.6)	13 (17.8)	16 (16.1)	0 (0)	11 (13.4)	10 (10.7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2.48 (4.68)	15.80 (4.68)	18 (4.7)
All	25 (100)	75 (100)	100 (100)	14 (100)	83 (100)	97 (100)	2 (100)	92 (100)	94 (100)	12 (100)	87 (100)	99 (100)	53.00 (100.0)	337.0 (100.0)	390 (100)

Source: Worker schedules ***Note****: Figures in parenthesis are percentages*

Table 3A.14 Response of workers on the number of hours of rest in a day

Hours of rest in a day	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
No rest	0 (0)	1 (2)	2 (1.5)	2 (14.1)	2 (1.8)	4 (4.3)	0 (0)	3 (2.8)	3 (2.7)	0 (0)	1 (0.7)	0 (0)	2.54 (4.79)	7.46 (2.21)	10 (2.6)
0.1-1 hour	25 (98.4)	74 (98)	98 (98.1)	12 (85.9)	80 (96.7)	92 (94.5)	1 (54.5)	89 (97.2)	91 (96.9)	12 (100)	86 (98.5)	25 (98.4)	48.91 (92.28)	328.45 (97.46)	378 (96.9)
1.01-2 hours	0 (1.6)	0 (0)	0 (0.4)	0 (0)	1 (1.5)	1 (1.2)	1 (45.5)	0 (0)	0 (0.4)	0 (0)	1 (0.8)	0 (1.6)	1.56 (2.94)	1.10 (0.33)	2 (0.6)
All	25 (100)	75 (100)	100 (100)	14 (100)	83 (100)	97 (100)	2 (100)	92 (100)	94 (100)	12 (100)	87 (100)	25 (100)	53.0 (100.0)	337.0 (100.0)	390 (100)

Source: Worker schedules ***Note****: Figures in parenthesis are percentages*

Table 3A.15 Distribution of workers by mode of wage payment (number)

Mode of wage payment	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal	
	Male	Female	Male	Female	Male	Female	Male	Female
Same day	5	7	2	12	2	12	1	32
After a week	20	64	9	63	0	78	10	47
After a month and above	0	4	3	11	1	7	1	9
Direct transfer to the bank/post office account	0	0	0	0	0	0	0	0
Other (specify)	0	0	0	0	0	0	0	0
All	25	75	14	86	3	97	12	88

Source: Worker schedules

Table 3A.16 Response of farmers on the type and intensity of problems in cotton cultivation

Problem	Intensity of problem	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
		Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Accidents at work	No problem	38 (66.2)	27 65.9)	65 66.1)	45 65.3)	15 49.8)	63 63.8)	39 65.6)	22 (54.8)	63 (63)	40 68.4)	20 49.7)	63 (63)	163 66.3)	89 57.9)	255 (64)
	A minor problem	19 (32)	14 34.1)	33 32.9)	21 (31.1)	14 (46.9)	32 32.6)	10 17.1)	12 28.9)	20 19.9)	7 11.5)	10 24.9)	15 15.4)	52 21.3)	47 30.8)	95 (24)
	A major problem	0 (0)	0 (0)	0 (0)	2 (3.6)	1 (3.3)	4 (3.6)	10 17.3)	6 14.2)	17 16.6)	10 16.5)	10 24.4)	19 18.8)	27 11.1)	16 10.4)	43 10.9)
	DK-NA	1 (1.8)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.1)	1 (0.5)	2 (3.6)	0 (1)	3 (2.9)	3 (1.3)	1 (0.9)	5 (1.2)
	All	58 (100)	41 (100)	99 (100)	69 (100)	30 (100)	99 (100)	59 (100)	41 (100)	100 (100)	59 (100)	41 (100)	100 (100)	245 (100)	153 (100)	398 (100)
Workers' health	No problem	34 (57.9)	19 46.5)	53 53.1)	31 44.7)	9 30.2)	43 43.3)	32 53.6)	22 52.7)	53 53.4)	39 65.9)	22 52.9)	62 62.2)	137 56.1)	75 49.2)	216 54.2)
	A minor problem	23 40.4)	20 48.9)	43 43.9)	38 55.1)	21 69.8)	56 56.5)	26 43.8)	16 38.7)	43 42.6)	17 29.2)	15 36.2)	31 31.2)	101 41.3)	67 43.6)	167 41.9)
	A major problem	0 (0)	2 (4.7)	2 (1.9)	0 (0.2)	0 (0)	0 (0.2)	0 (0.7)	4 (8.7)	3 (2.6)	0 (0)	4 (10)	3 (2.9)	1 (0.3)	11 (7)	9 (2.2)
	DK-NA	1 (1.8)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1.9)	0 (0)	1 (1.5)	3 (4.9)	0 (1)	4 (3.7)	6 (2.3)	0 (0.2)	7 (1.7)
	All	58 (100)	41 (100)	99 (100)	69 (100)	30 (100)	99 (100)	59 (100)	41 (100)	100 (100)	59 (100)	41 (100)	100 (100)	245 (100)	153 (100)	398 (100)

Problem	Intensity of problem	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
		Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Labour disputes	No problem	52 (89.5)	34 82.6)	86 86.6)	62 (90)	19 (62.5)	86 87.3)	38 64.7)	25 61.6)	64 63.9)	46 77.5)	32 78.6)	78 77.8)	189 77.2)	114 74.4)	304 76.4)
	A minor problem	4 (7.4)	7 17.4)	11 11.6)	7 (9.8)	11 37.5)	12 12.5)	20 33.4)	12 28.8)	32 32.3)	11 18.6)	7 18.2)	19 18.5)	50 20.5)	34 21.9)	83 20.9)
	A major problem	1 (1.2)	0 (0)	1 (0.7)	0 (0.2)	0 (0)	0 (0.2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.3)	0 (0)	1 (0.2)
	DK-NA	1 (1.8)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	1 (1.9)	4 (9.5)	4 (3.7)	2 (3.8)	1 (3.2)	4 (3.7)	5 (2)	6 (3.7)	10 (2.5)
	All	58 (100)	41 (100)	99 (100)	69 (100)	30 (100)	99 (100)	59 (100)	41 (100)	100 (100)	59 (100)	41 (100)	100 (100)	245 (100)	153 (100)	398 (100)
Absenteeism.	No problem	50 (86)	29 (71.2)	79 79.8)	61 (88.7)	27 89.6)	88 88.8)	38 66.3)	30 73.1)	67 (68)	39 66.8)	24 58.7)	65 64.5)	181 74.4)	106 69.5)	289 (73)
	A minor problem	4 (7.3)	8 (19.9)	12 (12.6)	5 (7.4)	3 (10.4)	8 (7.7)	6 (10)	5 (12)	10 (10.5)	3 (5.7)	10 (23.8)	11 (10.9)	19 (8)	28 (18)	43 10.8)
	A major problem	3 (4.9)	3 (7.6)	6 (6)	1 (1.9)	0 (0)	2 (1.7)	4 (6.6)	2 (5.3)	6 (6.3)	5 (8.4)	4 (9.7)	9 (8.8)	14 (5.9)	11 (7.1)	25 (6.2)
	DK-NA	1 (1.8)	1 (1.3)	2 (1.6)	1 (2)	0 (0)	2 (1.8)	10 17.1)	4 (9.5)	15 (15.3)	11 (19.1)	3 (7.8)	16 (15.8)	29 (11.8)	8 (5.3)	39 (9.9)
	No problem	58 (100)	41 (100)	99 (100)	69 (100)	30 (100)	99 (100)	57 (100)	41 (100)	98 (100)	59 (100)	41 (100)	100 (100)	243 (100)	153 (100)	396 (100)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table3A.17 Response of farmers on workers received trainingon risks of health and their prevention

Response	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Yes	10 (16.3)	7 (16.4)	16 (16.3)	20 (29)	10 (34)	30 (30.5)	9 (14.8)	10 (25.1)	19 (19)	10 (16.3)	8 (20.1)	18 (17.9)	48.22 (19.52)	35.49 (23.20)	74 (18.5)
No	48 (81.3)	34 (83.6)	82 (82.3)	48 (68)	19 (62.6)	66 (66.4)	47 (79.1)	30 (73.6)	77 (76.8)	36 (61.5)	32 (77.4)	68 (68)	178.52 (72.28)	114.95 (75.13)	300 (74.9)
DK-NA	1 (2.4)	0 (0)	1 (1.4)	2 (3)	1 (3.5)	3 (3.1)	4 (6.2)	0 (1.2)	4 (4.1)	13 (22.2)	1 (2.5)	14 (14.1)	20.26 (8.20)	2.55 (1.67)	25 (6.3)
All	59 (100)	41 (100)	100 (100)	70 (100)	30 (100)	100 (100)	59 (100)	41 (100)	100 (100)	59 (100)	41 (100)	100 (100)	247.00 (100.0)	153.00 (100.0)	400 (100)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3A.18 Response of farmers on workers received information on violence and harassment and their prevetion

Response	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Yes	8 (14.3)	6 (15.1)	15 (14.6)	16 (23.2)	4 (14.2)	21 (20.5)	11 (18.6)	7 (17)	18 (18)	7 (12.4)	2 (5.8)	11 (10.5)	43.02 (17.42)	20.48 (13.39)	64 (15.9)
No	48 (81.6)	35 (84.9)	83 (83)	51 (73.3)	24 (80.5)	75 (75.5)	48 (80.7)	31 (74.6)	78 (78.2)	48 (80.7)	37 (89.2)	83 (83.2)	194.66 (78.81)	126.41 (82.62)	321 (80.3)
DK-NA	2 (4.2)	0 (0)	2 (2.4)	2 (3.4)	2 (5.3)	4 (4)	0 (0.7)	3 (8.4)	4 (3.8)	4 (6.9)	2 (5)	6 (6.3)	9.31 (3.77)	6.12 (4.0)	15 (3.9)
All	59 (100)	41 (100)	100 (100)	70 (100)	30 (100)	100 (100)	59 (100)	41 (100)	100 (100)	59 (100)	41 (100)	100 (100)	247.0 (100.0)	153.0 (100.0)	400 (100)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3A.19 Response of farmers on workers received training on protective equipment, farmers' insistenace on the use and upkeep of protective equipment

Category	Response	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Employees received training/ information on the use of protective equipment	Yes	17 (16.5)	31 (31.2)	12 (11.9)	14 (14.3)	73.81 (18.45)
	No	83 (83.5)	67 (66.7)	81 (81.1)	75 (74.6)	305.76 (76.74)
	DK-NA	0 (0)	2 (2.2)	7 (7)	11 (11.2)	20.43 (5.10)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400.0 (100.0)
Insisting workers to use the equipment provided	Yes	27 (27.2)	36 (35.8)	12 (11.9)	7 (7.3)	82.19 (20.54)
	No	71 (70.7)	63 (63.2)	86 (86.1)	91 (91.3)	311.30 (77.82)
	DK-NA	2 (2)	1 (1)	2 (2)	1 (1.5)	6.51 (1.63)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400.0 (100.0)
Upkeep and cleaning of the equipment	Yes	55 (54.8)	74 (74.2)	36 (36.3)	35 (34.8)	200.14 (50.04)
	No	45 (45.2)	25 (24.8)	57 (56.6)	64 (64.3)	190.83 (47.71)
	DK-NA	0 (0)	1 (1)	7 (7.1)	1 (0.9)	9.03 (2.26)
	All	100 (100)	100 (100)	100 (100)	100 (100)	400.0 (100.0)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3A.20 Distribution of farmers by methods of recruiting workers

Methods	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal				All
	Commercial	Commercial	Commercial	Seed	Commercial	Both	All	All
	100	100	100	15	66	19	100	400
Through references from other cotton farmers in the village/area	58 (58)	51 (51)	86 (86)	12 (80)	57 (86.4)	19 (100)	88 (88)	297 (74.3)
Through labour contractors	23 (23)	20 (20)	47 (47)	4 (26.7)	31 (47)	12 (63.2)	48 (48)	150 (37.5)

Methods	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal				All
	Commercial	Commercial	Commercial	Seed	Commercial	Both	All	All
	100	100	100	15	66	19	100	400
Through references from existing employees/workers	50 (50)	51 (51)	83 (83)	12 (80)	57 (86.4)	19 (100)	87 (87)	284 (71)
Through references from cotton seed suppliers and bulk buyers of cotton bales	1 (1)	0 (0)	3 (3)	0 (0)	2 (3.0)	0 (0)	2 (2)	8 (2.0)
My self	49 (49)	37 (37)	14 (14)				26 (26)	126 (31.5)
Auto Driver/worker	16 (16)	10 (10)	1 (1)				2 (2)	29 (7.3)

Source: Farmer schedules ***Note****: i) Figures in the brackets are percentages ii) * commercial cotton*

Table 3A.21 Distribution of farmers advanced money to workers

Category	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	All	Farmers advanced money	All	Farmers advanced money	All	Farmers advanced money	All	Farmers advanced money	All	Farmers advanced money
Gender										
Male	87	35 (40.2)	88	55 (62.5)	92	18 (19.6)	86	17 (19.8)	353	108 (31.0)
Female	13	6 (46.1)	12	3 (25)	8	0 (0)	14	2 (14.29)	47	10 (21.3)
All	100	41 (41)	100	58 (58)	100	18 (18)	100	18 (18)	400	117 (29.3)
Size of land holding										
Small	59	25 (42.4)	70	39 (55.7)	59	11 (18.6)	59	11 (18.6)	247	74 (30.0)
Big	41	16 (39.0)	30	22 (73.3)	41	7 (17.1)	41	6 (14.6)	153	42 (27.5)
All	100	41 (41)	100	58 (58)	100	18 (18)	100	1 8 (18)	400	117 (29.3)
Cotton production type										
Seed		NA		NA	1	NA	15	3 (20)	17	3 (17.65)
Commercial	100	41 (41)	99	57 (57.6)	99	18 (18.2)	66	9 (13.6)	364	106 (29.1)

Category	Adilabad		Warangal		Nalgonda		Jogulamba Gadwal		All Districts	
	All	Farmers advanced money	All	Farmers advanced money	All	Farmers advanced money	All	Farmers advanced money	All	Farmers advanced money
Both		NA		NA		NA	19	9 (47.4)	19	9 (47.4)
All	100	41 (41)	100	58 (58)	100	18 (18)	100	18 (18)	400	117 (29.3)

Source: Farmer schedules Note: Figures in parenthesis are percentages to total

Table 3A.22 Response of farmers on workers indebtedness to them

Category	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Gender					
Male	0 (0)	8 (9)	3 (3.7)	4 (5.2)	13 (3.6)
Female	0 (0)	1 (5.5)	0 (0)	2 (14.1)	3 (5.9)
All	0 (0)	9 (8.5)	3 (3.3)	7 (7.3)	16 (4)
Size of land holding					
Small	0 (0)	5 (6.6)	3 (4.4)	6 (9.8)	12 (5)
Big	0 (0)	8 (25.8)	0 (0)	0 (1)	2 (1.3)
All	0 (0)	9 (8.5)	3 (3.3)	7 (7.3)	16 (4)
Cotton production type					
Seed	()	0 (0)	0 (0)	0 (0)	0 (0)
Commercial	0 (0)	8 (8.5)	3 (3.4)	4 (6.4)	13 (3.7)
Both				3 (16.5)	3 (16.5)
All	0 (0)	9 (8.5)	3 (3.3)	7 (7.3)	16 (4)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3 A.23 Response of farmers on modes of repayment of debt by workers

Modes of Payment	Size of land holding			Cotton Production Type			
	Small	Big	All	Seed	Commer-cial	Both	All
Payment by Cash	6 (2.4)	12 (7.8)	15 (3.8)	0 (0)	13 (3.6)	2 (10.5)	15 (3.7)
Partly by cash and partly by adjusting the wages earned	7 (2.8)	2 (1.3)	11 (2.7)	0 (0)	8 (2.2)	2 (10.5)	11 (2.7)
Through free labour by the worker who has incurred the debt	8 (3.2)	1 (0.6)	11 (2.7)	0 (0)	9 (2.4)	2 (10.5)	11 (2.7)
Through free labour by other family members	3 (1.2)	0 (0)	4 (1)	0 (0)	4 (1.1)	0 (0)	4 (1)
Through mortgaging any asset	15 (6.1)	13 (8.5)	28 (7)	0 (0)	24 (6.6)	4 (21.1)	28 (7)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3A.24 Distribution of workers refused to do work

Workers	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
All	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Yes	1 (4.2)	17 (22.4)	19 (18.8)	2 (16.7)	15 (17.3)	16 (16.4)	1 (33.3)	20 (20.4)	20 (20.4)	7 (61.7)	11 (12.3)	18 (17.6)	11 (19.5)	65 (18.8)	76 (18.9)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.25 Distribution of workers by type of difficult situations by gender

Description	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Sample Workers	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Forced workers to stay in the workplace outside working hours	1 (4.3)	2 (2.9)	3 (3.3)	1 (5.9)	3 (3.2)	4 (3.7)	0 (0)	30 (30.7)	30 (30.2)	2 20.0)	29 (32.8)	31 (31.3)	4 (7.2)	80 (23.1)	86 (21.6)
Withheld workers identity documents	0 (0)	0 (0)	0 (0)	2 (14.7)	1 (0.8)	3 (3.4)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.8)	1 (0.7)	3 (4.7)	1 (0.2)	3 (0.7)
Confiscated a personal item belonging to workers	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.8)	1 (0.6)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.8)	1 (0.7)	0 (0)	0 (0.1)	0 (0.1)
Using physical threats	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.8)	1 (0.6)	0 (0)	0 (0.2)	0 (0.2)	0 (0)	3 (3.7)	3 (3.3)	0 (0)	3 (0.8)	3 (0.7)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.26 Response of workers on freedom to stop work when face with difficult situation

Workers	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
All	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Yes	25 100)	74 (99)	99 (99.3)	13 (95.6)	76 (88.2)	89 (89.5)	2 (66.7)	75 (77.2)	77 (76.7)	12 (100)	71 (80.7)	83 (82.9)	52 96.7)	288 (83.3)	338 (84.6)

Source*: Worker schedules,* ***Note****: Figures in parenthesis are percentages*

Table 3A.27 Response of farmers on frequency of workers working overtime

Frequency of overtime	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Often	1 (2.2)	1 (2.5)	2 (2.3)	2 (2.1)	4 (13.3)	3 (3.2)	5 (8.1)	2 (5.8)	8 (7.5)	6 (10.6)	6 (14.4)	12 (11.7)	16 (6.4)	10 (6.9)	26 (6.5)
Rarely	16 (26.7)	9 (21.7)	25 (24.7)	31 (44.4)	17 (56)	45 (45.5)	19 (32.8)	12 (30.1)	32 (32.1)	11 (18.1)	19 (47.3)	26 (26.4)	73 (29.6)	49 (31.9)	121 (30.2)
Never	33 (56.1)	29 (70.1)	62 (62.1)	35 (50.6)	8 (27.3)	48 (48.3)	35 (59.1)	26 (64.1)	60 (60.3)	40 (68.5)	16 (38.3)	60 (60.1)	146 (59.1)	91 (59.2)	237 (59.2)

***Source**: Farmer schedules, **Note:** Figures in parenthesis are percentages*

Table 3A.28 Response of farmers on the payment for overtime to workers

Payment of overtime wages	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Yes, always	4 (6.8)	1 (2.4)	6 (6)	14 (20)	5 (16.7)	20 (20)	5 (8.5)	4 (9.8)	9 (9)	7 (11.9)	3 (7.3)	10 (10)	28 (11.3)	11 (7.19)	40 (10)
Yes, most of the time	3 (5.1)	2 (4.9)	5 (5)	1 (1.4)	0 (0)	2 (2)	3 (5.1)	2 (4.9)	4 (4)	1 (1.7)	1 (2.4)	2 (2)	9 (3.6)	8 (5.2)	17 (4.2)
Yes, but rarely	7 (11.9)	3 (7.3)	11 (11)	15 (21.4)	11 (36.7)	24 (24)	14 (23.7)	9 (21.9)	23 (23)	12 (20.3)	15 (36.6)	28 (28)	52 (21.1)	38 (24.8)	88 (22)
Never	4 (6.9)	2 (4.9)	5 (5)	8 (11.4)	3 (10)	12 (12)	3 (5.1)	2 (4.9)	5 (5)	1 (1.7)	0 (0)	2 (2)	15 (6.1)	6 (3.92)	22 (5.5)

***Source**: Farmer schedules, **Note:** Figures in parenthesis are percentages*

Table 3A.29 Response of workers on reasons for continuing unwilling activities with employer

Reasons	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	8	14	22	8	22	30	1	41	42	5	38	43	22	115	137
Fear of threats and violence against me or my relatives	0 (0)	0 (2.5)	0 (1.8)	0 (0)	2 (8.5)	2 (5.1)	0 (0)	2 (5.5)	2 (5.5)	0 (0)	2 (5.2)	2 (4.7)	0 (0)	6 (5.5)	7 (4.9)
Threat of financial penalties / fines	8 (100)	13 (92.9)	21 (95.5)	8 (100)	22 (100)	30 (100)	1 (100)	40 (97.6)	41 (97.6)	5 (100)	38 (100)	43 (100)	22 (100)	113 (98.3)	135 (98.5)
Because I am under constant surveillance	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	5 (12.4)	6 (13.2)	0 (0)	0 (0)	0 (0)	1 (5.2)	10 (8.4)	11 (8.1)
Because my debt is not paid back	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	2 (4.3)	2 (4.2)	0 (0)	0 (0)	0 (0)	1 (5.2)	3 (2.86)	4 (2.6)
Because my work permit renewal is done by my employers	8 (100)	13 (92.9)	21 (95.5)	8 (100)	22 (100)	30 (100)	1 (100)	40 (96.5)	41 (96.6)	5 (100)	38 (100)	43 (100)	22 (100)	112 (97.6)	134 (97.9)
Because I do not have access to my Aadhar/ ration card	8 (100)	13 (92.9)	21 (95.45)	8 (100)	22 (100)	30 (100)	1 (100)	40 (97.6)	41 (97.6)	5 (100)	38 (100)	43 (100)	22 (100)	113 (98.3)	135 (98.5)
Because I would lose all due wages	0 (0)	2 (17.8)	3 (12.7)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4.1)	2 (4.1)	0 (0)	0 (0.6)	0 (0.6)	0 (0)	5 (4.3)	5 (3.9)

Reasons	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	8	14	22	8	22	30	1	41	42	5	38	43	22	115	137
Because I need a salary	4 (50.6)	8 (58.3)	12 (56.3)	7 (92.5)	17 (77.6)	25 (83.9)	1 (100)	35 (85.1)	36 (85.2)	5 (100)	32 (84.8)	37 (85.8)	18 (81.6)	95 (82.6)	113 (82.6)
Because I could not go to another employer	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4.1)	2 (4.1)	0 (0)	0 (0)	0 (0)	0 (0)	3 (2.8)	3 (2.5)
Nothing will happen	0 (0)	0 (0)	0 (0)	0 (0)	2 (7.0)	1 (4.2)	0 (0)	5 (11.3)	5 (11.2)	0 (0)	0 (0)	0 (0)	0 (0)	10 (8.4)	10 (7.6)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.30 Distribution of farmers on type of restrictions on workers to get work done (Yes=Yes, regularly Yes, but rarely)

Restrictions	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Wage deductions or withhold wages or other benefits	1 (0.9)	0 (0)	1 (0.5)	2 (2.6)	3 (10.6)	3 (3.4)	14 (23.9)	4 (10.8)	21 20.7)	1 (2.3)	2 (4.2)	3 (2.8)	25 (10.3)	7 (4.8)	35 (8.8)
Unpaid overtime	0 (0)	1 (1.2)	1 (0.5)	4 (5.4)	0 (0)	5 (4.9)	9 (14.9)	1 (3.3)	12 (12.1)	1 (2.3)	6 (15.6)	6 (6.1)	17 (7.1)	8 (5.3)	26 (6.6)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3A.31 Response of farmers on children below 14 years performing tasks of adults

Holding Size	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Small	4 (7.5)	13 (18.3)	17 (29.1)	12 (20.5)	47 (19)
Big	4 (10.9)	5 (17.3)	17 (41.9)	8 (19.4)	36 (23.8)
All	9 (8.91)	20 (19.6)	34 (33.6)	20 (20.2)	83 (20.8)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3A.32 Response of farmers on children below 14 years working overtime

Size	Occasionally	Rarely	Never
Adilabad	2 (2.2)	1 (1.2)	13 (12.6)
Warangal	3 (3)	5 (5.5)	16 (16.2)
Nalgonda	13 (13.1)	7 (7.5)	18 (18.6)
Jogulamba Gadwal	0 (0.1)	8 (8.4)	18 (17.5)
All Districts	21 (5.2)	22 (5.6)	62 (15.4)

Source: Farmer schedules, Note: Figures in parenthesis are percentages

Take 3A.33 Response of workers on children's exposure to adverse work conditions in cotton farms (percentage, yes)

District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Sample	19	51	71	4	56	58	2	80	81	10	62	72	34	266	302
Dust, fumes,	0 (1.7)	4 (8.1)	5 (6.4)	1 (33.1)	14 (24.1)	15 (25.6)	2 (100)	60 (75.8)	62 (76.2)	10 (100)	44 (71.3)	54 (75.3)	12 (36.6)	148 (55.5)	164 (54.3)
Extreme cold or heat	5 (25.5)	24 (46.4)	29 (40.9)	2 (53.4)	29 (51.0)	31 (52.8)	2 (100)	72 (90.2)	74 (90.5)	10 (100)	52 (84.0)	63 (87.5)	19 (55.9)	194 (73.1)	217 (72.0)
Dangerous tools (knives etc.)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.3)	1 (2.1)	0 (0)	22 (27.9)	23 (27.7)	9 (84.3)	5 (7.4)	12 (16.9)	6 (19.1)	45 (17.1)	52 (17.3)
Workplace too dark or confined.	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.7)	1 (1.6)	1 (45.5)	4 (4.4)	4 (4.9)	0 (0)	1 (133)	1 (1.2)	1 (3.3)	8 (2.9)	9 (3.0)
Chemicals (pesticides, glues, etc.).	6 (31.1)	23 (43.9)	29 (40.6)	3 (63.8)	22 (39.0)	25 (42.2)	2 (100)	64 (80.0)	65 (80.4)	3 (27.4)	40 (65.4)	44 (61.1)	14 (42.3)	169 (63.4)	187 (62)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.34 Response of workers on children carrying heavy loads and working extra hours (percentage, yes)

District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Sample	19	51	71	4	56	58	2	80	81	10	62	72	34	266	302
Do they carry heavy loads at work?	3 (16.8)	2 (3.6)	5 (7.1)	0 (0)	8 (13.5)	7 (12.8)	0 (0)	7 (8.5)	7 (8.4)	0 (0)	6 (10.5)	7 (9.3)	4 (10.5)	21 (8.1)	25 (8.2)
Do any workers under 18 years of age work more than 8 hours a day?	2 (10.6)	10 (18.5)	12 (16.4)	2 (47.1)	10 (17.2)	12 (20.2)	0 (0)	18 (22.7)	18 (22.5)	1 (5.3)	13 (20.4)	13 (18.7)	5 (13.8)	52 (19.7)	58 (19.3)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.35 Response of farmers on children (14-18 years) accompany their family members

Response	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Yes	39 (38.5)	50 (49.6)	61 (60.7)	33 (33.3)	187 (46.8)

Source: Farmer schedules, Note: Figures in parenthesis are percentages

Table 3A.36 Response of farmers on children (14-18 years) performing tasks of adults

Size of land holding	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Small	24 (40.6)	34 (48)	26 (43.4)	19 (32.6)	97 (39.4)
Big	17 (41.7)	13 (42)	21 (50.3)	15 (37)	65 (42.8)
All	41 (41.1)	46 (46.4)	44 (44)	33 (33.1)	159 (39.8)

Source: Farmer schedules, Note: Figures in parenthesis are percentages

Table 3A.37 Response of farmers on children (14-18 years) working overtime

District	Size	Occasionally	Rarely	Never
Adilabad	Small	3 (4.9)	6 (9.8)	17 (29.4)
	Big	4 (8.7)	3 (6.8)	12 (28.4)
	All	7 (6.5)	9 (8.5)	29 (29)

District	Size	Occasionally	Rarely	Never
Warangal	Small	3 (4.8)	9 (12.9)	22 (30.9)
	Big	2 (5.3)	5 (16.7)	6 (21.4)
	All	5 (4.7)	13 (13)	29 (29.3)
Nalgonda	Small	13 (22.1)	7 (12.4)	14 (23.2)
	Big	4 (10.7)	10 (25.4)	5 (12.7)
	All	19 (19.1)	15 (14.7)	20 (20.3)
Jogulamba Gadwal	Small	2 (3.6)	5 (8.7)	14 (23.3)
	Big	0 (0.5)	3 (6.7)	13 (31.8)
	All	3 (3)	8 (8.4)	26 (25.6)
All Districts	Small	28 (11.4)	26 (10.6)	61 (24.6)
	Big	11 (7.4)	20 (13.4)	35 (23.1)
	All	41 (10.3)	45 (11.2)	96 (24)

***Source**: Farmer schedules, **Note:** Figures in parenthesis are percentages*

Take 3A.38 Response of workers on average number of children (below 14 years) work in cotton farm (percentage, yes)

District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
All workers	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Under 14 years	3 (11.0)	20 (27.1)	23 (23.2)	5 (35.5)	42 (48.6)	47 (46.8)	1 (30.3)	69 (71.4)	71 (70.7)	5 (44.6)	46 (52.5)	52 (52.1)	13 (24.7)	192 (55.5)	211 (52.9)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Take 3A.39 Response of workers on children (belwo 14 years) working in cotton farm attending school ((percentage, yes)

District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
All workers	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Attending school	13 (50.4)	40 (53.72)	53 (52.9)	6 (42.9)	54 (62.5)	60 (59.8)	1 (33.3)	74 (76.3)	75 (75)	7 (58.3)	42 (47.2)	49 (48.5)	27 (49.3)	213 (61.5)	239 (59.8)

Source: Worker schedules , ***Note****: Figures in parenthesis are percentages*

Take3A. 40 Response of workers on type of discrimination (percentage, yes)

Type of discrimi-natin	Dis-trict	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	Sample	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Sex/gen-der	Yes	0 (0)	0 (0)	0 (0)	4 27.86)	1 (1.27)	6 (6.43)	0 (0)	6 (5.76)	6 (5.66)	0 (0)	4 (4.19)	4 (3.71)	5 (9.24)	14 (4.08)	18 (4.58)
	DK-NA	0 (0)	0 (0)	0 (0)	1 (4.42)	0 (0)	1 (0.86)	0 (0)	11 11.52)	11 (11.32)	5 38.47)	3 (3.23)	7 (7.27)	4 (7.91)	25 (7.1)	29 (7.18)

Type of discrimi-natin	Dis-trict	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Gender	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	Sample	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Social back-ground	Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (4.77)	5 (4.69)	0 (0)	6 (6.31)	6 (5.59)	0 (0)	13 (3.62)	13 (3.27)
	DK-NA	0 (0)	0 (0)	0 (0)	1 (4.42)	0 (0)	1 (0.86)	0 (0)	8 (8.05)	8 (7.9)	5 38.47)	3 (3.23)	7 (7.27)	4 (7.91)	18 (5.09)	21 (5.36)
Migratory status	Yes	0 (0)	0 (0)	0 (0)	2 13.07)	5 (5.98)	7 (7.35)	0 (0)	9 (9.45)	9 (9.28)	0 (2.17)	3 (3.92)	4 (3.72)	3 (4.7)	24 (6.86)	27 (6.66)
	DK-NA	0 (0)	0 (0)	0 (0)	1 (4.42)	0 (0)	1 (0.86)	0 (0)	8 (8.29)	8 (8.14)	5 38.47)	3 (3.23)	7 (7.27)	4 (7.91)	18 (5.23)	22 (5.49)
Disability	Yes	0 (0)	0 (0)	0 (0)	1 (5.86)	2 (2.69)	3 (3.3)	0 (0)	21 (21.96)	22 21.57)	0 (0)	20 23.26)	21 20.59)	1 (1.94)	56 16.24)	60 14.88)
	DK-NA	3 12.23)	0 (0)	3 (2.82)	1 (4.42)	1 (0.67)	1 (1.4)	1 36.37)	14 13.94)	14 14.16)	5 38.47)	3 (3.23)	7 (7.27)	9 15.84)	30 (8.59)	37 (9.28)
Sexual ori-entation	Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	13 (13.9)	14 (13.65)	2 (13.81)	15 (17.55)	17 (17.12)	1 (2.31)	36 (10.42)	39 (9.65)
	DK-NA	0 (0)	0 (0)	0 (0)	1 (4.42)	0 (0)	1 (0.86)	0 (0)	17 (17.28)	17 (16.97)	5 (38.47)	3 (3.23)	7 (7.27)	4 (7.91)	36 (10.42)	41 (10.18)
Marital status	Yes	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (9.05)	9 (8.88)	0 (0)	2 (2.59)	2 (2.29)	0 (0)	19 (5.57)	20 (5.04)
	DK-NA	0 (0)	0 (0)	0 (0)	1 (4.42)	0 (0)	1 (0.85)	0 (0)	12 (11.94)	12 (11.73)	5 (38.47)	3 (3.23)	7 (7.27)	4 (7.91)	25 (7.32)	30 (7.38)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A. 41 Response of farmers on type of discrimination in recruitment of workers (percentage yes in total N)

Discrimination	Gender	Size of Holding			Cotton Production Type			
	All	Small	Big	All	Seed	Commercial	Both	All
Number	397	247	153	400	17	364	19	400
Sex/gender	27.9	28.84	25.49	27.86	0.4	29.0	15.3	27.9
Social background	4.5	5.89	1.27	4.60	0.4	4.6	6.4	4.6
Migratory status	7.5	6.52	8.80	7.14	7.5	6.9	14.6	7.1
Disability	25.3	26.01	22.72	25.06	11.8	25.3	26.8	25.1
Sexual orientation	4.1	3.97	3.76	3.91		3.6	15.3	3.9
Marital status	5.6	5.69	4.98	5.49		5.8		5.5

Source: Farmer schedules

Table 3A.42 Response of farmers on hiring physically handicappted persons (percentage yes)

Category	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Gender					
Male	1 (0.6)	42 (47.4)	17 (18.4)	5 (5.8)	51 (14.5)
Female	0 (3.4)	2 (20.5)	0 (0)	1 (8.7)	3 (6)
All	1 (1.1)	44 (44.3)	17 (16.7)	6 (6.4)	53 (13.3)
Size of land holding					
Small	1 (1.8)	32 (46)	11 (18.9)	4 (7.7)	41 (16.4)
Big	0 (0)	9 (28.4)	4 (9.6)	1 (3.3)	8 (5)
All	1 (1.1)	44 (44.3)	17 (16.7)	6 (6.4)	53 (13.3)
Type of cotton production					
Seed	--	--	--	2 (14.7)	2 (9.1)
Commercial	1 (1.1)	44 (44.3)	17 (17)	4 (6.8)	50 (13.8)
Both	--	--	--	0 (0)	0 (0)
All	1 (1.1)	44 (44.3)	17 (16.7)	6 (6.4)	53 (13.3)

Source: Farmer schedules Note: Figures in parenthesis are percentages

Table 3A.43 Response of farmers on hiring pregnant women in the last trimester (percentage yes)

Category	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Male	0 (0)	1 (1.1)	4 (4)	1 (1.3)	7 (2)
Female	0 (0)	1 (5.5)	0 (0)	3 (18.7)	4 (7.6)
All	0 (0)	2 (1.6)	4 (3.6)	5 (5.4)	11 (2.8)
Holding size					
Small	0 (0)	0 (0)	3 (4.8)	4 (7)	9 (3.5)
Big	0 (0)	5 (16.7)	0 (0)	1 (1.4)	2 (1.1)
All	0 (0)	2 (1.6)	4 (3.6)	5 (5.4)	11 (2.8)

Source: Farmer schedules, Note: Figures in parenthesis are percentages

Table 3A.44: Response of farmers on hiring persons with HIV/AIDS (percentage yes)

Type	Category	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Gender	Male	2 (2.3)	11 (12.3)	7 (7.8)	3 (3.6)	21 (6)
	Female	0 (0)	0 (1)	0 (0)	1 (8.5)	2 (3.3)
	All	2 (2)	11 (11)	7 (7.1)	5 (4.7)	22 (5.6)
Holding Size	Small	1 (2.4)	8 (11.8)	4 (7.4)	3 (4.7)	16 (6.3)
	Big	1 (1.3)	1 (2.8)	3 (6.2)	2 (4.7)	6 (3.7)
	All	2 (2)	11 (11)	7 (7.1)	5 (4.7)	22 (5.6)
Cotton Production Type	Seed					
	Commercial	2 (2)	11 (11)	7 (7.2)	4 (4.9)	21 (5.8)
	Both	2 (2)	11 (11)	7 (7.2)	1 (3.7)	1 (3.4)
	All	2 (2)	11 (11)	7 (7.2)	5 (4.7)	22 (5.6)

Source: Farmer schedules, Note: Figures in parenthesis are percentages

Table 3A.45 Percentage of farmers conducting collective bargaining negotiations with workers during last thtree years (percentage yes)

Gender	Percentage of farmers conducted
Gender (N=400)	
Male (N=353)	27.76
Female (N=47)	0.90

Source: Farmer schedules

Table 3A.46 Response of workers on action (firing or refuse the renew contract) taken by farmer on workers involved in union activities

Response	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
All workers	2	9	11	0	11	11	1	13	14	0	6	6	3	38	42
Workers responded Yes	2 (100)	0 (0)	2 (16.9)	0	6 (51.5)	6 (55.8)	0 (0)	0 (3.1)	0 (2.9)		0 (0)	0 (0)	3 (79.2)	4 (10.6)	6 (14.6)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.47 Response of workers on occurance of labour disputes in workplace

Occurance of dispute	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Number	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Frequent	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.7)	1 (0.7)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.4)	2 (0.4)
Rare	4 (16.1)	16 (21.8)	21 (20.5)	4 (30.7)	39 (45.8)	43 (42.8)	1 (30.3)	36 (37.3)	37 (37.1)	2 (16)	35 (39.7)	37 (37)	12 (22)	128 (37)	142 (35.6)
Non-existent	21 (83.9)	59 (78.2)	79 (79.5)	10 (69.3)	44 (50.7)	54 (54.2)	1 (36.4)	55 (56.4)	56 (55.8)	10 (84)	51 (58.2)	61 (61.2)	41 (76.1)	207 (59.8)	245 (61.4)
DK-NA	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0.4)	0 (0.4)	0 (0)	2 (2.1)	2 (1.8)	0 (0)	2 (0.5)	2 (0.5)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.48 Response of workers on result of negotiations

Outcome of negotiations	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Number	10	24	34	7	45	52	2	81	83	8	75	83	27	225	252
Successful	0 (0)	0 (0)	0 (0)	1 (19.6)	4 (9.1)	6 (10.6)	1 (54.6)	29 (36.1)	30 (36.3)	0 (0)	18 (24.5)	19 (22.3)	3 (12.5)	66 (29.1)	71 (28.1)
Partially successful	6 (60.9)	16 (65.2)	22 (64.1)	5 (66.2)	30 (67.1)	35 (67)	1 (45.4)	38 (46.9)	39 (46.9)	2 (28.3)	35 (46.4)	37 (44.8)	14 (53.2)	113 (50.1)	127 (50.3)
Not successful	4 (35.3)	8 (34.8)	12 (34.9)	1 (14.2)	10 (21.1)	10 (20.1)	0 (0)	14 (16.7)	14 (16.6)	6 (71.7)	22 (29.1)	27 (32.9)	9 (34.3)	46 (20.3)	53 (21.1)
DK-NA	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.7)	1 (2.3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.5)	1 (0.4)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.49 Percentage of farmers having knowledge on health effects of farming on workers

Having knowledge	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All	Small	Big	All
Yes	44 (73.9)	21 (50.1)	64 (64)	48 (68.1)	21 (70.8)	69 (68.5)	33 (56)	31 (75.1)	64 (63.8)	30 (50)	20 (49)	50 (49.6)	153.77 (62.26)	92.65 (60.56)	246 (61.6)
No	15 (26.1)	20 (49.9)	36 (36)	18 (25.8)	9 (29.2)	26 (26.2)	24 (40.7)	10 (24.9)	34 (34.2)	27 (45.1)	21 (51)	48 (47.6)	84.12 (34.06)	60.35 (39.44)	144 (36.1)
DK-NA	0 (0)	0 (0)	0 (0)	4 (6.1)	0 (0)	4 (4.3)	2 (3.3)	0 (0)	2 (1.9)	3 (4.9)	0 (0)	3 (2.9)	9.09 (3.68)	0.00 (0.00)	9 (2.3)
All	59 (100)	41 (100)	100 (100)	70 (100)	30 (100)	100 (100)	59 (100)	41 (100)	100 (100)	59 (100)	41 (100)	100 (100)	247.00 (100.0)	153.00 (100.0)	400 (100)

Source: Farmer schedules, Note: Figures in parenthesis are percentages

Table 3A.50 Percentage of workers having knowledge on risks, preventive equipment and safety rules (percentage yes)

Description	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Risks involved in your job	22 (88.2)	63 (83.8)	85 84.8)	13 (94.1)	71 (85)	84 (86.9)	2 (100)	53 (57.2)	54 (57.6)	12 (95.9)	53 (59.8)	64 (63.9)	49 (92.1)	222 (65.7)	267 (68.2)
The equipment needed to prevent risks	11 42.7)	3 (3.9)	13 (12.8)	7 (46.9)	26 (31.1)	33 (34.3)	1 (54.6)	53 (58)	54 (57.9)	12 95.9)	45 (51.1)	56 56.2)	28 53.8)	151 (44.7)	178 45.6)
Workplace safety rules	3 11.3)	2 (2.7)	5 (4.7)	6 (45)	25 (30.4)	32 (33.3)	1 (54.6)	47 (51.5)	48 (51.5)	12 (95.9)	32 (36)	43 (42.9)	21 (39.2)	131 (38.7)	152 (38.8)

Table 3A.51 Percentage of workers received training from employer on health risks and their prevention (percentage yes)

District	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Training received	8 (32.8)	5 (6.1)	12 12.3)	3 (18.1)	12 (14.9)	15 (15.6)	0 (0)	2 (1.7)	2 (1.7)	9 (72)	11 (13)	20 (19.7)	17 32.9)	20 (5.9)	33 (8.5)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.52 Percentage of workers received training on violence and harassment at work and their prevention (percentage yes)

Received training	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Yes	8 (32.8)	3 (3.4)	10 (10.2)	1 (5.9)	15 (18.4)	15 (15.9)	2 (100)	23 (25.4)	24 (26.1)	11 (89.5)	12 (13.2)	22 (22)	19 (36.7)	65 (19.2)	82 20.9)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.53 Percentage of workers received training on occupation health and safety by source (percentage yes)

Source of Training	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
In-house training/ information session led by employer-farmer	0 (0)	3 (4.5)	3 (3.5)	0 (0)	1 (1.7)	1 (1.3)	1 (45.4)	6 (6.3)	6 (6.7)	0 (2.2)	10 (12.1)	11 (11)	1 (2.6)	21 (6.2)	23 (5.8)
In-house training/ information session led by a health/safety professional	0 (0)	1 (0.9)	1 (0.7)	0 (0)	0 (0)	0 (0)	1 (45.4)	3 (3.7)	4 (4)	1 (7.4)	0 (0)	1 (0.9)	2 (3.5)	7 (2.2)	9 (2.3)
Training/ information session led by the unions	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (2.1)	2 (1.8)	0 (0)	1 (0.3)	1 (0.3)
Given any occupational health and safety literature	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.2)	1 (1.2)	0 (0)	0 (0.3)	0 (0.3)	0 (0)	2 (0.7)	3 (0.7)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.54 Percentage of workers reported provision of equipment by farmers

Type of equipment	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Gloves	2 (9.3)	0 (0)	2 (2.1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0.5)	0 (0.5)	0 (2.2)	2 (2.3)	2 (2.3)	2 (4.5)	2 (0.6)	4 (1)
Safety shoes	1 (6)	0 (0)	1 (1.4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.6)	0 (0)	1 (0.3)
A breathing mask	2 (6)	1 (0.9)	2 (2.1)	0 (0)	1 (1.7)	1 (1.4)	0 (0)	1 (0.7)	1 (0.7)	0 (0)	1 (1.7)	1 (1.5)	1 (2.7)	3 (1)	5 (1.2)
Protective glasses	1 (2.8)	0 (0)	1 (0.7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.3)	0 (0)	0 (0.1)
A helmet	3 (12)	0 (0)	3 (2.8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (5.3)	0 (0)	2 (0.5)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.55 Percentage of workers reported insistence of farmer to use protective equipment

Equipment	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Gloves	2 (9.3)	0 (0)	2 (2.1)	0 (0)	0 (0)	0 (0)	0 (0)	11 (12.4)	12 (12.3)	0 (2.2)	7 (8.1)	7 (7.4)	2 (4.5)	27 (8.1)	30 (7.8)
Safety shoes	2 (6.5)	0 (0)	1 (1.4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.7)	0 (0)	1 (0.3)
Work overalls	25 100)	75 (100)	100 (100)	14 100)	83 (100)	97 100)	2 (100)	78 (85.2)	80 (85.3)	12 95.9)	88 (100)	100 99.5)	53 (99.3)	310 (91.7)	361 (92.4)
A jacket or work coat	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (45.4)	3 (2.9)	3 (3.3)	0 (2.2)	13 (14.5)	13 13.1)	1 (2.6)	12 (3.7)	14 (3.6)
Work trousers	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (45.4)	3 (3.8)	4 (4.1)	0 (0)	1 (0.8)	1 (0.7)	1 (2.2)	8 (2.2)	9 (2.2)

Equipment	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
A breathing mask	2 (6)	0 (0)	1 (1.4)	1 (5.9)	6 (7.2)	7 (6.9)	1 (45.4)	15 (16.6)	16 (16.9)	0 (2.2)	14 (15.7)	14 (14.1)	4 (7.3)	42 (12.6)	47 (12.1)
Protective glasses	1 (2.8)	0 (0)	1 (0.7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.3)	0 (0)	0 (0.1)
Hearing protection	0 (0)	0 (0)	0 (0)	1 (6.8)	0 (0)	1 (1.2)	0 (0)	2 (2.5)	2 (2.5)	0 (0)	9 (10.5)	9 (9.3)	1 (2.2)	10 (2.9)	11 (2.8)
A helmet	3 (12)	0 (0)	3 (2.8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (5.3)	0 (0)	2 (0.5)
Others	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (8.2)	6 (8.1)	0 (0)	1 (0.9)	1 (0.8)	0 (0)	13 (4.7)	13 (4.2)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.56 Percentage of workers reported training on usage of equipment conducted by farmers

District	Male	Female	All
Adilabad	5 (18.1)	2 (3.2)	7 (6.6)
Warangal	1 (7.8)	7 (8.6)	8 (8.5)
Nalgonda	0 (0)	4 (4.1)	4 (4)
Jogulamba Gadwal	0 (2.2)	9 (10.8)	10 (9.8)
All Districts	6 (11)	19 (5.5)	24 (6.1)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.57 Resaons for not providing various worksite facilities reported by farmers (percentage)

Worksite facilites	Difficult to provide	Workers Manage on their own	Expensive to provide	DK-NA
Creche	33.8	45.8	8.8	11.6
Shade and floor sheet for workers	34.2	34.9	13.2	17.7
First aid	16.0	40.8	34.7	8.5
Separate latrines or toilets for women and men workers	21.2	11.6	65.6	1.6
Hygienic bathrooms with appropriate lighting, and with locks on their doors	21.2	10.5	65.0	3.2

Source: Farmer schedules

Table 3A. 58 Response of farmers on facilitating pregnant women to work

Response	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Yes	4 (3.8)	9 (9)	2 (1.8)	15 (14.7)	25 (6.30)
No	94 (94.2)	91 (90.7)	97 (96.5)	81 (81.3)	366 (91.58)
DK-NA	2 (2)	0 (0.3)	2 (1.7)	4 (4)	8.46 (2.12)
ALL	100 (100)	100 (100)	100 (100)	100 (100)	400.0 (100.0)

Source: Farmer schedules, Note: Figures in parenthesis are percentages

Table 3A.58 Percentage of workers reported various types of problems and their intensity

Intensity of a problem	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Sample	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Handling or exposure to chemicals (such as poisoning from gas)															
Not a Problem	2 (8.8)	6 (8.1)	8 (8.3)	2 (13.7)	25 (29.4)	26 (26.2)	0 (0)	25 (25.5)	25 (25.2)	1 (4.5)	14 (16)	15 (14.8)	5 (9.2)	78 (22.6)	86 (21.4)
Minor Problem	15 (59)	50 (66.4)	65 (64.7)	10 (69.3)	36 (42.4)	47 (47.2)	2 (66.7)	51 (52.6)	53 (52.6)	11 (95.5)	62 (70.7)	74 (73.6)	38 (69.8)	194 (56.2)	231 (57.7)
Major Problem	4 (16.2)	2 (2.8)	6 (6)	0 (2.7)	4 (5)	5 (4.5)	0 (0)	0 (0.2)	0 (0.2)	0 (0)	1 (0.9)	1 (0.8)	4 (8)	5 (1.4)	8 (2.1)
Work-related commuting accidents															
Not a Problem	12 (47.7)	16 (22)	28 (28.1)	2 (12.6)	15 (17.5)	16 (16.5)	2 (66.7)	30 (30.8)	31 (31.2)	12 (97.8)	48 (54.7)	60 (59.6)	25 (46)	108 (31.2)	131 (32.7)
Minor Problem	4 (17)	31 (41.6)	36 (35.8)	8 (59.4)	42 (48.5)	50 (50.3)	0 (0)	41 (42.6)	42 (42)	0 (2.2)	30 (33.6)	30 (30.2)	15 (27.9)	148 (42.7)	166 (41.4)
Major Problem	5 (19.3)	10 (13.7)	15 (15.1)	2 (13.7)	9 (10.7)	11 (11.2)	0 (0)	3 (2.8)	3 (2.8)	0 (0)	0 (0)	0 (0)	7 (13.1)	18 (5.3)	24 (6)
Accidents while transporting cotton															
Not a Problem	12 (47.9)	35 (46.1)	47 (46.5)	5 (38)	31 (36.5)	37 (36.6)	1 (36.4)	39 (40.7)	41 (40.5)	12 (97.8)	54 (61.8)	66 (65.9)	28 (52.6)	153 (44.3)	181 (45.2)
Minor Problem	9 (34.8)	14 (18.5)	22 (22.4)	5 (39.1)	26 (30.2)	32 (31.7)	1 (30.3)	23 (23.6)	24 (23.6)	0 (2.2)	17 (18.8)	17 (17)	17 (31)	81 (23.5)	97 (24.3)
Major Problem	0 (1.4)	10 (12.8)	10 (10.1)	1 (8.5)	5 (5.6)	6 (6.1)	0 (0)	12 (12.2)	12 (12)	0 (0)	7 (8)	7 (7.1)	2 (3.5)	38 (10.9)	41 (10.2)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.59 Response of workers on withdrawal from dangerous work situation (percentage yes)

District	Male	Female	All
Adilabad	60.4	96.1	87.1
Warabgal	75.3	82.9	81.5
Nalgonda	100.0	59.5	59.9
Jogulamba Gadwal	19.0	47.3	43.8
All Districts	**59.2**	**66**	**65.4**

Source: Worker schedules

Table 3A.60 Occurance of accidents, violence and harassment in the study area (number)

Description of events	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Accidents	2	1	2	1	2
Violence	2	1	1	0	1
Harassment	2	1	2	2	2

Source: Farmer schedules

Table 3A.61 Casuses for occupational risks reported by farmers (percentage yes)

Types of risks	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Handling or exposure to chemicals (such as poisoning from gas)	15.5	58.6	29.5	44.9	32.6
Work-related commuting accidents	0.0	24.7	36.3	54.3	35.7
Accidents while transporting cotton	0.0	0.00	11.3	1.0	7.7
Other types of accidents/injuries (specify)	36.8	16.7	15.8	16.7	19.0

Source: Farmer schedules

Table 3A. 62 Perceptions of workers on impact of cotton farming on their health (percentage yes)

Perception of workers	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
	25	75	100	14	86	100	3	97	100	12	88	100	54	346	400
Does not harm health	3 (10.1)	15 (19.9)	18 (17.6)	1 (5.3)	10 (11.7)	10 (10.4)	0 (0)	10 (10.8)	11 (10.6)	0 (0)	9 (10.8)	10 (9.6)	3 (6.2)	43 (12.4)	47 11.9)
Harms health a little	21 (85.9)	60 (79.6)	81 (81)	13 (94.7)	62 (72)	76 (76)	2 (66.7)	78 (80.8)	80 (80.2)	12 (100)	78 (88.1)	89 (89.4)	49 90.1)	282 (81.5)	330 82.4)
Harms health a lot	0 (0)	0 (0.5)	0 (0.4)	0 (0)	7 (8.2)	7 (6.6)	0 (0)	0 (0.2)	0 (0.2)	0 (0)	0 (0)	0 (0)	0 (0)	5 (1.4)	5 (1.3)

Source: Worker schedules, ***Note****: Figures in parenthesis are percentages*

Table 3A.63 Percentage of workers reported various health problems and their intensity

Health problems	Intensity of problems	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Number		100	97	88	92	377
Breathing problems and asthma	Never	95	90.8	70.7	62.3	77.5
	Occasionally	4	6.3	29.3	32.9	21.1
	Always	1	2.9	0.0	2.8	1.1
	DK-NA	0	0.0	0.0	2.0	0.3
Muscle and bone pains	Never	38	39.8	12.8	7.4	21.3
	Occasionally	26	25.0	76.3	90.8	59.9
	Always	36	35.1	12.0	1.8	19.0
	DK-NA	0.0	0.0	0.0	0.0	0.0
Visual disturbances	Never	86	92.4	83.5	88.1	85.9
	Occasionally	11	4.1	17.6	11.9	13.3
	Always	2	3.5	0.0	0.0	1.0
	DK-NA	0.0	0.0	0.0	0.0	0.0

Health problems	Intensity of problems	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Skin diseases	Never	69	42.5	32.7	44.5	42.7
	Occasionally	31	53.5	65.6	54.6	55.3
	Always	0	4.1	2.9	0.0	2.1
	DK-NA	0	0.0	0.0	0.9	0.1
Blood disorders/anaemia	Never	98	96.3	85.8	93.5	90.7
	Occasionally	2	3.7	14.9	6.5	9.4
	Always	0	0.0	0.4	0.0	0.2
	DK-NA	0,0	0.0	0.0	0.0	0.0
Allergies	Never	60	43.0	42.0	42.0	45.5
	Occasionally	35	55.1	56.6	58.0	52.3
	Always	5	0.8	0.4	0.0	1.2
	DK-NA	0	0.0	2.1	0.0	1.0
Digestive problems	Never	98	91.5	87.4	81.7	89.2
	Occasionally	2	8.5	13.7	18.3	11.1
	Always	0.0	0.0	0.0	0.0	0.0
	DK-NA	0.0	0.0	0.0	0.0	0.0
Fever	Never	17	18.5	7.0	10.1	11.2
	Occasionally	79	80.4	90.8	89.9	86.4
	Always	4	1.2	3.3	0.0	2.7
	DK-NA	0.0	0.0	0.0	0.0	0.0
Headache/dizziness	Never	18	19.0	21.3	17.5	19.6
	Occasionally	74	80.7	78.1	77.7	77.5
	Always	8	0.3	1.7	4.7	3.1
	DK-NA	0.0	0.0	0.0	0.0	0.0

Health problems	Intensity of problems	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Hearing problems/ deafness	Never	97	91.5	90.9	86.9	91.3
	Occasionally	3	6.3	10.2	12.8	8.6
	Always	0	2.1	0.0	0.3	0.4
	DK-NA	0.0	0.0	0.0	0.0	0.0
Sleep disorders	Never	91	86.3	59.3	59.3	69.5
	Occasionally	9	11.6	41.6	40.7	30.2
	Always	0	1.1	0.3	0.0	0.3
	DK-NA	0.0	0.0	0.0	0.0	0.0
Fatigue	Never	26	21.4	15.3	2.8	16.7
	Occasionally	42	41.9	68.6	95.3	62.4
	Always	31	36.6	17.2	0.8	20.9
	DK-NA	0.0	0.0	0.0	0.0	0.0
Others	Never	13	32.5	10.1	22.7	17.5
	Occasionally	2	0.0	8.8	12.2	7.1
	Always	3	4.3	0.0	0.0	1.4
	DK-NA	81	62.2	47.0	45.5	61.0

Source: Worker schedules

Table 3A.64 Response of workers on link between health problems and cotton farming (percentage)

Health problems	Responses	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Number		100	95	88	92	375
Breathing problems and asthma	Yes, mainly to work	2.4	3.5	20.9	20.0	13.8
	Yes, to work but also to other factors	1.5	7.9	12.8	13.5	9.5
	No, not to work	29.1	41.8	23.8	28.6	27.2
	DK-NA	52.1	19.5	43.5	37.9	38.8
Muscle and bone pains	Yes, mainly to work	60.6	47.3	51.0	39.2	50.6
	Yes, to work but also to other factors	1.5	12.4	37.2	52.9	28.5
	No, not to work	18.6	29.3	7.0	3.9	12.4
	DK-NA	19.3	11.0	4.8	4.0	8.5
Visual disturbances	Yes, mainly to work	6.8	0.0	8.0	2.8	5.5
	Yes, to work but also to other factors	4.5	6.5	12.5	10.7	9.3
	No, not to work	27.3	43.5	22.9	33.3	27.5
	DK-NA	49.4	22.7	57.7	53.3	47.8
Skin diseases	Yes, mainly to work	23.9	37.4	54.1	31.8	41.2
	Yes, to work but also to other factors	6.7	15.1	14.8	25.3	14.3
	No, not to work	8.7	13.8	7.0	4.4	7.8
	DK-NA	48.7	12.7	25.2	38.5	28.5
Blood disorders/anaemia	Yes, mainly to work	0.0	0.9	6.5	3.3	3.7
	Yes, to work but also to other factors	2.8	0.0	6.2	4.8	4.2
	No, not to work	31.3	44.8	24.6	34.5	29.2
	DK-NA	51.9	22.7	63.9	57.4	51.5

Health problems	Responses	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Allergies	Yes, mainly to work	33.5	33.0	45.9	41.6	39.5
	Yes, to work but also to other factors	7.1	20.3	14.5	22.4	14.6
	No, not to work	10.0	16.1	17.2	10.0	14.2
	DK-NA	37.4	10.5	23.5	26.0	23.7
Digestive problems	Yes, mainly to work	0.0	0.9	5.7	10.5	4.3
	Yes, to work but also to other factors	1.5	7.7	18.9	9.3	11.9
	No, not to work	31.8	43.4	17.4	31.1	25.4
	DK-NA	53.6	22.8	59.0	49.1	48.7
Fever	Yes, mainly to work	10.2	11.4	28.6	8.2	19.3
	Yes, to work but also to other factors	66.3	70.9	62.0	83.7	66.9
	No, not to work	14.2	13.3	10.3	3.3	10.5
	DK-NA	7.3	3.3	0.3	4.8	2.7
Headache/dizziness	Yes, mainly to work	20.6	12.0	36.5	16.9	26.5
	Yes, to work but also to other factors	55.2	67.5	47.1	68.6	54.5
	No, not to work	9.4	7.3	11.3	7.3	9.6
	DK-NA	13.8	8.9	6.3	7.2	8.2
Hearing problems/deafness	Yes, mainly to work	0.0	0.0	1.5	0.6	0.8
	Yes, to work but also to other factors	3.2	9.2	9.2	8.9	7.7
	No, not to work	31.6	39.2	25.0	34.8	28.8
	DK-NA	53.2	23.1	65.5	55.6	52.5

Health problems	Responses	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Sleep disorders	Yes, mainly to work	2.9	6.3	20.5	7.9	12.6
	Yes, to work but also to other factors	6.6	8.9	21.3	31.4	17.3
	No, not to work	30.9	40.6	17.8	19.1	23.5
	DK-NA	50.6	23.1	41.6	41.6	39.1
Fatigue	Yes, mainly to work	61.7	76.0	61.6	43.8	61.0
	Yes, to work but also to other factors	9.8	3.8	21.4	51.2	20.0
	No, not to work	8.9	6.1	11.6	2.3	8.9
	DK-NA	16.5	12.1	6.5	0.5	8.5
Others	Yes, mainly to work	2.2	2.2	0.3	4.2	1.6
	Yes, to work but also to other factors	0.0	0.0	8.4	9.3	6.1
	No, not to work	2.1	24.4	2.8	6.2	7.1
	DK-NA	93.7	69.2	54.4	60.8	70.9

Source: Worker schedules

Table 3A.65 Response of workers on provision of farmers' suppor for medical emergency

Response	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal	All Districts
Number	100	97	92	99	388
Yes	4.5	14.7	1.5	5.2	4.7
No	95.5	85.3	96.1	94.8	94.0
DK-NA	0.0	0.0	2.5	0.0	1.3

Source: Worker schedules

Table 3A.66 Response of farmers on health as a major problem in cotton farming (percentage)

Response	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Number	87	13	100	87	12	99	92	8	100	85	14	99	351	47	398
Yes, major problem	0.8	0.0	0.7	1.2	44.3	6.2	0.3	0.0	0.3	0.0	0.0	0.0	0.5	4.3	1.1
Yes, minor problem	38.9	61.5	42.4	48.3	28.3	46.0	50.5	60.1	51.4	56.4	40.4	52.6	48.3	50.0	48.5
No, not a problem	57.2	31.8	53.4	50.5	27.4	47.8	49.1	39.9	48.3	37.5	51.6	40.8	49.1	40.7	47.9
DK-NA	3.0	6.7	3.6	0.0	0.0	0.0	0.0	0.0	0.0	6.1	8.0	6.6	2.1	5.0	2.5

Source: Farmer schedules

Table 3A.67 Response of farmers on link between health of workers and cotton farming (percentage)

Response	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Number	87	13	100	87	12	99	92	8	100	83	14	97	349	47	396
Yes	0.0	3.6	0.6	1.8	0.0	1.6	12.8	0.0	11.6	0.0	0.6	0.1	5.2	1.3	4.6
Yes, but only partly	41.9	42.7	42.0	46.1	70.7	48.9	54.3	87.5	57.4	70.8	47.8	65.4	53.3	57.8	53.9
No, there is no link to work	51.4	47.0	50.7	44.0	29.3	42.3	26.1	12.5	24.8	22.2	51.6	29.1	34.6	39.0	35.2
DK-NA	6.8	6.7	6.8	8.2	0.0	7.2	6.8	0.0	6.2	7.0	0.0	5.4	7.0	2.0	6.3

Source: Farmer schedules

Table 3A.68 Perceptions of farmers on tasks detrimental to workers health

Response	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Number	87	13	100	87	12	99	92	8	100	85	14	99	351	47	398
Percentage Yes	43.8	31.5	41.9	57.8	68.1	59.0	53.9	54.6	54.0	62.7	34.3	56.1	53.5	41.5	51.7
Percentage No	45.1	58.2	47.1	22.0	31.3	23.1	30.8	45.4	32.1	32.8	55.0	38.0	34.1	51.4	36.6
DK-NA	11.1	10.3	11.0	20.2	0.6	17.9	15.3	0.0	13.9	4.5	10.8	5.9	12.4	7.1	11.7

Source: Farmer schedules

Table 3A.69 Percentage of farmers provided paid-leave to workers

Response	Adilabad			Warangal			Nalgonda			Jogulamba Gadwal			All Districts		
	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female	All
Number	87	13	100	87	12	99	89	8	97	85	14	99	348	47	395
Percentage Yes	1.0	0.0	0.8	0.1	0.0	0.1	5.0	0.0	4.5	11.8	0.0	9.1	4.7	0.0	4.0
Percentage No	99.0	93.3	98.2	99.9	100.0	99.9	95.0	100.0	95.5	87.0	100.0	90.0	95.0	98.0	95.5
DK-NA	0.0	6.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.9	0.2	2.0	0.5

Source: Farmer schedules

ANNEXURE 4

Table 4A.1 District wise number of FGDs and stakeholder interviews conducted

Category of FGD	Adilabad	Warangal	Nalgonda	Jogulamba Gadwal
Cotton Labour- Men	1	1	2	0
Cotton Labour- Women	2	1	1	1
Small Farmers- Men	1	1	2	1
Small Farmers- Women	1	1	1	1
Large Farmers –Men	1	1	2	2
FPOs –Member farmers	1	1	0	0
FPOs- Executive members	1	1	2	0
Trade Union Representatives	0	0	1	1
Migrant labour	0	0	1	0
Commuting labour	1	1	0	1
Contract labour	0	0	0	1
Family labour	0	0	1	1
Child labour	1	1	0	2
Raithu Sangham	1	0	0	0
Total	**11**	**9**	**13**	**11**
Stakeholder interviews				
Labour Department officials	1	1	1	1
Agriculture Department officiasl (DAO)	1	1	1	1
Agriculture Department officials (AEO)	1	1	1	1
School Teachers	1	1	1	1
NGOs	1		1	0
Cotton Traders	1	1	0	0
Input Dealers	1	1	0	1
Organisers	0	0	0	1
Sub-organiser	0	0	0	1
Formal Credit institutions	1	1	1	1
Non-formal Credit institutions		1	0	0
Total	**8**	**8**	**6**	**8**

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