

Sowing Hope



Seeds

Child labour and non-payment of minimum wages in hybrid cottonseed and vegetable seed production in India

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Commissioned by

Colofon

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Disclaimer

A draft of this report was sent by Arisa to the companies mentioned in the report in the first quarter of 2020 for their comments. The comments of the companies are integrated and summarised in this report. It is however possible that after the review process companies have changed or adopted new measures or policies that are not mentioned in this report.

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Foreword

This report is based on data collected before the COVID-19 crisis. This study intends to inform stakeholders of child labour and labour rights issues in the cottonseed and vegetable seed sector, to start a dialogue, and to improve the situation of people working in the supply chains of Indian and multinational companies.

We are aware of the enormous and unprecedented consequences of the COVID-19 crisis. This crisis shows us once again the workers' vulnerable position. In India, the COVID-19 measures are having devastating effects on the economy as a whole and on people working in all sectors, particularly on migrant labourers. These workers are among the hardest hit by this crisis, many of them women who are their families' primary wage earner. Very few workers have ever been able to accumulate any savings; in fact many are in debt.

As Glocal Research and Arisa, we aim to work on improvements in the supply chains of companies. By engaging in reports like this, we want to create awareness of the risks and labour rights violations in the seed sector. It is a call for action, as we do not want companies to disengage from their suppliers and stop sourcing in India as a result of this report.

We know the issues presented in this report will not be solved overnight, they require concerted efforts of companies, industry associations, labour unions, civil society organisations, and local and national governments. We also know that the current COVID-19 crisis will affect the way business will be done. We are convinced this crisis can be used as an opportunity to implement the necessary changes to create sustainable supply chains that respect human rights of all workers.

We trust you will read this report with interest and use the information for further improvements. In case of any questions please do not hesitate to get in touch with Arisa.

Davuluri Venkateswarlu, Glocal Research & Sandra Claassen, Arisa

Executive Summary

The present study examines the recent trends in the employment of children and the issue of below minimum wages in hybrid seed production in India. The field survey for the present study was conducted during 2018-19 and covered a sample of 613 seed farms (388 cottonseed and 225 vegetable seeds) in 124 villages producing seeds for both MNCs and major Indian seed companies in six Indian states, namely Andhra Pradesh, Telangana, Karnataka, Maharashtra, Gujarat and Rajasthan.

The research data for 2018-19 shows that children under 14 years account for nearly 18.6% of the total workforce in cottonseed farms and 10% in vegetable seed farms in India. The overall incidence of child labour in hybrid seed production in India shows a declining trend since 2015. The absolute number of children below 14 years employed in cottonseed farms in different states in India showed a decline of 20% and the proportion of children to the total workforce showed a decline of 25% during 2015-19. A similar trend is observed in vegetable seeds also. The proportion of child labour to the total workforce in tomato, hot pepper and okra crops also showed a significant decline of 37.6% in Maharashtra and 39.8% in Karnataka during 2015-2019.

The extent of decline shows wide variations between different states and regions within states. The biggest decline comes from the states and regions where significant interventions took place to address child labour. The overall decline in the incidence of child labour per acre and also the total number of children below 14 years employed in several parts of the country can be attributed to interventions undertaken by different players e.g. government, NGOs, seed industry, international agencies, social investors - to address the issue of child labour.

The child labour incidence data for 2018-19 for individual companies shows significant difference in the incidence of child labour between companies who have already implemented substantial measures to tackle the problem of child labour and those who are yet to begin or are in the process of implementing them. Compared to other companies, the incidence of child labour was found quite low on farms producing for Bayer, Syngenta, BASF, HM.CLAUSE, East-West Seed, Advanta, Namdhari Seeds, Kalash Seeds, Tierra Agrotech and Sakata. These companies have been working on the issue of child labour for quite some time and implemented some systematic measures.

Despite the decline, the total number of children still employed in seed production and particularly in cottonseed farms is high. In 2018-19, a total of around 151,000 children below 14 years were employed in cottonseed farms in Andhra Pradesh, Telangana, Gujarat, Karnataka and Rajasthan which account for more than 85% of the total production area in the country. The persistence of child labour on a large scale is due to the limited coverage and insufficient impact of the present interventions.

Though more companies have become active now and were seen taking some measures to tackle the issue of child labour, the overall responses from the broader industry is still not very encouraging. Several leading companies particularly in cottonseed production are yet to pay a serious attention to the issue and implement concrete measures to address the problem. Unless all the major seed companies come forward and implement serious measures in collaboration with other stakeholders, it is difficult to combat the overall problem of child labour in the seed sector.

The other issue of major concern in seed production discussed in this report is payment of minimum wages to workers. A comparison of prevailing market wages with the statutory minimum wages fixed by the respective state governments clearly indicates that the legal norms are not followed, especially for women. The prevailing wage rates for cross-pollination activity was 27% below the legal minimum wage in Telangana, 24% below in Andhra Pradesh and 41% below in Bodoli and 29% below the legal minimum wage in Idar in Gujarat in 2018-19.

☞ The issue of non-payment of minimum wages has not received as much attention from seed companies as well as from other stakeholders compared to the issue of child labour. Though several companies have taken measures to ensure minimum wages to labourers working on nurseries, research farms and processing units directly managed by them, similar efforts have not been made to ensure minimum wages to labourers working on their suppliers' seed farms. They are of the opinion that the issue is very complex and ensuring payment of minimum wages at suppliers' farms requires concerted efforts from different stakeholders.

☞ Some companies have recently started pilot initiatives in vegetable and corn seed farms to address the problem of non-payment minimum wages on their suppliers' farms. The steps initiated by these companies helped to create some awareness about minimum wages, particularly among organisers and farmers. They also helped to improve the documentation of wage records at farms. However these measures have not yielded expected results of ensuring payment of minimum wages to the workers in the areas where there is a significant gap between prevailing market and statutory minimum wages. A key learning from these pilots is that while the efforts of individual companies can make a small difference, for sustainable progress this challenge must be addressed at industry level with collaboration from other stakeholders.

☞ An analysis of recent trends in wages and procurement prices particularly in cottonseed production indicates that there is a link between procurement prices received by the farmers and wages paid to workers. There are multiple factors that determine the wages paid to workers in seed production, of which the procurement price is an important one. Detailed insights in the production costs, yields and net income show that with the current procurement prices and yields farmers cannot pay minimum wages to workers, as they would be left with no income at all. As a first step in the direction of implementing minimum wages companies need to have a proper review of their procurement policies and ensure that farmers have enough margins to pay at least the minimum wages to workers.



List of Abbreviations

AP	Andhra Pradesh
APEDA	Agricultural and Processed Food Products Export Development Authority
APSA	Asia and Pacific Seed Association
BCs	Backward Castes
CAGR	Compound Annual Growth Rate
CCP	Child Care Programme
CSR	Corporate Social Responsibility
DRMU	Dakshini Rajasthan Mazdoor Union [trade union Rajasthan]
ECHO	Enabling Child and Human Rights with Seed Organisations
EU	European Union
EUR	Euro (€)
FGD	Focus Group Discussion
FLA	Fair Labor Association
FSII	Federation of Seed Industry of India
GEW	Gewerkschaft Erziehung und Wissenschaft [German based teachers' trade union]
ICN	India Committee of the Netherlands (since February 1, 2019: Arisa Foundation)
ILO	International Labour Organization
INR	Indian Rupee (₹)
IOE	International Organisation of Employers
ISF	International Seed Federation
MMB	Mahyco-Monsanto Biotech
MNC	Multinational company
MRTPC	Monopolistic and Restrictive Trade Practices Commission
MVF	Mamidipudi Venkatarangaiah Foundation
NGO	non-governmental organisation
NHB	National Horticulture Board
NSAI	National Seed Association of India
OECD	Organisation for Economic Co-operation and Development
SCs	Scheduled Castes
RVO	Rijksdienst voor Ondernemend Nederland - Netherlands Enterprise Agency
STs	Scheduled Tribes
USD	US dollar (\$)
VDA	Variable Dearness Allowance
UNCRC	The United Nations Convention on the Rights of the Child
UNICEF	The United Nations Children's Fund

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1 Introduction

1.1 Background

The issue of child labour and non-payment of minimum wages in the production of hybrid cottonseed and vegetable seed in India has received considerable attention in recent years. In 2015, Arisa (formerly known as India Committee of the Netherlands (ICN)) together with the Stop Child Labour Coalition published two reports on child labour and non-payment of minimum wages in the hybrid cottonseed and vegetable seed production in India: "Cotton's Forgotten Children - Child Labour and Below Minimum Wages in the Hybrid Cottonseed Production in India" and "Soiled Seeds - Child Labour and Underpayment of Women in Vegetable Seeds Production in India"¹. The studies, conducted by Glocal Research, highlighted that children under the age of 14 years still accounted for 16% (in the vegetable seeds farms) to 25% (in the cottonseeds farms) of the total workforce. The number of adolescent children (15-18 years) increased dramatically as compared to earlier studies.² Another major concern at the seeds farms was the non-payment of legal minimum wages. Prevailing market wages were found to be lower than legal minimum wages. In particular women were often not being paid the legal minimum wages since the tasks assigned to them are often lower paid than the tasks assigned to men.



¹ "Soiled Seeds – Child Labour and Underpayment of Women in Vegetable Seed Production in India", published by India Committee of the Netherlands (ICN) and Stop Child Labour Coalition in 2015: <https://arisa.nl/wp-content/uploads/SoiledSeeds.pdf>. "Cotton's Forgotten Children - Child Labour and Underpayment of Women in hybrid Cottonseed Production in India", published by India Committee of the Netherlands (ICN) and Stop Child Labour Coalition in 2015: <https://arisa.nl/wp-content/uploads/CottonsForgottenChildren.pdf>.

² The Child and Adolescent Labour (Prohibition and Regulation) Act of 1986 defines 'Child' as any person below the age of 14 and prohibits employment of a child in any employment including as a domestic help (except helping own family in non-hazardous occupations). The 15-18 year age group is defined as 'adolescent'. As per the law 'adolescents' are allowed to work in non-hazardous occupations. However several seed companies in India like Bayer and Syngenta kept 15 years as age limit for defining child labour and HM.CLAUSE and DuPont kept 16 year as age limit for entering into employment.

The 2015 reports called upon the seed companies to systematically tackle labour rights violations on their suppliers farms, including child labour, working conditions and wages below the official minimum wage rates.

In the fall of 2017, Arisa reached out again to the companies mentioned in the reports to find out what measures they had taken to end child labour and the underpayment of wages.³ Nine out of 14 companies responded, including on the incidence of child labour. The incidences reported by the companies are much lower than reported in the 2015 Arisa reports. Companies monitor their performance in different ways. Most companies are monitoring the incidence rate of child labour (sometimes only sample-wise), but not all monitoring is done independently which could weaken their reported incidence rates. In the context of the follow-up paper it was not possible to assess the quality of the internal or external audits and/or compare it to independent research. It is in this context Arisa has commissioned the present research to assess the current state of affairs in the Indian vegetable and cottonseeds production.

1.2 Structure of the report

The report is divided into 8 chapters. The context of the present study and the scope, objectives and methodology are discussed in chapter 1. The structure of the seed industry and recent developments in seed production that have significant implications for the composition of the workforce and the nature and magnitude of child labour in the seed industry are presented in chapter 2. The magnitude of child labour and the profile of the working children in sample vegetable and cottonseed farms during the 2018-19 crop season in different states are presented in chapter 3. To analyse the trends in the employment of children the data for 2018-19 is compared with the data of 2014-15. The estimates of total number of children employed in vegetable and cottonseed farms in different states based on extrapolation of data from sample farms are also presented in chapter 3. In chapter 4 an analysis of prevailing wage rates in vegetable and cottonseed production is discussed. The prevailing wage rates are compared with the statutory minimum wages to find out to what extent the minimum wages in vegetable seed farms are implemented. Interventions from different stakeholders to tackle child labour and minimum wages issues are discussed in chapter 5. A summary of the findings and conclusions is presented in chapter 6. Recommendations are given in chapter 7. The responses from companies to this report are summarised in chapter 8.

1.3 Objectives of the study

The principal aim of this follow-up study is to assess the current situation and the progress made since 2014-15 on tackling the issues of child labour and non-payment of minimum wages in the hybrid seed sector in India.

The sub-objectives of the research are as follows:

1. To gain updated insight in the scope and magnitude of child labour and payment of minimum wages on seed farms producing vegetable and cottonseed for Indian and multinational enterprises and to compare these figures with the figures in the previous research outcomes.
2. To gain insight in the background of the labourers, gender composition, possible caste background and State (city/village) of origin.
3. To compare the prevalence of child labour and the (minimum) wage situation on farms producing seeds for companies who have implemented substantial measures against child labour and the payment of minimum wages and for companies who implemented limited measures or no measures at all.
4. To motivate more seed companies to address labour rights violations, including child labour in their supply chain and to increase the impact of existing CSR initiatives and activities.
5. To advocate for improved monitoring by the Dutch government and other governments of companies' compliance with international CSR guidelines, including the OECD Guidelines for Multinational Enterprises, United Nations Guiding Principles on Business and Human Rights and the ILO core labour conventions.

³ "Remedies for Indian seed workers in sight? Monitoring report on tackling child labour and non-payment of minimum wages in hybrid cotton and vegetable seeds production in India", published by Arisa and Stop Child Labour Coalition in 2018: <https://arisa.nl/wp-content/uploads/RemediesForIndianSeedWorkersInSight.pdf>.

1.4 Research methodology and sampling

The findings of this study are mainly based on the analysis of primary data collected through field visits and interactions with farmers and various categories of workers in cottonseed and vegetable seed farms. The research sample consists of 613 sample seed farms (388 cottonseed and 225 vegetable seeds) in 124 villages producing seeds for both multinational companies (MNCs) and major Indian seed companies in six Indian states, namely Andhra Pradesh, Telangana, Karnataka, Maharashtra, Gujarat and Rajasthan.

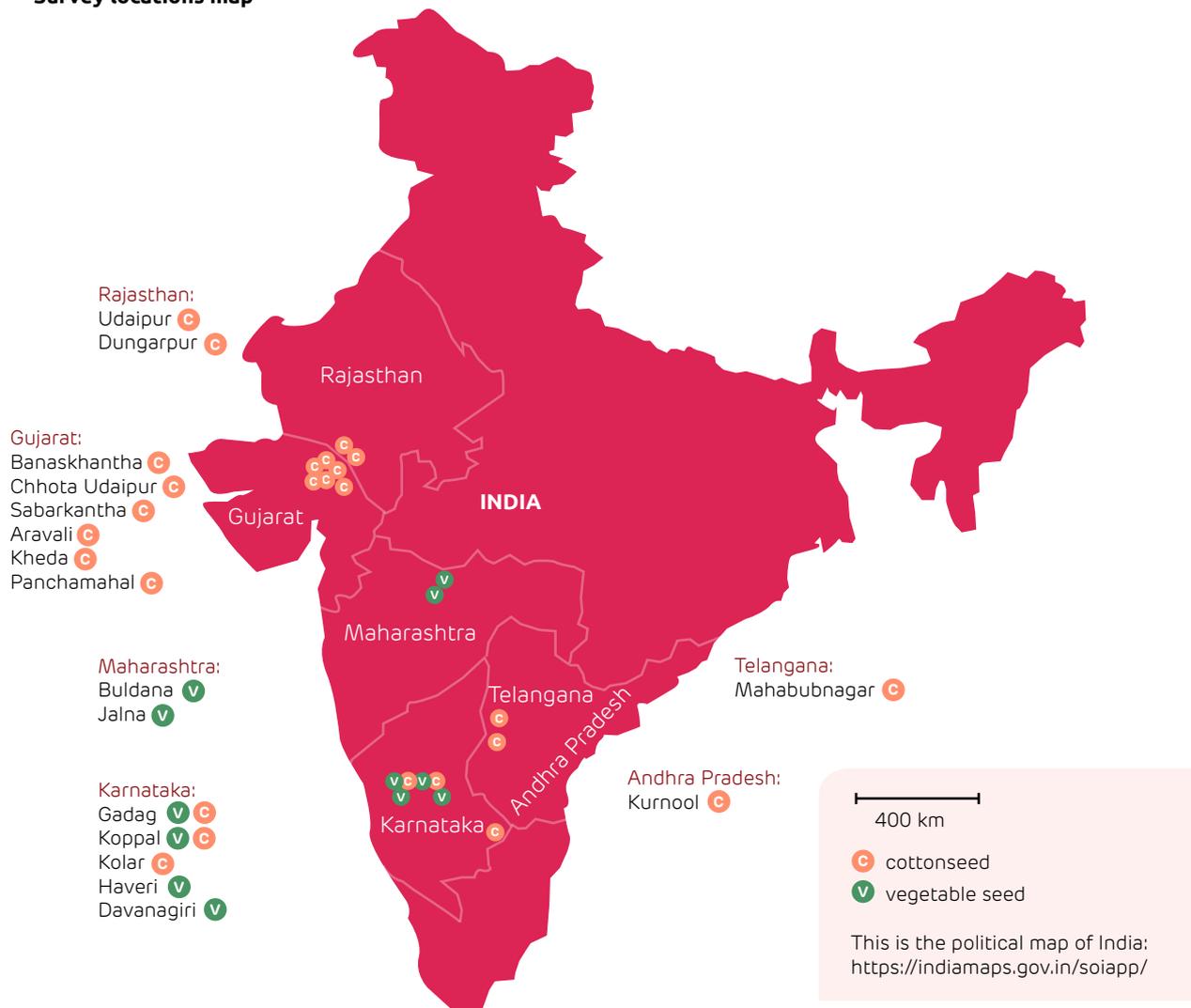
Table 1: State-wise and crop-wise distribution of sample farms

	Cottonseeds		Vegetable Seeds	
	Indian Companies	MNCs	Indian Companies	MNCs
Gujarat	92	36		
Rajasthan	20	10		
Andhra Pradesh	58	12		
Telangana	86			
Karnataka	54	20	55	95
Maharashtra			34	41
Total	310	78	98	136

Table 1 presents crop-wise and state-wise distribution of sample farms covered in the study. Out of 388 cottonseed farms surveyed, 70 are in Andhra Pradesh, 86 are in Telangana, 128 in Gujarat, 30 in Rajasthan and 74 in Karnataka. These five states account nearly 85% of the cottonseed produced in India. In Gujarat the survey was conducted in six districts: Banaskantha, Chhota Udaipur, Sabarkantha, Aravali, Kheda and Panchamaharashtra. In Andhra Pradesh Kurnool district and in Telangana Mahabubnagar district were selected for the survey. In Karnataka the survey covered three districts: Gadag, Koppal and Kolar. In Rajasthan the seed production is concentrated in Dungarpur and Udaipur districts.

Of the total 225 vegetable seed farms surveyed, 150 are located in Karnataka and the remaining 75 are located in Maharashtra. In vegetable seeds the sample is confined to only three important crops, namely tomato, hot pepper and okra. The sample size is equally distributed among these crops: 75 tomato, 75 hot pepper and 75 okra farms. Karnataka and Maharashtra account for more than 80% of the total vegetable seed production area in India. Karnataka is the main hub for hybrid vegetable seed production in India. Karnataka accounts for more than 60% of the tomato and hot pepper seed production, and 30% of okra seed production in India. In Karnataka, the survey was conducted in four districts, namely Koppal, Gadag, Davanagiri and Haveri. These districts are major centres for vegetable seed production in Karnataka. The four districts covered in the survey account for nearly 85% of the total vegetable seed production in Karnataka. In Maharashtra, the survey was conducted in Jalna and Buldana districts. These two districts account for more than 80% of the hybrid vegetable seed production in the state.

Survey locations map



Hybrid seed production is done through contract farming. Seed companies enter into production agreements with seed farmers (directly or through intermediaries called seed organisers) through buy back arrangements.⁴

The presence of MNCs is higher in vegetable seeds where they control nearly two-thirds of the production. In cottonseed MNCs control nearly 20% of the production area. Out of 388 cottonseed sample farms, 78 (20%) and out of 225 vegetable seed farms, 136 (60.4%) farms covered in the study were producing seed for multinationals or its joint venture companies and the remaining for local Indian companies. The proportion of sample size among MNCs and Indian companies as a group closely represents their overall share in the market.

⁴ Seed companies operating in India are dependent on local farmers for multiplication of seeds, an activity that seed farmers do at their own fields. Since Indian landownership laws do not permit individuals or companies to own large areas of land, companies are constrained in having their own farms producing large quantities of seed. Thus, they depend upon local seed farmers for production of seeds. Most of the companies do not make direct agreements with seed farmers. Instead they operate through third-party agencies called "seed organisers" or "seed coordinators". A "seed organiser" is an independent businessman who mediates between a company and seed farmers for organising seed production. For a detailed description of the role of seed organisers in organising seed production see the report: https://www.fairlabor.org/sites/default/files/documents/reports/report_syngenta_procurement_prices_india_july_2015.pdf.

The names of MNCs or their joint venture companies included in the study are: Bayer, Syngenta, BASF (Nunhems)⁵, HM.CLAUSE (Limagrain group company), Sakata, Mahyco, Advanta (UPL group company)⁶, I & B Seeds⁷, United Genetics (Kagome group company)⁸, Oriental Biotech which was supplying seed to Heinz Seeds, a subsidiary of Kraft Heinz⁹ and East-West Seed. The names of leading Indian companies included in the study sample are Nuziveedu Seeds, Kaveri Seeds, Rasi Seeds, Seed Works, Tierra Agrotech, Namdhari Seeds, Ajeet Seeds, Bioseed, VNR Seeds, Tulasi Seeds, Ankur Seeds, Meta-helix¹⁰, Indo-American Hybrid Seeds, Kalash Seeds (formerly Bejo Sheetal) and JK Seeds.

The field survey for the study was conducted **between July 2018 and February 2019**. A seed farm or plot is taken as a unit for gathering the information. The field team physically visited all the **613 sample farms** at the time of cross-pollination work. Farm level data on total number of workers engaged, age and gender composition of workers, wage rates and working conditions were gathered through interactions with labourers and seed farmers and also through on field observations. The field team interacted with a total of 956 workers (17.7% of the total workers present in sample farms at the time of field inspection) including 618 children below the age of 18 years and 546 seed farmers to gather the data.¹¹ In each sample farm visited a minimum of 15% workers or one worker per farm was covered. In addition to individual interactions and on field observations, 44 Focus Group Discussions (FGDs) with workers, 6 FGDs with labour contractors and 22 FGDs with seed farmers were conducted in different states.¹² The information related to supply chain, production area estimates etc. was gathered from seed organisers, seed company representatives and seed industry experts. A total of 18 seed organisers, 21 seed company representatives and four seed industry experts were met to gather the information.¹³

Challenges in gathering information on child labour and working conditions

Due to growing attention from various stakeholders child labour in seed production has become a sensitive issue now. It is becoming more invisible and hidden. Identifying child labour and estimating its prevalence is becoming a major challenge for researchers and auditors, especially those coming from outside. Children are becoming invisible when outsiders are visiting the farms. To overcome this challenge the study team took the help of local community level resource persons who have good

⁵ BASF's presence in seed business in India is through Nunhems, a vegetable seed company which it has acquired in 2018 from Bayer. The acquisition of Monsanto by Bayer necessitated Bayer to divest some of its business to avoid legal complications. Following anti-competitive laws and measure, Bayer was supposed to divest some of its undertakings, to get a go ahead nod for the merger with Monsanto. The selling of Nunhems' business is part of this. <https://krishijagran.com/industry-news/basf-to-enter-the-seed-segment-with-nunhems/> (last accessed 28 April 2020).

⁶ Advanta seeds merged with UPL (United Phosphorous Limited) in 2016.

⁷ I & B Seeds is a joint venture between Indus Seeds and W. Atlee Burpee Company from USA.

⁸ United Genetics is a fully owned subsidiary of Japan based MNC Kagome. Kagome acquired 100% stake in United Genetics in 2016.

⁹ Heinz Seeds, a subsidiary of Kraft Heinz, is not directly involved in seed production. It has a third party contract agreement with Oriental Biotech, a Bangalore based Indian company, for production of its seeds. Oriental Biotech is included in the study. In its response to the draft report Heinz Seeds states that they terminated their relationship with Oriental Biotech in August 2019. As the research was conducted between July 2018 and February 2019 we have kept the name of the company in the report.

¹⁰ Dhaanya is a Brand of Meta-helix Life Sciences Limited which is now part of Rallis India Ltd, a TATA enterprise: <https://www.rallis.co.in/metahelix/main/companyinfo.html> (last accessed 28 April 2020).

¹¹ Out of 956 workers, 586 are women and 370 are men. Out of 546 farmers, 517 are men and 29 are women.

¹² The state-wise distribution of FGDs covered are: out of 44 FGDs with workers 12 in Gujarat, 4 in Rajasthan, 8 in Karnataka, 6 in Maharashtra and 7 each in Andhra Pradesh and Telangana. One FGD with labour contractors in each state was covered. Out of 22 FGDs with seed farmers, five were in Gujarat, two were in Rajasthan, four each were in Karnataka, Andhra Pradesh and Telangana and three were in Maharashtra. In each FGD 4 to 8 people participated. The topics discussed in FGDs with workers and labour contractors include awareness about child labour and minimum wages acts, labour arrangements, wage rates and working hours. In farmer FGDs, the topics included are awareness about labour laws, agreements with seed companies, relationship with organisers and sub-organisers, support services from companies, procurement rates etc.

¹³ Out 18 seed organisers covered six are working for MNCs and seven are working for Indian companies exclusively. The remaining five are working for both. Out of 21 seed company representatives covered 12 are working for MNCs and nine for Indian companies.

knowledge about the local situation and also have access to production plots. A seven member research team with the help of 58 local resource persons¹⁴, visited the sample seed plots and gathered the information in different locations.

The field team encountered several problems while collecting data on sensitive topics like child labour, particularly from farmers and seed organisers. There was extreme nervousness and reluctance by the farmers to admit the existence of child labour in the seed production activities. In several plots, particularly hot pepper and tomato, seeds are produced under so-called net-houses. These are closed areas and unlike in open plots the activities are not visible from a distance. In open plots one can see the activities from a distance and if there are any young children working they can be traced from a distance as well. The activities in net-houses are not visible unless one enters inside. In eight plots farmers did not allow the research team to enter into net-houses to interact with the workers.¹⁵ In 26 plots, although permission was given, due to the reluctance of farmers, investigators could not freely interact with workers to obtain their age and terms and conditions of employment. In such cases, an attempt was made to meet the workers outside the farms at their homes after they returned from the plots. Out of 34 farms where the research team had difficulty in interacting with workers, in 20 cases the research team was successful in meeting the workers outside at their home. The research team had to exclude 14 fields from the sample where they had difficulty in reaching out to workers. These excluded fields are not part of the current sample list. During the field visits to farms 42 children in 34 fields¹⁶ ran away from the plots after seeing the study team approaching the farms. Farmers trained the children to leave the plots if they see any new persons entering into the plots.

Age proof evidence for children

When asked by the study team, except for 26 farms¹⁷, none of the farms visited declared that they were maintaining age proof documents for young workers. In the absence of age proof documents, age determination for borderline cases was found difficult by the field investigators. Young children working on family farms did not hesitate to report their correct age but this was not the case with children working for wages. Children who may be 13 or 14 years old also reported their age as above 14 years knowing that the law prohibits employment of children below 14 years. Age determination was found difficult in 156 cases (i.e. 25%) of young workers. In 38 cases the research team verified the ages reported by children with age documented in the school records. Out of 38 cases only in 12 cases the ages reported by children matched with age recorded in the school documents. In 26 cases the age reported by children was higher than the age mentioned in the school records. In other cases, in the absence of any documentary evidence, the research team relied on other means for age determination, including physical observation, oral enquiry with the children about their age, cross verification of reported ages with other details like i) in case children are going to school, in which class they are currently studying, ii) in case of school dropouts, which year and which class they dropped out from school, iii) in case of children who never went to school, what class her/his age group friends or sisters/ brothers are studying now.

¹⁴ The local resource persons helping the research team to conduct the field survey included school teachers, village youth association members, NGO staff, Anganwadi teachers and Women Self Help Group members.

¹⁵ Out of eight farms five were producing for MNCs.

¹⁶ Out of 34 farms, 22 are cottonseed farms, eight are okra farms and two each are tomato and hot pepper farms. Out of 34, 21 are producing for Indian companies and 13 are producing for MNCs.

¹⁷ All of the 26 farms are vegetable seed plots under net-houses.

Supporting evidence

The research team was not able to collect very detailed documentation (paper documents, audio and video recordings) as a supportive evidence for the oral interviews conducted with the respondents, as most of the respondents were hesitant and unwilling for audio/video recording their interviews. Some workers spoke with the researchers on the condition of anonymity. Photographs and small video clippings were taken wherever there was an opportunity and willingness on the part of respondents. The research team took photographs of nearly 200 working children¹⁸ when they were on the farms doing the work.

Child labour estimates

There are no official data on the total area used for cottonseed and vegetable seed production or the land area operated by individual seed companies. Information on land area used, was gathered through discussions with representatives of seed companies, seed organisers and experts on seed industry matters. The total number of child labourers in cotton, tomato, hot pepper and okra seed production for the 2018-19 crop season is estimated for each state separately on the basis of average labour requirements per acre in the sampled farms. By extrapolating the sample data to the total production in each state, the total number of child labourers on cottonseed and vegetable seed farms was estimated.

¹⁸ Nearly 70% of the photos of working children are from cottonseed farms in Gujarat and Telangana. The pictures are taken with the consent of children only. If they were along with the parents on the farm we have taken the consent of the parents as well.



2 Recent developments in Indian seed industry, 2015-2019

2.1 Introduction

The various developments taken place in Indian seed industry since 2015 that have implications for workforce composition, child labour and working conditions of the labourers in production of seeds are discussed in this chapter.

The Indian seed industry has been growing rapidly in quantity and value over the past two decades. According to IMARC Group's latest report published in 2018, the Indian seeds market reached a value of USD 4.1 billion, registering a Compound Annual Growth Rate (CAGR) of 15.7% during 2011-2018.¹⁹ It is further expected to grow at a CAGR of 13.6% during 2019-2024, reaching a value of USD 9.1 billion by 2024. The Indian seed industry is the fifth largest seed market in the world after the United States, China, France and Brazil. Of the global seeds market, India's market share was 4% in 2017 which was

¹⁹ "Seed Industry in India: Market Trends, Structure, Growth, Key Players and Forecast 2019-2024", <https://www.imarcgroup.com/seed-industry-in-india> (last accessed 28 April 2020).



dominated by cottonseeds, maize seeds and fruits and vegetable seeds. India stands 16th globally in fruits and vegetables seed exports, and had nearly 2% share of the global trade in 2016.

The trends in the production area under commercial cottonseed and vegetable seed crops in India show no major variations between 2015 and 2019. The area under vegetable seed increased marginally from 9.4 million hectares in 2014-15 to 10.4 million hectares in 2018-19. The area under commercial cotton production showed a marginal decline from 12.7 million hectares to 12.2 million hectares during the same period.²⁰

2.2 Area under hybrid cottonseed and vegetable seed production

The total production area under cottonseed production shows marginal increase between 2015 and 2019. Approximate area under cottonseed production for 2014-15 and 2018-19 is presented in table 2. The total production area increased from 95,000 acres in 2014-15 to 100,000 acres in 2018-19. While the changes in the production area are marginal in other states, in Andhra Pradesh and Telangana there is a significant raise of 58.8% from 2015 to 2019.

Table 2: Area under cottonseed production in India (area in acres)



State	2014-15	2018-19
Andhra Pradesh & Telangana*	17000	27000
Gujarat	48000	47000
Rajasthan	5000	4000
Karnataka	11000	8000
Tamil Nadu	7000	9000
Maharashtra	7000	5000
Total	95000	100000

* For the purpose of comparison with previous data, the figures for Andhra Pradesh and Telangana states are clubbed together. Andhra Pradesh state was divided into two states in 2014: Andhra Pradesh and Telangana.

Source: no official data is available on the total area under hybrid seed production and the area covered by individual seed companies. This information was gathered through discussions with representatives of seed companies, seed organisers and experts on seed industry matters.

Table 3 presents the total area under vegetable seed production for 2014-15 and 2018-19 in Karnataka and Maharashtra. Vegetable seed production in India is largely concentrated in three states, namely Karnataka in southern India, Maharashtra in central India, and Gujarat in western India. In Karnataka the production is concentrated in four districts, Davanagiri, Haveri, Koppal and Gadag. In Maharashtra, production is concentrated in Jalna and Buldana districts; and in Gujarat Kheda, Aravali, Sabarkantha and Chhota Udaipur districts are main centres for vegetable seed production. In Gujarat only the okra seed production is concentrated (around 30% of total okra production area in India). The area under other vegetable seed crops is negligible in Gujarat .

²⁰ Source: The data for vegetable seeds is taken from Indian Horticulture Database, National Horticulture Board (NHB); from 2014-15 to 2018-19. The Horticulture Division, Department of Agri. & Cooperation. For cotton data is taken from the Cotton Corporation of India, <https://cotcorp.org.in> (last accessed 28 April 2020).

Compared to 2014-15, the production area for the three crops (hot pepper, okra and tomato) covered in the study reduced by 38.6% in Karnataka and 19% in Maharashtra in 2018-19. The year 2018-19 was not a normal year for vegetable seed production. The bad weather conditions coupled with pest problems affected the area under production. The total production area for tomato, hot pepper and okra put together dropped from 7650 acres in 2014-15 to 4700 acres in 2018-19 in Karnataka. In Maharashtra the production area dropped from 5200 acres to 4200 acres during the same period.

Table 3: Area under vegetable seed production in Karnataka and Maharashtra (area in acres) 

Crop	Karnataka		Maharashtra	
	2014-15	2018-19	2014-15	2018-19
Tomato	2500	1500	450	700
Hot pepper	1150	700	350	500
Okra	4000	2500	4400	3000
Total	7650	4700	5200	4200

Source: Same as table 2.

2.3 Growing control of multinational companies and major Indian companies

The seed industry has seen a process of concentration in recent years. MNCs and large Indian companies are slowly increasing their control over the seed industry by expanding their production area as well as by acquiring smaller companies. This process of concentration of industry with big players which began in early 2000s has further intensified during the period 2015-2019. The production and marketing of hybrid vegetable seeds in India is now mostly controlled by the private sector. Currently private seed companies, both MNCs and Indian companies, account for more than 90% of the total hybrid cottonseed and vegetable seed produced and marketed in the country. Though there are over 200 companies involved in cottonseed and vegetable seed cultivation in India, only a few companies control a large market share.

MNCs and large Indian companies are slowly increasing their control over the seed industry by expanding their production area as well as by acquiring smaller companies. This process of concentration of industry with big players which began in early 2000s has further intensified during the period 2015-2019.

The names of the **top 10 companies** which control more than 80% of the Indian **vegetable seed** market are Syngenta, Bayer, BASF (Nunhems), Namdhari Seeds, Kalash Seeds, Mahyco, Advanta (UPL), East-West Seed, HM.CLAUSE and Ankur Seeds. While Syngenta, BASF, Bayer, Advanta (UPL), East-West Seed and HM.CLAUSE are multinational companies, Namdhari Seeds and Ankur Seeds are leading Indian companies. Mahyco has a joint venture partnership with Bayer.

Companies from the Netherlands which have a substantial share in the global as well as Indian vegetable seed market are BASF (Nunhems), East-West Seed, Rijk Zwaan and Enza Zaden.²¹

²¹ Enza Zaden and Rijk Zwaan have newly entered into seed business in India. Currently there are doing production on a small scale and have plans to expand in the coming years. Though none of the farms producing seed for these companies were included in the study sample the draft copy of the report was shared with these companies for their feedback.

The land area and production rates indicate that multinationals control more than 50% of the market share in vegetable seeds. Syngenta has a leading position in tomato seed production followed by BASF, Bayer, East-West Seed, Advanta (UPL) and Namdhari Seeds. Mahyco, BASF, Kalash Seeds, Syngenta and Bayer are the leading companies in hot pepper seed production. Advanta (UPL), BASF, Mahyco, Syngenta and Bioseed are leaders in okra hybrid seed production.

The area directly controlled by MNCs and its partners has been consistently growing in vegetable seeds in recent years. The production area controlled by MNCs increased from 59% in 2014-15 to 64% in 2018-19 (see table 4).

Table 4: Proportion of seed production area controlled by MNCs and Indian companies

Type of company	2014-15		2018-19	
	Cottonseed	Vegetable seeds	Cottonseed	Vegetable seeds
MNCs	31.6%	59%	20%	64%
Indian companies	69.4%	41%	80%	36%

Source: Same as table 2.

The presence of MNCs and their control over production area is low in **cottonseeds** compared to vegetable seeds. The area directly controlled by MNCs and their business partners shows a decline since 2014-15. In 2014-15 nearly 32% of the cottonseed production area was under the control of MNCs and their business partners. This has reduced to 20% in 2018-19. The acquisition of Monsanto by Bayer urged Monsanto to sell its cottonseed business in 2017. A Hyderabad based Indian company Tierra Agrotech purchased Monsanto's cottonseed business. DuPont, another MNC, also sold its cottonseed business to Tierra Agrotech in 2017. Due to these two divisions of Monsanto and DuPont, the share of MNCs in cottonseed market dropped enormously. The leading Indian companies involved in the production and marketing of cottonseeds are Rasi Seeds, Nuziveedu Seeds, Kaveri Seeds, Ajeet Seeds, Bioseed, Ankur Seeds, JK Seeds, Meta-helix, Green Gold Seeds, Tierra Agrotech, Tulasi Seeds, Seed Works, Nath Seeds and Krishidhan Seeds.

The top five leading Indian cottonseed companies are: Nuziveedu Seeds, Rasi Seeds, Kaveri Seeds, Ajeet Seeds and Bioseed. Together they control more than 50% of the total cottonseed production area in India.

Shifting production to new and remote pockets: this process is clearly visible in **cottonseed** and **okra seed** production. Seed companies are relocating and expanding their production to new areas situated in remote pockets where cheap labour is more readily available. The increase in the production area in remote tribal pockets of Gujarat and backward areas of Telangana indicates this trend. In the new locations most of the seed farmers are marginal landholders and tribal people who mostly depend upon their family for labour.

Seed companies are relocating and expanding their production to new areas situated in remote pockets where cheap labour is more readily available.

Shifting production from large commercial farms to small family-based farms: the shift of production from large commercial farms to small family-based farms is a new trend which began in the

mid-2000s and further accelerated in recent years. This process is also clearly visible in **cottonseed** and **okra seed** production. Due to reduction in profit margins on account of rise in production costs, mainly labour costs, and stagnant prices for the products, large commercial farmers who mainly depend upon hired labour are slowly either withdrawing from cottonseed production or opting for sharecropping arrangements with working class families.²² In recent years companies have received demands for higher procurement prices from large growers in several places. This is one of the reasons for the seed companies to shift their production to new locations while preferring to contract their production to small farmers. This is one of the reasons for the seed companies to shift their production to new locations while preferring to contract their production to small farmers. The small farmers are less organised and have less bargaining power to negotiate for higher prices. This also has implications for the workforce composition in the cottonseed sector. Small farmers tend to depend more on their own family labour, including their children.

The shift of production from large commercial farms to small family-based farms is a new trend which began in the mid-2000s and further accelerated in recent years.

A clear indication of this shift from large to small holdings can be seen in the decline of the average size of cottonseed and okra seed farms. The average size of a cottonseed farm is lowest in Rajasthan followed by Gujarat. During 2014 and 2019 the average size of a cottonseed farm declined by 12% to 19% in different states.

Table 5: Average size of cottonseed farm in different states (in acres)

State	2014-15	2018-19
Andhra Pradesh & Telangana	1.38	1.12
Gujarat	0.68	0.58
Rajasthan	0.48	0.42
Karnataka	0.82	0.72

Source: sample survey data.

The small farmers are less organised and have less bargaining power to negotiate for higher prices (...) (They tend to depend more on their own family labour, including their children.

2.4 Changes in the workforce composition

The expansion and relocation of production into remote tribal locations and the decline in the average size of production units had significant consequences for the composition of the workforce. In the new production locations most of the seed growers are small and marginal farmers mostly depending on family labour. Here it is observed that the proportion of family labour, both adults and children, is relatively high compared to traditional seed production areas. As the new production locations are situated in labour supply zones, the need for seasonal migrant labourers reduced significantly. Most of the hired labourers in new production locations are local labourers.

²² Sharecropping is a form of tenancy arrangement. In a standard sharecropping contract, both parties i.e. farmer and the sharecropper enter into a verbal agreement where the farmer bears the cost of agricultural inputs such as seeds, fertiliser, irrigation etc.; the contribution from the sharecropper being labour. The share is decided as per existing norms in the region and is often given in kind, though there is an increasing trend countrywide to take cash in return. "Share-crop Contract between Migrant Workers & Farmers: Aajeevika-KAS's experience in Idar-Kotda", Aajeevika Bureau, 2010: [http://www.aajeevika.org/assets/pdfs/Takrar%20se%20Karar%20Tak%20\(Sharecropping%20Contract\).pdf](http://www.aajeevika.org/assets/pdfs/Takrar%20se%20Karar%20Tak%20(Sharecropping%20Contract).pdf).

2.5 The export market for hybrid seeds

The export market for hybrid cottonseeds is very limited. More than 95% of the cottonseed produced in India is consumed within the country. For hybrid vegetable seeds produced in India there is a vast demand in foreign countries. India is the ninth major exporter of fruit and vegetable seeds in the world. The major

India is the ninth major exporter of fruit and vegetable seeds in the world. The major seed importing countries from India are Pakistan, Bangladesh, Saudi Arabia, The Netherlands and the Republic of Korea.

seed importing countries from India are Pakistan, Bangladesh, Saudi Arabia, The Netherlands and the Republic of Korea. Next to South Asia, the European Union (EU) is the largest importer of vegetable seeds from India. Exports to the EU account for 27.7% of the total exports value of fruits and vegetable seeds in 2018-19. Within the EU, The Netherlands is the largest importer of vegetable seeds from India. It accounts for nearly 80% of the total exports to the EU. Out of the INR 2400 million exports of vegetable and fruit seeds to the EU in the years 2018-19, INR 1930 million exports were to The Netherlands. Other EU countries importing vegetable and fruits seeds from India are France and Italy. Vegetable seed exports consist of 70% of the

total seed exports. The share of various countries importing fruit and vegetable seeds from India is showed in table 6. The foreign exchange generated through import of fruit and vegetable seeds have increased with 107% from INR 4165 million in 2013-14 to INR 8650 million in 2018-19.²³

Table 6: Trends in exports of fruit and vegetable seeds from India to different countries

Countries	2013-14		2018-19	
	Quantity (M tonnes)	Value (INR millions)	Quantity (M tonnes)	Value (INR millions)
European Union*	1881	873	628	2400
South Asia	12545	1203	10256	2222
North America	176	431	700	1759
Other continents	4736	1342	3701	2269
Total	19338	4165	15285	8650

* Among the EU countries The Netherlands is the largest importer of vegetable seeds from India (INR 354 million in 2013-14 and INR 1930 million in 2018-19): http://agriexchange.apeda.gov.in/indexp/18headgenReportmonth_combine.aspx.

To sum up, the recent developments in the seed industry such as production shifting from large commercial farms to small family units, the expansion and relocation of production into remote tribal locations and the decline in the average size of production units had significant implications for the composition of the workforce and the nature and magnitude of child labour in the seed industry. In the next section the incidence of child labour and profile of the children working on cottonseed and vegetable seed farms in different states are presented.

Within the EU, The Netherlands is the largest importer of vegetable seeds from India. It accounts for nearly 80% of the total exports to the EU.

²³ Agri Exchange, by APEDA, Government of India: http://agriexchange.apeda.gov.in/indexp/18headgenReportmonth_combine.aspx (last accessed 28 April 2020).

3 Child labour: Significant progress

Estimates of child labour: Results and trends, 2015-2019



3.1 Introduction

This chapter presents findings from the field survey carried out in 613 sample seed farms during the 2018-19 crop season on the magnitude and profile of the children working on hybrid cottonseed and vegetable seed farms in six different states in India. In order to understand the recent trends in the employment of children, the results of the present study were compared with the studies conducted in 2014-15. Field visits to the farms were conducted during cross-pollination (hybridisation) which is the most labour-intensive activity. The workforce composition and child labour estimates presented in this section are related to cross-pollination activities only.

Hybrid seeds are produced through cross-pollination which is done manually. Cross-pollination of two plants or lines of

Hybrid seeds are produced through cross-pollination which is done manually (...) This is the most labour-intensive activity, which takes up nearly 90% of the total work days required for seed production in cottonseed and 70% in vegetable seeds.

dissimilar genotype is known as hybridisation. This is the most labour-intensive activity, which takes up nearly 90% of the total work days required for seed production in cottonseed and 70% in vegetable seeds.²⁴ Hybridisation involves two separate tasks: emasculation and pollination. Emasculation involves removal of the stamen from the flower bud of the female line before the flower sheds its pollen. Emasculation must occur without damaging the stigma, style or ovary. For tomato and pepper crops, sharp-pointed forceps are used to open the selected buds and remove the anther cone from the bud, leaving the calyx, corolla and pistil. Pollination is achieved by exposing the stigma and dipping it into a pool of pollen that has been collected in a container from male parent flowers. This process prevents the self-fertilisation of the female parent. As a result of this selective breeding process, hybrid vigour, the hybrid seeds produced can be used for only one crop. The duration of hybridisation activity is 60-80 days in cotton, 25-30 days in tomato and 30-40 days in hot pepper and okra. Farmers need continuous supply of labour during cross-pollination period as this activity needs to be done every day, without fail. The other activities in seed production such as sowing/transplanting, weeding, harvesting and seed extraction are also labour-intensive but compared to cross-pollination the labour requirement is less in these activities.

3.2 Definition of child labour

The United Nations Convention on the Rights of the Child (UNCRC) defines the child as a person under 18 years of age. India is a signatory to UNCRC and also ILO Convention No. 138. According to the ILO 138 Minimum Age Convention the minimum age for employment is 15 years and in case of countries whose economy and educational facilities are insufficiently developed, this can be lowered to 14 years.²⁵ India ratified the ILO 138 Convention in June 2017 and amended its law. The Child Labour (Prohibition and Regulation) Act, 1986 now prohibits employment or work of children below 14 years in any occupation or process, except in family enterprises before and after school hours. However even in these exceptional cases the work has to be non-hazardous and should not affect the education of the child. The work on the cottonseed and vegetable seed farms, especially in the cross pollination season, is very intensive and could therefore affect the education of the child and would qualify as child labour. India also ratified the ILO Convention on the Worst Forms of Child Labour No. 182 in June 2017, that indicates that the employment of persons between 15 to 18 years in hazardous occupations and processes is prohibited. Although seed production as such is not included under hazardous work, specific tasks like pesticide application and handling heavy machinery are.²⁶

²⁴ An acre of cottonseed farm requires around 700 labour days to complete the task of cross-pollination. Compared to okra, tomato and hot pepper seeds production is more labour-intensive. Depending upon plant population, the average tomato plot (0.40 acres open field, 0.25 acres net-house) requires about 250-300 work days and the average hot pepper plot (0.25 acres) requires 350-450 work days while the average okra plot (0.50 acres) requires 200 work days for completion of cross-pollination activity.

²⁵ According to article 2(3) and 2(4) of the ILO Minimum Age Convention, 1973 (No. 138).

²⁶ http://ilo.org/wcmsp5/groups/public/--asia/--ro-bangkok/--sro_new_delhi/documents/genericdocument/wcms_486746.pdf.

3.3 Section I: Cottonseed production

3.3.1 Workforce composition and incidence of child labour

Table 7 presents data on the incidence of child labour during the 2018-19 crop season in 388 sample cottonseed farms in 84 villages that are producing seeds for both MNCs and major Indian seed companies in five Indian states.

The data for 2018-19 shows that children under 14 years account for over 18% of the total workforce in cottonseed farms in India. The occurrence of child labour marginally varies between different states and regions within states. Rajasthan has highest incidence of child labour (20.2%) followed by Gujarat (19.1%). Karnataka and combined states of Andhra Pradesh and Telangana have the lowest incidence of child labour, respectively 17.5% and 18.4% (see table 7).

The data for 2018-19 shows that children under 14 years account for over 18% of the total workforce in cottonseed farms in India.

Table 7: Incidence of child labour in cottonseed farms in different states during 2018-19

	Andhra Pradesh & Telangana*	Gujarat	Karnataka	Rajasthan	Total
Total number of farms surveyed (area in acres)	156 (174.5)	128 (74.2)	74 (53.3)	30 (12.6)	388 (314.6)
Total number of workers engaged in cross-pollination activity	1426	752	479	139	2796
% children (below 14 years) to total workforce	18.4% (262)	19.1% (144)	17.5% (84)	20.2% (28)	18.5% (518)
% children (15-18 years) to total workforce	23.9% (342)	26.3% (198)	25.5% (122)	23.0% (32)	24.8% (694)
% adults (above 18 years) to total workforce	57.6% (822)	54.5% (410)	56.9% (273)	58.2% (81)	56.7% (1586)
Average number of children (below 14 years) per acre	1.5	1.9	1.6	2.3	1.6
Average number of children (15-18 years) per acre	1.9	2.7	2.3	2.5	2.2

* For the purpose of comparison with previous years data, the figures for Andhra Pradesh and Telangana states are clubbed together. Andhra Pradesh state was divided into two states in 2014: Andhra Pradesh and Telangana.

Note: Figures between brackets are the absolute numbers.

Nearly one third of the sample farms covered under the study are located in Gujarat.²⁷ A total of 752 workers were found working on 128 sample farms during field visits in **Gujarat**, out of which 19.1% were children below 14 years and 26.3% were older children in the age group of 15-18 years. The average number of children employed per acre stands at 1.9 children below 14 years and 2.7 children between 15-18 years.

Rajasthan is not a traditional cottonseed production area. It used to supply labour to cottonseed farms located in **Gujarat**. Due to the restrictions imposed by the **Rajasthan** and **Gujarat** governments on

²⁷ Large portion of sample farms were chosen from Gujarat as it is the number one state having highest area under cotton seed production in India.

the movement of young migrant workers from **Rajasthan** to cottonseed farms in **Gujarat**, some of the companies have moved part of their production to **Rajasthan** where there is availability of skilled labour to work on cottonseed farms. A total of 139 workers were found working on 30 sample farms during the field visits in **Rajasthan**, out of which 20.2% (28) were children below 14 years. Children in the age group of 15-18 years accounted for 23.0%.

Compared to Gujarat and Rajasthan the lowest incidence of child labour is reported in Karnataka.

The proportion of children below 14 years accounted for 17.5% of the total workforce and average number of children below 14 years employed per acre stood at 1.6 children.

For the purpose of comparison with previous data, the figures for **Andhra Pradesh** and **Telangana** states are clubbed together. In **Andhra Pradesh** which is now divided into two states, wide regional variations were observed. The field work was conducted in two districts: Kurnool which is now part of **Andhra Pradesh** and Mahabubnagar²⁸ which is part of the newly created state of Telangana. The children below 14 years accounted for 18.4% of the total workforce in Andhra Pradesh and Telangana together. The proportion of children to the total workforce was relatively high in Mahabubnagar district compared to Kurnool district. The proportion of children below 14 years accounted for 15.2% in Kurnool district where as it is 23.4% in Mahabubnagar district.

3.3.2 Trends in the employment of child labour

The data for 2018-19 shows a clear decline in the incidence of child labour since 2014-15. The decline is observed in the proportion of children to the total workforce as well as a decline in the average number of children employed per acre of cottonseed production in different states. Table 8 presents the comparative data on the incidence of child labour in hybrid cottonseed production in different states for 2014-15 and 2018-19.

The overall incidence of child labour below 14 years across India has decreased by 25% during 2015-2019. The proportion of children to the total workforce reduced from 24.6% in 2014-15 to 18.4% in 2018-19. The average number of children employed per acre also declined from 2.2 to 1.6 during this period.

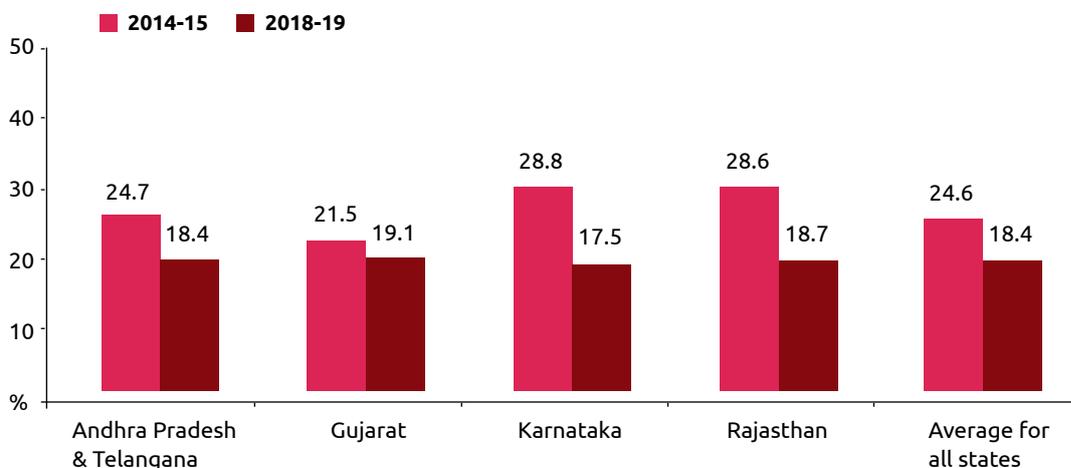
The extent of decline shows wide variations between different states and regions within states. The large part of contribution for this decline comes from the states and regions where significant interventions took place to address child labour.

Both **Karnataka** and **Rajasthan** reported a significant decline. The proportion of children below 14 years to the total workforce declined by 39.2% (from 28.8% to 17.5%) in **Karnataka** and 34.6% in **Rajasthan**. The proportion of children in the 15-18 age group to the total workforce also witnessed a marginal decline of 17% in **Karnataka** and 29.6% in **Rajasthan** during this period.

The data for 2018-19 shows a clear decline in the incidence of child labour since 2014-15. The decline is observed in the proportion of children to the total workforce as well as a decline in the average number of children employed per acre of cottonseed production in different states.

²⁸ The government of Telangana has recently reorganised the districts. Mahabubnagar district is now subdivided into four districts, namely Mahabubnagar, Wanaparthy, Gadwal and Nagar Kurnool. Cottonseed production is concentrated in Gadwal district.

Trends in employment of child labour in cottonseed farms Percentage of children (below 14 years) to the total workforce 2015-19



The data for the combined state of **Andhra Pradesh** shows a decline of 25%, from 24.7% in 2014-15 to 18.4% in 2018-19. The state-wise disaggregated data indicates that the decline is significant with 30% drop in present **Andhra Pradesh** compared to only 19% drop in **Telangana**.

Compared to other states, the progress reported in **Gujarat** is negligible. The proportion of children below 14 years to the total workforce declined by only 2.4% (from 21.5% to 19.1%) in Gujarat during 2015-2019. In case of 15-18 age group children the decline is reported at 15.4%.

Table 8: Proportion of children (below 14 years) to the total workforce during 2015-19

	2014-15	2018-19
Andhra Pradesh & Telangana		
% total workforce	24.7%	18.4%
Average number of children employed per acre	2.1	1.5
Gujarat		
% total workforce	21.5%	19.1%
Average number of children employed per acre	2.3	1.9
Karnataka		
% total workforce	28.8%	17.5%
Average number of children employed per acre	2.6	1.6
Rajasthan		
% total workforce	28.6%	18.7%
Average number of children employed per acre	2.7	2.1
Average for all states		
% total workforce	24.6%	18.4%
Average number of children employed per acre	2.2	1.6

Table 9: Proportion of children (15-18 years) to the total workforce during 2015-19

	2014-15	2018-19
Andhra Pradesh & Telangana		
% total workforce	34.6%	23.9%
Average number of children employed per acre	2.9	1.9
Gujarat		
% total workforce	31.1%	26.3%
Average number of children employed per acre	3.4	2.7
Karnataka		
% total workforce	30.7%	25.5%
Average number of children employed per acre	2.8	2.3
Rajasthan		
% total workforce	30.2%	23%
Average number of children employed per acre	3.1	2.5
Average for all states		
% total workforce	32.6%	24.8%
Average number of children employed per acre	3.2	2.2

3.3.3 Profile of the working children in cottonseed farms

65% of child workers are girls

The major part of the work on cottonseed farms is done by female workers. The gender composition of the working children on cottonseed farms shows that girls outnumber boys in all states. They accounted for nearly 65% of the total working children (below 14 years) during 2018-19 (see table 10). Compared to Gujarat, the proportion of girls among working children is relatively high in Karnataka, Andhra Pradesh and Rajasthan. The overall percentage of girls to total child workers has shown no major change during 2015-19.

Gradual shift from paid to family labour

The data for 2018-19 shows that nearly two thirds of child workers engaged in cottonseed production are hired labour working for wages. They constituted 67.6% of the total working children in **Andhra Pradesh** and 64.3% in **Karnataka**. Compared to other states the share of family children is relatively high in **Rajasthan** and **Gujarat** where they accounted for 40.7% and 57.7% of all children involved. The share of family children among child workers has been showing a consistent increase since 2006. This trend continued during 2015-19 as well. The proportion of family children to the total child labour increased from 33.2% in 2014-15 to 36.4% in 2018-19. The increase is significant in the areas where production has shifted from large commercial farms to small family farms.

The share of family children among child workers has been showing a consistent increase since 2006. This trend continued during 2015-19 as well.

Table 10: Profile of working children in cottonseed farms during 2018-19

	Andhra Pradesh & Telangana	Gujarat	Karnataka	Rajasthan	Total
Total number of sample farms	156	128	74	30	388
Total number of children (below 14 years)	262	144	84	26	516
Family versus hired labour					
% of family labour to total labour	32.4% (85)	40.3% (58)	35.7% (30)	57.7% (15)	36.4% (188)
% of hired labour to total labour	67.6% (177)	59.7% (86)	64.3% (54)	42.3% (11)	63.6% (328)
Gender composition					
% of boys to total children	31.3% (82)	45.1% (65)	32.1% (27)	34.6% (9)	35.5% (183)
% of girls to total children	68.7% (180)	54.9% (79)	67.8% (57)	65.4% (17)	64.5% (333)
Caste background²⁹					
% of Scheduled Castes (SCs)	30.3% (68)	7.7% (9)	33.8% (21)	9.5% (2)	23.6% (100)
% of Scheduled Tribes (STs)	9.4% (21)	67.2% (78)	16.2% (10)	66.6% (14)	29.1% (123)
% of Backward castes	51.8% (116)	18.1% (21)	38.7% (24)	19.1% (4)	39.0% (165)
% of Other castes	8.5% (19)	6.9% (8)	11.3% (7)	4.7% (1)	8.3% (35)
Educational Status³⁰					
% of school dropouts	51.7% (116)	47.4% (55)	48.4% (30)	52.4% (11)	50.1% (212)
% of school going but working during peak season	33.9% (76)	37.9% (44)	43.5% (27)	38.1% (8)	36.7% (155)
% of school going but occasionally working during school holidays	14.3% (32)	14.6% (17)	8.1% (5)	9.5% (2)	13.2% (56)

Note: The school going status and caste background details are not available for all the working children. These details are available for 224 out of 262 children below 14 years in Andhra Pradesh, in Gujarat for 116 out of 144 children, in Karnataka 62 out of 84 children and in Rajasthan 21 out of 26 children.

²⁹ The caste and school going status information was gathered directly from the children themselves. With regard to sharing accurate information related caste background there was no issue but in case of school going status not all the children revealed the correct information. In 38 doubtful age cases the research team verified the ages and school going status reported by children with age and attendance documented in the school records. Out of 38 cases in 5 cases the school going status information reported by children did not match with information in school attendance records. In these cases children reported that they were irregular to school but school attendance showed that they were school dropouts.

³⁰ See note 26.

Table 11: Profile of working children in cottonseed farms: 2015-2019

	2014-15	2018-19
Family vs hired Labour		
% of family children to total child labour	33.2%	36.4%
% of hired child labour to total child labour	66.8%	63.6%
Gender composition		
% of boys to total children	34.3%	35.5%
% of girls to total children	65.7%	64.5%
Caste background		
% of Scheduled Castes (SCs)	23.2 %	23.6%
% of Scheduled Tribes (STs)	33.1%	29.1%
% of Backward castes	36.5%	39.0%
% of Other castes	7.0%	8.3%
Educational Status		
% of school dropouts	60.0%	50.1%
% of school going but working during peak season	29.8%	36.7%
% of school going but occasionally working during school holidays	10.1%	13.2%

Source: The data for 2014-15 is taken from the report "Cotton's Forgotten Children".

Most of the working children are Dalits and Adivasi

The data on caste background of working children for 2018-19 showed no major change since 2015. The children from Dalits - also called Scheduled Castes (SCs) - and Adivasi - also called Scheduled Tribes (STs) - communities still constitute more than 50% of the total workforce. In Gujarat and Rajasthan more than nearly 65% of the working children are from Adivasi communities. In Karnataka, Andhra Pradesh and Telangana the largest number of working children are from Backward Castes (BCs).

Though caste-based discrimination in wages was not reported in any of the study locations, differential treatment of workers by the employers on caste lines was reported in few

locations mostly in south Indian states. In Gadwal area in Mahabubnagar district, Dalit and Adivasi workers reported that they often face some kind of discrimination in treatment from their employers who belong to upper castes. Respondents mentioned that some employers treat Dalit workers differently from upper caste workers. They feel not respected. The upper caste workers are allowed to take some respite during working hours. They are not scolded even if they are late to work. Whereas Dalit women are not given this 'privilege'. Wage discrimination and differential treatment of workers on the basis of caste and ethnicity was not reported in Gujarat. This is probably because most of the labourers working on cottonseed farms are migrant Adivasi from a single ethnic community.

Some employers treat Dalit workers differently from upper caste workers.

Educational status: Majority of them are school dropouts

Nearly 50% of the children found working on cottonseed farms in 2018-19 were school dropouts who are now working as full-time workers. They accounted for 52.4% of the total working children in **Rajasthan** and 47.4% in **Gujarat**, 51.7% in **Andhra Pradesh** and 48.4% in **Karnataka**. Compared to 2014-15, there is a drop of 16.6% in

Nearly 50% of the children found working on cottonseed farms in 2018-19 were school dropouts who are now working as full-time workers.

the category of children who are school dropout and full-time workers. The category of children who go to school and temporarily drop out during the cross-pollination period accounted nearly 36.7% of the total working children. This category of children who are temporarily dropping out from school during the cross-pollination period has increased by 23% since 2015. The pressure on farmers to reduce the labour costs is leading to the adoption of new strategies to find cheap labour. In **Telangana** and parts of **Karnataka** and **Gujarat** it is observed that the farmers are encouraging school going children to take up cottonseed work as a part-time activity.



3.4 Section II: Vegetable seed production

3.4.1 The incidence of child labour in Karnataka

Table 12 presents the details of the workforce composition and incidence of child labour in hybrid vegetable seed farms in Karnataka for 2014-15 and 2018-19. The survey conducted in 2018-19 covered 150 sample seed plots in Karnataka. Out of the 150 plots, 55 plots are producing for Indian companies and 95 for MNCs. The crops included are okra, hot pepper and tomato. The sample covers 50 farms each for these three crops.

The data for 2018-19 shows that children under 14 years account for nearly 11.5% of the total workforce in tomato, hot pepper and okra seed farms in Karnataka. The occurrence of child labour varies between different crops and geographical locations.

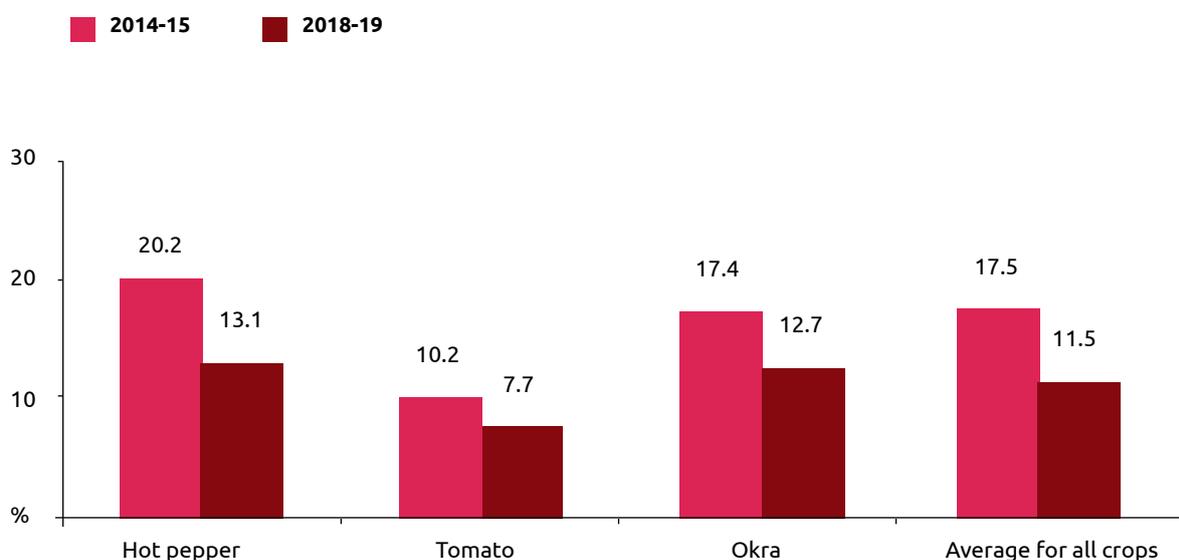
Children under the age of 14 years accounted for 13.1% of the total workforce in hot pepper, 12.7% in okra and 7.7% in tomato. The average number of children below 14 years employed per acre is 9.2 in hot pepper, 1.9 in tomato and 1.7 in okra farms.

Regional variations were found in the incidence of child labour. Compared to other locations, the magnitude of child labour was found very high for all companies' farms in Koppal district, where hot pepper seed production is largely concentrated. The high incidence of child labour in hot pepper farms is caused by contextual variations in the region. For example more child labour in Koppal district can mainly be attributed to backwardness of the region and relatively low literacy rates both among growers and workers.

The data for 2018-19 shows that children under 14 years account for nearly 11.5% of the total workforce in tomato, hot pepper and okra seed farms in Karnataka. The occurrence of child labour varies between different crops and geographical locations.

Child labour in vegetable seed production in Karnataka

Percentage of children (below 14 years) to the total workforce 2015-2019



The overall incidence of child labour (below 14 years) in tomato, hot pepper and okra crops in 2018-19 in Karnataka showed a significant decline of 34.2% during 2015-2019. The proportion of children to the total workforce reduced from 17.5% in 2014-15 to 11.5% in 2018-19. In hot pepper the decline is reported at 35% and in tomato and okra at 24.5% and 27.1% respectively. The average number of children employed per acre also declined from 5.2 to 3.0 during this period.

The gender composition of workforce shows marginal increase in the girls' proportion to total child workers since 2014-15. They accounted 61.7% in 2014-15 and this has increased to 67.4% in 2018-19.

The gender composition of workforce shows marginal increase in the girls proportion to total child workers since 2014-15.

Table 12: Workforce composition and child labour in sample farms in Karnataka

	Hot pepper		Tomato		Okra		Total for all crops	
	2014-15	2018-19	2014-15	2018-19	2014-15	2018-19	2014-15	2018-19
Total number of seed plots surveyed (approx. area in acres)	57 (15)	50 (12)	60 (24)	50 (20)	40 (36.8)	50 (39)	157 (75.8)	150 (71)
Total number of workers engaged during cross-pollination activity	1096	840	652	492	518	503	2266	1835
% of family labour to total labour	14.7% (161)	15.2% (128)	17.3% (113)	21.5% (106)	19.9% (103)	27.0% (136)	16.6% (377)	20.1% (370)
% of hired labour to total labour	85.3% (935)	84.8% (712)	82.7% (539)	78.5% (386)	80.1% (415)	70.0% (367)	83.7% (1889)	79.9% (1465)
% of children (below 14 years) to total workforce	20.2% (222)	13.1% (110)	10.2% (67)	7.7% (38)	17.4% (90)	12.7% (64)	17.5% (397)	11.5% (212)
% of girls to total children (below 14 years)	65.8% (146)	69.0% (76)	65.7% (44)	63.1% (24)	61.1% (55)	67.2% (43)	61.7% (245)	67.4% (143)
% of children (15-18 years) to total workforce	31.3% (343)	28.1% (236)	30.2% (197)	26.0% (128)	28.5% (148)	24.6% (124)	30.4% (688)	26.6% (488)
% of girls to total children (15-18 years)	70.3% (241)	68.6% (162)	70.5% (139)	73.4% (94)	71.6% (106)	66.1% (82)	70.6% (486)	69.2% (338)
Average number of children (below 14 years) per acre	15.8	9.2	2.8	1.9	2.5	1.7	5.2	3.0
Average number of children (15-18 years) per acre	22.9	19.7	8.2	6.4	4.1	3.2	9.1	6.9

3.4.2 The incidence of child labour in Maharashtra

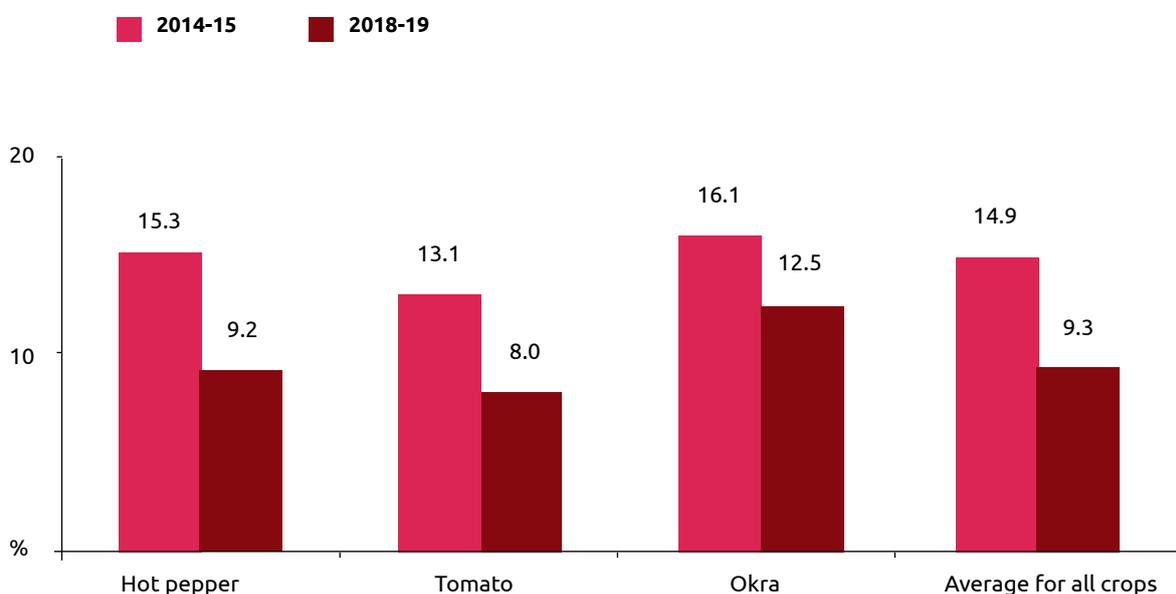
Table 13 presents the details of the workforce composition and incidence of child labour in hybrid vegetable seed farms in **Maharashtra** for 2014-15 and 2018-19. The survey conducted in 2018-19 covered 75 sample seed plots in **Maharashtra**. Out of the 75 plots 34 plots (45.3%) are producing for Indian companies and 41 plots (54.7%) for MNCs. The crops included are okra, hot pepper and tomato. The sample covers 25 farms each for these three crops.

The data for 2018-19 shows that children under 14 years account for 9.3% of the total workforce in tomato, hot pepper and okra seed farms in Maharashtra. The occurrence of child labour varies between different crops and geographical locations.

The data for 2018-19 shows that children under 14 years account for 9.3% of the total workforce in tomato, hot pepper and okra seed farms in Maharashtra.

Children under the age of 14 years accounted for 9.2% of the total workforce in hot pepper, 12.5% in okra and 8.0% in tomato. Children in the age group 15-18 accounted for nearly 27.7% of the total workforce. The average number of children below 14 years employed per acre is 6.5 in hot pepper, 1.8 in tomato and 1.6 in okra farms.

Child labour in vegetable seed production in Maharashtra Percentage of children (below 14 years) to the total workforce 2015-2019



Regional variations were found in the incidence of child labour. Compared to other locations, the magnitude of child labour was found relatively high for all companies' farms in Lonar location in Buldana district where okra and hot pepper seed production is concentrated.

The overall incidence of child labour (below 14 years) in tomato, hot pepper and okra crops in 2018-19 in Maharashtra showed a significant decline of 37.6% during 2015-2019. The proportion of children to the

total workforce reduced from 14.9% in 2014-15 to 9.3% in 2018-19. In hot pepper the decline is reported at 39.8% and in tomato and okra at 38.9% and 22% respectively. The average number of children employed per acre also declined from 4.4 to 2.9 during this period.

The gender composition of workforce shows no major change since 2014-15. Girls outnumber boys and accounted for nearly 65% child labour in 2018-19.

The overall incidence of child labour (below 14 years) in tomato, hot pepper and okra crops in 2018-19 in Maharashtra showed a significant decline of 37.6% during 2015-2019.

Table 13: Workforce composition and child labour in sample farms in Maharashtra

	Hot pepper		Tomato		Okra		Total for all crops	
	2014-15	2018-19	2014-15	2018-19	2014-15	2018-19	2014-15	2018-19
Total number of seed plots surveyed (approx. area in acres)	20 (5)	25 (6.2)	20 (8)	25 (10)	38 (13.5)	25 (9)	78 (26.5)	75 (25.2)
Total number of workers engaged during cross-pollination activity	359	433	221	237	192	112	772	782
% of family labour to total labour	18.9% (68)	17.1% (74)	21.3% (47)	24.9% (59)	37.5% (72)	42.9% (48)	24.2% (187)	23.1% (181)
% of hired labour to total labour	71.1% (291)	82.9% (359)	78.7 (174)	75.1% (178)	62.5% (120)	57.1% (64)	75.8% (585)	76.9% (601)
% of children (below 14 years) to total workforce	15.3% (55)	9.2% (40)	13.1% (29)	8.0% (18)	16.1% (31)	12.5% (14)	14.9% (115)	9.3% (72)
% of girls to total children (below 14 years)	70.9% (39)	72.5% (29)	58.6% (17)	61.1% (11)	61.3% (19)	64.3% (8)	65.2% (75)	66.7% (48)
% of children (15-18 years) to total workforce	33.1% (119)	29.3% (127)	28.9% (64)	23.6% (56)	35.9% (69)	30.3% (34)	32.6% (252)	27.7% (217)
% of girls to total children (15-18 years)	68.1% (81)	70.8% (90)	65.6% (42)	64.2% (36)	68.1% (47)	64.7% (22)	67.5% (170)	68.2% (148)
Average number of children (below 14 years) per acre	11	6.5	3.6	1.8	2.3	1.6	4.4	2.9
Average number of children (15-18 years) per acre	23.8	20.5	8.0	5.6	5.1	3.8	9.8	8.6

3.4.3 Profile of the working children: social and educational status

Table 14 presents the data on social and education background of the working children (below 14 years) for 2014-15 and 2018-19.

Hired child labourers and child workers of growers' families

Most of the working children in vegetable seed production farms are hired labourers. They accounted for more than 70% of the total working children in Karnataka and Maharashtra. Compared to Karnataka, the share of family children is relatively high in Maharashtra. The proportion of family children to the total number of working children has marginally increased in recent years from 21.6% to 26.1% in Karnataka and from 27.7% to 29% in Maharashtra during 2015-19.

Caste background

The caste background of the working children clearly indicates that most of the working children are from economically poor and socially backward communities like Dalits, Adivasi and Backward Classes.

In **Karnataka** the largest number of working children are from BCs. In **Maharashtra** children from STs and SCs account for nearly 50% of the total working children.

Compared to 2014-15, there is a marginal change in the caste composition of working children. The share of BCs increased by 8% in **Karnataka** and 10% in **Maharashtra** during 2015-19.

The caste background of the working children clearly indicates that most of the working children are from economically poor and socially backward communities like Dalits, Adivasi and Backward Classes.

Table 14: Social and educational status of working children in vegetable sample seed farms

	Karnataka		Maharashtra	
	2014-15	2018-19	2014-15	2018-19
Total number of sample farms	157	150	78	75
Total number of children (below 14 years)	315	188	94	62
Family versus hired labour				
% of family child labour to total labour	21.6% (68)	26.1% (49)	27.7% (26)	29.0% (18)
% of hired child labour to total labour	78.4% (247)	73.9% (139)	72.3% (68)	71.0% (44)
Caste composition				
% of Scheduled Castes (SCs)	28.2% (89)	25.0% (47)	32.9% (31)	30.6% (19)
% of Scheduled Tribes (STs)	16.2% (51)	13.8% (26)	22.3% (21)	20.9% (13)
% of Backward castes	43.8% (138)	47.3% (89)	30.8% (29)	33.8% (21)
% of Other castes	11.8% (37)	13.8% (26)	13.8% (13)	14.5% (9)
Educational status				
% of school dropouts	64.1% (202)	54.2% (102)	60.6% (57)	51.6% (32)
% of school going but working during peak season	21.3% (67)	32.4% (61)	25.5% (24)	33.8% (21)
% of school going but occasionally working during school holidays	51.8% (116)	18.1% (21)	38.7% (24)	19.1% (4)
% of school going but working during peak season	33.9% (76)	37.9% (44)	43.5% (27)	38.1% (8)
% of school going but occasionally working during school holidays	14.6% (46)	13.3% (25)	13.8% (13)	14.5% (9)

Note: The actual number of children under 14 years found working on sample farms in Karnataka is 212 and in Maharashtra 72. The details of caste and school going status are available for only 188 children in Karnataka and 62 children in Maharashtra.

Educational status: Majority are school dropouts

The educational status of working children in vegetable seed farms shows a decline of 15% since 2015 in the category of children who are not going to school and full-time workers, yet this category of children account for more than 50% of the total child workers. The number of children who are temporarily dropping out from school during the cross-pollination period has increased from 21.3% to 32.4% in **Karnataka** and from 25.5% to 33.8% in **Maharashtra** during 2015-19. The pressure on farmers to reduce the labour costs is leading to the adoption of new strategies to find cheap labour. In **Karnataka** and parts of **Maharashtra** it is observed that the farmers are encouraging school going children to take up cross-pollination work as a part-time activity.

The pressure on farmers to reduce the labour costs is leading to the adoption of new strategies to find cheap labour.

3.5 Section III: Magnitude of child labour on farms producing for MNCs

The presence of multinational seed companies is significant in the Indian seed market, particularly in **vegetable seeds**. They control nearly 2/3 of the seed production area in hybrid tomato, pepper and okra seeds in India. Their control is consistently growing due to the raising international export market for these seeds. In **cottonseed**, though the seed technology³¹ is mostly controlled by MNCs, their presence is limited in the production area. In 2018-19, nearly 20% of the area under cottonseed production was under the control of MNCs. 60% of the vegetable seed sample farms (136 out of 225) and 20% of the cottonseed sample farms (80 out of 388) covered in this study are producing seed for different MNCs like Bayer, Syngenta, BASF (Nunhems), East-West Seed, Advanta (UPL), United Genetics, Heinz Seeds, I & B Seeds, HM.CLAUSE and Sakata.

The presence of multinational seed companies is significant in the Indian seed market, particularly in vegetable seeds. They control nearly 2/3 of the seed production area in hybrid tomato, pepper and okra seeds in India.

The issue of child labour in hybrid seed production in India has received considerable attention from some of the MNCs. This issue was first highlighted in the cotton sector in the early 2000s. Syngenta, Bayer and Monsanto were the first companies to react to the issue. The issue of child labour in seed production farms received special attention from Bayer and Monsanto and since 2005 they have been implementing various measures to tackle the issue. Monsanto and Bayer started with cottonseed farms and extended their child labour intervention to vegetable seed farms later on.³² Syngenta joined the Fair Labor Association (FLA) in 2004 as the first agribusiness member of the association to implement the FLA code of conduct, which is based on the ILO's decent work labour standards. The issue of child labour was one of the reasons for Syngenta to join FLA.³³ In their partnership with FLA, Syngenta has been implementing various measures to address the problem of child labour in their suppliers' farms since 2005. Though Syngenta left the cottonseed business in 2006 its programme continued in vegetable and field crops.³⁴ Nunhems which was part of Bayer till 2018 and now acquired by BASF also paid attention to the issue of child labour and implementing measures to address this problem since 2008.

³¹ In more than 95% of the area under commercial cotton in India seeds with Bt technology, which is controlled by Monsanto, now merged with Bayer, are used.

³² 1) <https://arisa.nl/wp-content/uploads/signsofhope.pdf>, 2) <https://www.cropscience.bayer.in/Social-Commitment/Rural-Development/Child-Care-Program.aspx> (last accessed 28 April 2020), 3) <https://store.hbr.org/product/bayer-cropscience-in-india-a-against-child-labor/910M61> (last accessed 28 April 2020).

³³ https://www.fairlabor.org/sites/default/files/documents/reports/syngenta_project_report_2006.pdf.

³⁴ <https://www.fairlabor.org/affiliate/syngenta> (last accessed 28 April 2020).

Other MNCs like HM.CLAUSE³⁵, East-West Seed and Sakata³⁶ have recently entered into vegetable seed production activities in India and since 2015 they have been actively implementing measures to address the child labour issue on their suppliers' farms. Bayer, Syngenta, BASF, HM.CLAUSE, Advanta, East-West Seed, Rijk Zwaan and Sakata are all active members of ECHO (Enabling Child and Human Rights with Seed Organisations), formerly known as CCP forum, a multi-stakeholder initiative actively working on child labour and minimum wage issues in hybrid seed production farms in India since 2003. Currently, 15 seed companies, both MNCs and Indian companies, four NGOs and one research institute are members of this initiative.³⁷

The comparison of the magnitude of child labour between MNCs and Indian farms indicate that the situation is generally much better on MNC-related farms, in particular those companies which have implemented special programmes to address the issue of child labour. The child labour incidence data for 2018-19 for individual companies shows significant difference in the incidence of child labour between companies who have already implemented substantial measures to tackle the problem of child labour and those who are yet to begin or are in the process of implementing them.

Compared to other companies, the incidence of child labour was found quite low on farms producing for Bayer, Syngenta, BASF, HM.CLAUSE, East-West Seed, Sakata and Advanta which have been working on the issue of child labour for quite some time and implemented some systematic measures. The proportion of children below 14 years to the total workforce in vegetable seed farms was found less than 5% (varied between 2.2% to 4.8% in different crops) and in cottonseed farms less than 6% (varied between 1.6% to 5.9% in different regions) in the above mentioned MNC companies which is significantly lower compared to industry averages of around 10% in vegetable seed farms and 18.5% in cottonseed farms. However, the present study figures of child labour on Bayer, Syngenta, BASF, HM.CLAUSE, East-West Seed, Sakata and Advanta are high when compared to the companies official figures which indicates either less than one percentage of workforce or no cases of child labour.³⁸

Compared to 2014-15, there is a significant decline in the incidence of child labour on the farms of East-West Seed, HM.CLAUSE, Sakata and Advanta. While the 2014-15 survey reported the incidence of child labour in seed producing farms of these companies to an extent of 10.5% to 16.3% depending upon the nature of crops, this has reduced significantly to the levels of 2.6% to 4.8% in 2018-19. Thus, the progress made by these companies during the period 2015-19 is significant, however it needs to be sustained through more rigorous processes to achieve their aim of zero tolerance towards child labour. In respect of Bayer and Syngenta, by 2015 itself there was a significant improvement in seed production farms and they could sustain this till 2019 except in case of cotton and okra crops. For cotton crop, with a specific reference to seed production farms in Gujarat state, there was a marginal increase in the incidence of child labour in 2018-19 in comparison to 2014-15 season.

³⁵ <https://www.limagrain.com/data/medias/5054/style/default/LIMAGRAIN-Rapport-2019-DPEF-UK-VF.pdf>.

³⁶ <http://www.sakata.co.in/csr-hrpolicy.aspx> (last accessed 28 April 2020).

³⁷ The names of the seed companies actively participating in ECHO forum are Bayer, Syngenta, BASF, Nuziveedu Seeds, HM.CLAUSE, Advanta, East-West Seed, Rijk Zwaan, Sakata, Mahyco, Corteva Agri sciences, Kalash Seeds, Tierra Agrotech, United Genetics and Seed Works.

³⁸ "Remedies for Indian seed workers in sight? Monitoring report on tackling child labour and non-payment of minimum wages in hybrid cotton and vegetable seeds production in India", published by Arisa and Stop Child Labour Coalition in 2018: <https://arisa.nl/wp-content/uploads/RemediesForIndianSeedWorkersInSight.pdf>.

3.6 Section IV: Estimates of the total number of children employed in cottonseed and vegetable seed in different states in India

In the present section, an attempt is made to estimate the approximate total number of children employed in cottonseed and vegetable seed production areas per state for the year 2018-19. The results are compared with the results of the previous study conducted in 2014-15. The total number of child labourers in cottonseed and vegetable seed production for 2014-15 were estimated for each state separately on the basis of per acre average requirement of labour and the proportion of child labour to the total work force in the sampled farms. This was done by extrapolating the sample proportions to the total area under cottonseed and vegetable seed production in different states. Using a similar methodology, the total number of children employed in cottonseed and vegetable seed farms is estimated for 2018-19 for the different states.

The total production area is one of the determining factors of the magnitude of child workers involved in cottonseed and vegetable seed production. The total area under cottonseed production in the surveyed states increased marginally by 6.2% since 2014-15 (from 81,000 in 2014-15 to 86,000 acres in 2018-19). The area has increased by 58.8% in **Andhra Pradesh** and **Telangana**.

Table 15 presents the data on the total area under tomato, hot pepper and okra seed production for 2014-15 and 2018-19. The total area under tomato, hot pepper and okra seed production dropped by 38.5% (from 7650 to 4700 acres) in **Karnataka** and by 19.2% in **Maharashtra** during 2015 and 2019. The rise and fall of the total number of child labourers have - in addition to other factors like decreasing number of children per acre - to be understood in the context of changes in production area.

Table 15: Total production area and average number of children employed per acre in vegetable seed farms

Crop	Karnataka		Maharashtra	
	2014-15	2018-19	2014-15	2018-19
Tomato				
Total production area (in acres)	2500	1500	450	700
Average number of children per acre (below 14 years)	2.8	1.9	3.6	1.8
Average number of children per acre (15-18 years)	8.2	6.4	8.0	5.8
Hot pepper				
Total production area (in acres)	1150	700	350	500
Average number of children per acre (below 14 years)	15.8	9.2	11.0	6.5
Average number of children per acre (15-18 years)	22.9	19.7	23.8	20.5
Okra				
Total production area (in acres)	4000	2500	4400	3000
Average number of children per acre (below 14 years)	2.5	1.7	2.3	1.6
Average number of children per acre (15-18 years)	4.1	3.2	5.1	3.8
Total production area	7650	4700	5200	4200

Note: The average farm size of hot pepper is 0.25 acre, of tomato 0.40 acre. The average okra farm size is 0.78 acre in Karnataka whereas in Maharashtra the farm size is 0.36 acre. No official data is available on the total extent of area under vegetable seed production or the full area covered by individual seed companies. This information was gathered through discussions with representatives of seed companies and key informants in seed industry circles.



Table 16: Estimates of the total number of children employed on hybrid cottonseed farms in different states in India for 2014-15 and 2018-19

State	2014-15			2018-19			% change 2014-15 to 2018-19	
	Production area (acres)	Total children (below 14 years)	Total children (15-18 years)	Production area (acres)	Total children (below 14 years)	Total children (15-18 years)	Children below 14 years	Children 15-18 years
Andhra Pradesh & Telangana	17,000	35,700	49,300	27,000	40,500	51,300	+4,800 (13.4%)	+2,000 (4.0%)
Gujarat	48,000	110,400	163,200	47,000	89,300	126,900	-21,100 (-19.1%)	-36,300 (-22.2%)
Karnataka	11,000	28,600	30,800	8,000	8,400	10,000	-20,200 (-70.6%)	-20,800 (-67.5%)
Rajasthan	5,000	13,500	15,500	4,000	12,800	18,400	-700 (-5.2%)	+2,900 (18.7%)
Total	81,000	188,200	258,800	86,000	151,000	206,600	-37,200 (-19.8%)	-52,200 (-20.2%)

Table 16 presents the estimates of the total number of children employed in hybrid cottonseed farms in **Andhra Pradesh/Telangana, Gujarat, Rajasthan and Karnataka** in India for 2014-15 and 2018-19.

3.6.1 Cottonseed

Despite a marginal increase of 5% in the production area the absolute estimated number of children employed in cottonseed farms in different states showed a significant decline of 20% since 2014-15. The total estimated number of children below 14 years employed in different states has come down from 188,200 in 2014-15 to 151,000 in 2018-19. The children in the category of 15-18 years also showed a similar reduction of 20% since 2014-15 (from 258,800 in 2014-15 to 206,600 in 2018-19).

The state-wise trends since 2014-15 on the incidence of child labour in cottonseed production measured in terms of proportion of children to the total workforce and the average number of children employed per acre of cottonseed production showed a declining trends in all the states. The decline is significant in **Andhra Pradesh, Karnataka and Rajasthan**. However, this has not translated into a decline of the total estimated number of children employed on cottonseed farms in **Andhra Pradesh**. This is due to a significant increase in the production area in this state. In **Andhra Pradesh**, though the proportion of children below 14 years to the total workforce declined from 24.7% to 18.5% and the average number of children per acre reduced from 2.1 persons to 1.5 persons, the total estimated number of children employed increased from 35,700 to 40,500 between 2014-15 and 2018-19. This is mainly caused by the significant increase in the total production area. The total area under cottonseed production in **Andhra Pradesh** increased with 58.8% since 2014-15.

Data on **Rajasthan** and **Karnataka** shows a significant decline in the total number of children employed in cottonseed farms since 2014-15. The total estimated number of children employed has been reduced from 28,600 in 2014-15 to 8,400 in 2018-19 in **Karnataka**. The total estimated number of children below 14 years dropped with 70.6% in **Karnataka**. Part of the reason for this significant reduction is a drop in production area from 11,000 acres in 2014-15 to 8,000 in 2018-19.

3.6.2 Vegetable seeds

Table 17 presents the estimates of the approximate total number of children employed in tomato, hot pepper and okra seed farms in **Karnataka** and **Maharashtra** where vegetable seed production is largely concentrated in India for the years 2014-15 and 2018-19.

A total of approximately 79,980 children, out of which 22,880 (28.6%) are below 14 years and 57,100 (71.3%) are in the 15-18 year age group, were employed in tomato, hot pepper and okra seed plots in **Karnataka** and **Maharashtra** during 2018-19.

Table 17: Estimates of total number of children employed in hybrid vegetable seed production in Karnataka and Maharashtra for 2014-15 and 2018-19



Year	Karnataka				Maharashtra			
	Total children (below 14 years)		Total children (15-18 years)		Total children (below 14 years)		Total children (15-18 years)	
	2014-15	2018-19	2014-15	2018-19	2014-15	2018-19	2014-15	2018-19
Okra	10,000	4,250	16,400	8,000	10,120	4,800	23,460	11,400
Hot pepper	18,170	6,440	22,900	13,790	3,850	3,250	8,330	10,250
Tomato	7,000	2,880	30,500	9,600	1,620	1,269	3,600	4,060
Total	35,170	13,570	69,800	31,390	15,590	9,310	35,390	25,710

Compared to 2014-15, the absolute estimated number of children employed declined by 50% in vegetable seed farms. Part of the reason for this significant decline can be attributed to reduction in the production area (from 10570 acres in 2014-15 to 7900 acres in 2018-19), but this cannot explain the entire change. The incidence of child labour measured in terms of proportion of children to the total workforce and per acre employment of children also showed significant decline both in **Karnataka** and **Maharashtra**. The decline is significant in some parts of **Karnataka** and **Maharashtra** where there are effective interventions to tackle child labour.



4 Non-payment of minimum wages: limited progress

The 2018 ILO report on wages in India³⁹ shows that low pay and wage inequality remain a serious challenge to India's path to achieving decent working conditions and inclusive growth. The Indian law guarantees payment of minimum wages to workers in different sectors, including the agriculture sector. The Minimum Wages Act 1948⁴⁰ in India empowers state governments to fix and revise minimum wage rates for different agricultural activities. Once fixed, the wage rates are revised at an interval not exceeding five years. Wages are fixed for timework, known as a 'minimum time rate (daily wage rate)', or for piecework, known as a 'minimum piece rate'. Payment of wages below the minimum wage rate amounts to forced labour. According to the Minimum Wages Act the minimum wages are indexed to inflation by having a provision called Variable Dearness Allowance (VDA) in addition to the basic minimum wages. The VDA is indexed to Consumer Price Index.

A number of studies have revealed that in spite of the legal requirements, payment of minimum wages have long been an issue in the agriculture sector in general, and hybrid seed production in particular, in India. A detailed study on the situation of wages in hybrid seed production in different states of India in 2012 conducted by Arisa and the Fair Labor Association (FLA) indicated a significant variation in wage rates among different states, regions within states, type of production activity, gender, location and nature of labour arrangement.⁴¹ With regard to payment of minimum wages the study observed that male workers generally were paid higher



³⁹ "India Wage Report - Wage policies for decent work and inclusive growth", ILO, 2018:

https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_638305.pdf.

⁴⁰ https://labour.gov.in/sites/default/files/TheMinimumWagesAct1948_0.pdf.

⁴¹ "Wages of Inequality: Wage discrimination and underpayment in hybrid seed production in India" (2012), by D. Venkateswarlu and J. Kalle, jointly published by the Fair Labor Association (FLA) and Arisa: <https://arisa.nl/wp-content/uploads/WagesOfInequality.pdf>.

than the legal minimum wages for most of the activities in which they are involved. Women were not paid legal minimum wages for most activities, except in some locations for cross-pollination. The wage rates for children for all activities were below the legal minimum wages. The findings of the study conducted in 2014-15 were in line with findings of this Arisa-FLA study in 2012. According to the 2014-15 study the prevailing market wages for several operations, including cross-pollination and harvesting, which amount for 90% of the labour activities in seed production, are low compared to minimum legal wages. The minimum wage rate for cross-pollination is INR 269/EUR 3.74⁴² in Karnataka. The wage rate paid by farmers for cross-pollination in Koppal is INR 143.6/EUR 2.00 which is 46.6% below the minimum wage. If minimum wages are taken into consideration, the cost of labour for cross-pollination would rise by 46.6%. This in turn would increase the total cost of production by 16.4%. With the current procurement price and crop yields It is difficult for farmers to pay minimum wages to workers.⁴³

4.1 Statutory minimum wage rates in different states in India

Table 18 presents the statutory minimum wage rates for 2018-19 prescribed by different state governments for workers in the agriculture sector. The Minimum Wages Act in India empowers state governments to fix and revise minimum wage rates for different agricultural activities. There is no single uniform minimum wage rate across the country. The wage rates vary from state to state and within state also from region to region. For the purpose of fixing minimum wages for agricultural work, the state governments of Karnataka, Gujarat and Rajasthan treat the entire state as a single zone. A common wage rate is fixed for all activities such as sowing, ploughing, weeding, spraying pesticides and fertilisers, staking and pruning of plants, harvesting, emasculation and pollination in hybrid seeds. Karnataka and Andhra Pradesh identify hybridisation as a separate activity in the list of agricultural activities set out in the official notification. In Andhra Pradesh, Telangana and Maharashtra for the purpose of fixing minimum wages the state is divided into different zones⁴⁴ and zone-wise wage rates are fixed. Maharashtra is divided into four zones and Andhra Pradesh and Telangana are divided into three zones. In Andhra Pradesh and Telangana there is a further break up of wages on the basis of type of work. The wage rates apply to men and women equally. The number of working hours for a normal working day is eight hours for all the states except Andhra Pradesh and Telangana which mention a normal working day as six hours. The wages for overtime work varied between 1.5 and 2 times the ordinary wage rate in different states.

The wage rates vary from state to state and within state also from region to region.

The minimum wage rates for 2018-19 prescribed by the respective state governments under the study for daily casual workers for agricultural activities varied between INR 210-413. Compared to other states the wage rates are high in Andhra Pradesh, Telangana and Karnataka. The legal minimum daily wage rate for 2018-19 in Karnataka was INR 330 and this varied between INR 251 and INR 413 depending upon zones and type of work in Andhra Pradesh and Telangana. The wage rates are the same in Andhra Pradesh and Telangana. The locations selected for the study fall under **Zone II** in AP and **Zone III** in Telangana. The minimum daily wage rate for casual labour in **Zone II** varied between INR 267 to INR 363 and in **Zone III** between INR 251 and INR 323 depending upon the type of activity. In **Zone III** the highest wage rate of INR 323 is for cross-pollination and spraying pesticides, and the lowest wage rate of INR 251 is for weeding, sowing, harvesting etc. In Maharashtra the wage rates varied between INR 210 and INR 234 depending upon the zones. A single wage rate is applied for the entire state in Karnataka, Gujarat and Rajasthan. For 2018-19, the Karnataka government fixed the INR 330 as legal daily wage rate while Gujarat and Rajasthan governments fixed the rates at INR 265 and INR 225 respectively.

⁴² With an exchange rate of EUR/INR = 0.01404 (July 1, 2015); source: oanda.com.

⁴³ Under the Minimum Wage Act, to fix the wage rates wage boards are set up to review the industry's capacity to pay and fix minimum wages such that they at least cover a family of four's requirements of calories, shelter, clothing, education, medical assistance, and entertainment. Under the law, wage rates in scheduled employments differ across states, sectors, skills, regions and occupations owing to difference in costs of living, regional industries' capacity to pay, consumption patterns, etc.

⁴⁴ Zones are decided on the basis of cost of living and other development indicators. For example in Maharashtra the state is divided into four zones: ZONE I: shall comprise of the areas falling within the limits of Municipal Corporation; ZONE II: shall comprise of the areas falling within the limits of 'A' & 'B' grade Municipal Councils; ZONE III: shall comprise of all other areas in the state, not included in Zone I and Zone II; Zone IV: identified backward areas.

Table 18: The statutory minimum wage rates for daily wage agricultural workers in different states in India for 2018-19

States	Amount Per day (Indian Rupees)
Karnataka	INR 330.25
Maharashtra	Zone I- INR 234.54 Zone II- INR 224.54 Zone III- INR 214.54 Zone IV- INR 210.54
Gujarat	INR 265
Rajasthan	INR 225
Andhra Pradesh & Telangana	
Ploughing, loading and unloading, threshing	Zone I- INR 312 Zone II- INR 267 Zone III- INR 251
Sowing/transplanting, weeding, harvesting, grass cutting, digging, staking, pruning and any other unskilled manual labour, etc.	Zone I- INR 301 Zone II- INR 296 Zone III- INR 251
Cross-pollination in hybrid seeds, pesticide application	Zone I- INR 413 Zone II- INR 363 Zone III- INR 323

Source: The data is compiled from minimum wage notifications issued by different state governments.

4.2 Comparison of statutory minimum wages with prevailing market wages

Table 19 presents a comparison of prevailing market wage rates for different activities in seed production with statutory minimum wages in five states in India. Wage data analysis for prevailing market wages for 2018-19 for agricultural activities clearly indicate significant variation in wage rates based on different states, regions within a state, type of production activity, gender and location. The southern India states of Andhra Pradesh, Telangana and Karnataka have higher wage rates for all activities as compared to central Indian states of Gujarat and Maharashtra. Regional variations in wage rates in the same state are present in all five states. The wages are higher in regions that are relatively developed due to better agro-climatic conditions, infrastructure facilities, availability of alternative employment etc. In Karnataka wage rates are relatively higher in Ranibennur taluk in Haveri district compared to Koppal district which is a relatively backward region. Similarly, the wage rates are higher in Idar location in Gujarat than in Bodoli which is relatively backward compared to Idar location.

Wage data analysis for prevailing market wages for 2018-19 for agricultural activities clearly indicate significant variation in wage rates based on different states, regions within a state, type of production activity, gender and location.

The average wages in all the five states are substantially higher for tasks like ploughing, spraying pesticides and applying fertilisers as compared to sowing, weeding, harvesting and cross-pollination. Overall, pesticide application is the highest paid task (INR 225–325), whereas weeding is the least paid (INR 150-195) across all states. Division of work based on gender in the areas studied was observed; this has earning implications for men and women engaged in various production activities. In particular, women are preferred for cross-pollination, weeding and harvesting, which are labour-intensive and lower paid, as compared to ploughing, spraying pesticides

and applying fertilisers, which are less labour-intensive and highly paid and mostly done by men. Therefore, on average, women workers earn less than men. No significant differences in wages were found between the farms producing seeds for national and multinational companies.

A comparison of prevailing market wages with the statutory minimum wages (see table 19) fixed by the respective state governments for 2018-19 clearly indicates that the legal norms are not followed, especially for certain categories of workers, mainly women, performing specific activities. Except for ploughing and pesticide application in Maharashtra and ploughing in Andhra Pradesh and Telangana, which are almost exclusively done by men, the prevailing market wages for all other activities are below the legal minimum wages.

Women are preferred for cross-pollination, weeding and harvesting, which are labour-intensive and lower paid...

Ploughing, spraying pesticides and applying fertilisers, which are less labour-intensive and highly paid and mostly done by men.

Table 19: Comparison of prevailing market wages with statutory minimum wages for daily wage agricultural workers in 2018-19 (amount in INR)

Production activity	Karnataka		Maharashtra		Andhra Pradesh & Telangana		Gujarat	
	Statutory wages	Prevailing market wages	Statutory wages	Prevailing market wages	Statutory wages	Prevailing market wages	Statutory wages	Prevailing market wages
Ploughing	330	Koppal- 250 Haveri- 275	Zone II- 225 Zone III- 215	Lonar- 225 D Raja- 235	Zone II- 267 Zone III- 251	Nandyal- 283 Gadwal- 260	265	Bodoli- 195 Idar- 213
Sowing	330	Koppal- 165 Haveri- 195	Zone II- 225 Zone III- 215	Lonar- 167 D Raja-188	Zone II- 296 Zone III- 251	Nandyal- 195 Gadwal- 175	265	Bodoli- 146 Idar- 167
Weeding	330	Koppal- 150 Haveri- 188	Zone II- 225 Zone III- 215	Lonar- 163 D Raja-185	Zone II- 296 Zone III- 251	Nandyal- 195 Gadwal- 175	265	Bodoli- 137 Idar- 150
Pesticide application	330	Koppal- 262 Haveri- 295	Zone II- 225 Zone III- 215	Lonar- 225 D Raja- 235	Zone II- 362 Zone III- 323	Nandyal- 325 Gadwal- 275	265	Bodoli- 225 Idar- 250
Cross-pollination	330	Koppal- 195 Haveri- 228	Zone II- 225 Zone III- 215	Lonar- 210 D Raja- 214	Zone II- 362 Zone III- 323	Nandyal- 275 Gadwal- 222	265	Bodoli- 157 Idar- 188
Harvesting	330	Koppal- 166 Haveri- 195	Zone II- 225 Zone III- 215	Lonar- 166.6 D Raja-187.7	Zone II- 296 Zone III- 251	Nandyal- 200 Gadwal- 175	265	Bodoli- 146 Idar- 166

Note:

- The prevailing market wages mentioned in Andhra Pradesh and Telangana refer to two locations: 1) Nandyal area in Kurnool district which is part of Andhra Pradesh. This location comes under Zone II; 2) Gadwal area in Gadwal district is in Telangana. The villages where field work was conducted in this location fall under Zone III as per minimum wages notification.
- In Gujarat the wages data was collected in two locations. Idar taluk in Sabarkantha district and Bodoli taluk in Chhota Udaipur district. Compared to Bodoli, Idar is a relatively developed area.
- In Karnataka the wages data was collected in one two locations: Koppal and Haveri districts. Compared to Koppal Haveri is a developed area.
- In Maharashtra the wages data was collected in two locations: Lonar and Deulgaon Raja, both in Buldana district. Both the locations come under Zone III.

Source: Statutory wage rates are compiled from minimum wage notifications issued by different governments. The prevailing market wages were gathered from field survey conducted in 2018-19.

The prevailing wage rates for cross-pollination activity, which is the vital activity in seed production and is largely done by women, are 41% below the legal minimum wage in Koppal, 31% below in Haveri in Karnataka, 27.2% below in Telangana, 24% below in Andhra Pradesh, and 41% below in Bodoli and 29% below the legal minimum wage in Idar in Gujarat. The gap is very marginal in Maharashtra and the prevailing wage rates for cross-pollination are close to minimum wages.

Cross-pollination, which is largely done by women, is being payed below the legal minimum wage.

Table 20: Trends in statutory and prevailing market wage rates for cross-pollination activity during 2015-2019

State	Statutory minimum wage rates			Prevailing market wage rates		
	2014-15	2018-19	Change between 2015-19	2014-15	2018-19	Change between 2015-19
Andhra Pradesh (Nandyal location Zone II)	234	362	54.7%	213	275	29.1%
Telangana (Gadwal location Zone III)	213	323	51.6%	175	235	34.2%
Gujarat Idar	150	265	76.7%	140	188	34.3%
Bodoli				125	157	25.6%
Maharashtra D Raja (Zone III)	160 (Zone III)	215 (Zone III)	34.3%	142	214	50.7%
Lonar (Zone III)				122	210	72.1%
Karnataka Koppal	269	330	22.7%	145	195	34.5%
Haveri				228	230	0.08%

4.3 No improvement in real wages⁴⁵

The recent trends in wage rates indicate that both the prevailing market wages for agricultural workers as well as the legal minimum wages prescribed by the governments for this category of workers have increased since 2014-15. However, the increase in the legal minimum wages which is adjusted to inflation is higher than the increase in market wages in most of the states. In Andhra Pradesh and Telangana, the legal minimum wages increased by 54.7% and 51.6% respectively during 2015-19 whereas the increase in the market wages was only 29.4% in Andhra Pradesh and 34.2% in Telangana (table 20). In Gujarat the increase in statutory wages is also higher than the increase in market wages. Statutory wages in Gujarat increased by 76.7% during 2015-19 (from INR 150 in 2014-15 to INR 265 in 2018-19) whereas the increase in market wages was less than 35% during the same period. No significant change in the market wages between 2015-19 was reported in Ranibennur location in Haveri district in Karnataka which has witnessed a drop in seed production area leading to less demand for labour.

⁴⁵ Real wages are wages adjusted for inflation, or, equivalently, wages in terms of the amount of goods and services that can be bought.

4.4 Widening gap between legal minimum wage and prevailing market wages

The data shows (table 20) that the gap between legal minimum wage and prevailing market wages has widened in recent years in Andhra Pradesh, Telangana and Gujarat where cottonseed production is concentrated. The prevailing wage rates for cross-pollination activity was 27% below the legal minimum wage in Telangana, 24% below in Andhra Pradesh, and 41% below in Bodoli and 29% below the legal minimum wage in Idar in Gujarat in 2018-19. The wage gap was only 9% in Andhra Pradesh, 17.8% in Telangana, 6.6% in Idar location and 16.6% in Bodoli location in Gujarat in 2014-15.

The gap between legal minimum wage and prevailing market wages has widened in recent years in Andhra Pradesh, Telangana and Gujarat where cottonseed production is concentrated.

4.5 Link between procurement prices and minimum wages

Studies have revealed that there is a link between procurement prices received by the farmers and wages paid to workers on seed production farms. There are multiple factors that determine the wages paid to workers in seed production.⁴⁶ The procurement price is one of the contributing factors determining wages. A 2014 study on trends in wage rates and procurement prices in cottonseed producing locations in Andhra Pradesh showed that higher procurement prices for cottonseed led to an increase in wages rates and a decrease in child labour.⁴⁷ The study indicated that the rise in procurement prices during the years 2010-14 enabled the growers to increase the wages and attract more and more adults to join the workforce. The rise in procurement prices also encouraged the growers to increase the area under cottonseed production, creating additional demand for labour in a market, which is already facing labour shortages. This led to further tightening of labour markets and pushed wages up.

The stagnation in procurement prices has implications for overall income and profit margins of the farmers and their capacity to pay higher wages to workers. The stagnation in procurement prices had negative impact on wages also.

Since 2014-15 there is almost a stagnation in the procurement price paid to farmers for cottonseed. This is not the case with regard to other seeds. The procurement rate per packet of 750 grams of cottonseed paid by companies varied between INR 410 to INR 440 in 2014-15 and in 2018-19 this rate was INR 420 to INR 450. The stagnation in procurement prices has implications for overall income and profit margins of the farmers and their capacity to pay higher wages to workers. The stagnation in procurement prices had negative impact on wages also. The increase in wages in cottonseed production locations was low during 2015-19 when compared to the period 2010-14.

4.6 Government regulation on cottonseed prices - impact on procurement prices and minimum wages

One of the important reason for stagnation of procurement prices is the government regulation on maximum sale price of Bt cottonseeds. In India the cottonseed sale prices are regulated by the government. In 2006 the government capped the maximum sale price of BG II (Bollgard II) cottonseed at

⁴⁶ The factors determining the wages include labour demand and supply, productivity, bargaining power of workers, awareness about statutory wages etc.

⁴⁷ "The price of less child labour and higher wages: Assessing the link between farm wages and procurement prices in Bt cottonseed production in Andhra Pradesh, India" (2014), by D. Venkateswarlu, study commissioned by ICN: <https://arisa.nl/wp-content/uploads/ThePriceOfLessChildLabourAndHigherWages.pdf>.

INR 750 for a packet of 450 grams of seeds (inclusive of technology fee).⁴⁸ In 2011 there was a revision of prices and the maximum sale price of Bt cottonseeds was hiked by 30% from INR 750 to INR 930. Since 2014 seed companies are requesting for revision of these prices but they have not been able to succeed. In fact, the prices have been slashed by government since 2014-15. In 2016-17 the price of BG II variety was reduced from INR 930 to INR 800 and it was further reduced in 2018-19 to INR 740. Since 2014-15 the cost of cottonseed production has increased significantly but the procurement prices paid by companies to seed farmers remained stagnant. The companies are arguing that they will not be able to increase procurement prices unless they are allowed to increase the sale price. Unless procurement prices are increased or productivity is improved farmers will not be able to increase the wages and pay the minimum wages to workers. There is a need for the governments to review the prices at frequent intervals keeping the changes in cost of cultivation in mind.

A comparison between procurement prices and prevailing wage rates in **vegetable seed** crops also indicates that there is a link between procurement prices received by the farmers and wages paid to workers. Like in cottonseed, there are no government restrictions on sale prices of vegetable seeds. Wages are generally higher in locations and for crops where procurement prices are higher and farmers have greater profit margins. The detailed analysis of production costs, yields and net income of 25 sample farmers producing okra in Bodoli area in Gujarat and 25 farmers producing tomato seeds for different companies in Koppal district in Karnataka, shows that with current procurement prices and yields farmers cannot pay minimum wages to workers. During the year 2018-19 farmers on average incurred about INR 183,000 for growing tomato seed in one plot (size of 0.25 acres) under a net-house in Koppal area. The gross income was INR 210,500. Farmers had a net income of INR 27,500 or a 15.0% profit margin over the cost of production. For growing okra in 0.5 acre plot size in Gujarat farmers on an average incurred about INR 38,000 and the gross income earned was INR 44,600. Farmers had a net income of INR 7,600 or a 17.1% profit margin over the cost of production.

The gap between the prevailing market wages and legal minimum wages in Koppal area in Karnataka and Bodoli in Gujarat is substantial. The prevailing market wages for cross-pollination work in these areas were 41% less than legal minimum wages. The minimum wage rate for cross-pollination was INR 330 in Karnataka and INR 256 in Gujarat. The wage rates paid by the farmers for cross-pollination was INR 195 in Koppal and INR 157 in Bodoli which are 41% below the legal minimum wages in those areas. If minimum wages are taken into consideration, the cost of labour would rise by 29.6%⁴⁹ in tomato in Koppal and 34.8% in okra in Bodoli. This in turn would increase the total cost of production by 14.5% in tomato and 18.3% in okra. With the current procurement prices and crop yields farmers cannot pay minimum wages to workers.

The gap between the prevailing market wages and legal minimum wages in Koppal area in Karnataka and Bodoli in Gujarat is substantial. The prevailing market wages for cross-pollination work in these areas were 41% less than legal minimum wages.

⁴⁸ The monopoly control over Bt technology by Mahyco-Monsanto Biotech (MMB) has led to exorbitant pricing of Bt cotton hybrids which were in the initial years (2003-05) priced between INR 1600-1800 for 450 grams of Bt hybrids, as against INR 400-450 for non-Bt hybrid seeds. MMB dominated the market for cotton hybrids, either directly through selling hybrid seeds or indirectly through sub-licensing to private seed companies till 2006. The domestic companies who licensed Bt trait from MMB were required to pay a one-time license fee as well as royalty fee on every packet of seed sold in the market. Until 2006, the price for official Bt cottonseeds in India was around INR 1600 per packet of 450 grams. Out of this, INR 1250 was charged by MMB as the trait value. Due to pressure from various farmer and civil society organisations the state of Andhra Pradesh imposed certain regulations targeted to control Bt cottonseed prices, so as to make the technology affordable and accessible to small and marginal farmers in the state. In January 2006, the government of Andhra Pradesh filed a case with the Monopolistic and Restrictive Trade Practices Commission (MRTPC) against MMB for indulging in monopolistic trade practices with unreasonably high prices and limited technical developments. MRTPC gave a ruling against MMB and asked it to rework on pricing of Bt cottonseeds.

⁴⁹ Out of total cost of INR 183,000, INR 90,000 is labour costs. In the labour costs the major expense is cross-pollination which accounts for nearly 72% (INR 65,000) of total labour costs. 41% increase in cross-pollination costs is equal to INR 26,500.

5 Interventions to tackle child labour and non-payment of minimum wage issues

The issues related to decent work, particularly the issue of child labour in hybrid seed production in India, have received attention in recent years and various interventions were made by different stakeholders to address these issues. This chapter describes initiatives undertaken by NGOs, seed industry, government, multi-stakeholder initiatives and social investors since 2015 to address child labour and non-payment of minimum wages issues in hybrid seed production.

The field study findings presented in chapter 3 on child labour and chapter 4 on non-payment of minimum wages issues shows that when compared to the 2014-15 situation, the progress made addressing the child labour issue is significant while there is a limited progress on tackling the issue of non-payment of minimum wages.

5.1 Child Labour

The overall incidence of child labour in cottonseed farms in the researched area showed a significant decline of 25% since 2014-15. The proportion of children to the total workforce reduced from 24.6% in 2014-15 to 18.4% in 2018-19. A similar trend is observed in vegetable seeds also. The overall incidence of child labour (below 14 years) in tomato, hot pepper and okra crops showed a significant decline of 37.6% in Maharashtra and 39.8% in Karnataka during 2015-2019.

The extent of decline shows wide variations between different states and regions within states. The large part of contribution for this decline comes from the states and regions where significant interventions took place to address child labour. The overall decline in the incidence of child labour per acre and also the total number of children particularly of the category of children below 14 years employed in several parts of the country can be attributed to interventions undertaken by different players - e.g. government, NGOs, seed industry, international agencies, social investors - to address the issue of child labour.

Significant interventions took place to address child labour.

Compared to other states, the decline in child labour in cottonseed farms is significant in Andhra Pradesh, Karnataka and Rajasthan. In Andhra Pradesh the



lowest incidence of child labour was reported in Kurnool district. In Rajasthan Dungarpur district and in Karnataka Haveri and Koppal districts showed lowest incidence of child labour and good progress in tackling the issue since 2015. These are the areas where local child rights groups like MV Foundation, Prayas, Seva Mandir, Shramika Vikas Kendram, Saadhana and CARE are very active.⁵⁰ These are the areas where UNICEF in collaboration with local district government and NGOs implemented special projects during 2008-2016 to address the issue of child labour with a special focus on the cottonseed sector. These are also the areas where there is a good response from both MNCs and Indian seed companies engaged in seed production to address the child labour issue on their suppliers' farms.

The project implemented by UNICEF in Kurnool district in Andhra Pradesh and Raichur and Koppal districts in Karnataka was named as 'Cotton Corridors' with a clear focus on addressing the child labour issue in cotton producing regions.⁵¹ UNICEF also implemented a similar project in Dungarpur district in Rajasthan which is the main source area for migrant child workers in Gujarat cottonseed farms.⁵² MV Foundation has been actively working in Kurnool district in Andhra Pradesh since 2003. During 2003-05 it collaborated with Association of Seed Industry⁵³ to pressure the seed companies to prepare action plans for addressing the child labour issue in their suppliers' farms. During 2011-14, a special project for the elimination of child labour through community mobilisation and implementation of the Right to Education Act was implemented in two mandals with the support from 'Project Hope' of GEW.⁵⁴ An intensive campaign was launched mobilising government machinery, village panchayats, cottonseed farmers, teachers, youth and other sections of the society against engaging children in any form of work including working on cottonseed farms. With the support from Monsanto, CARE implemented a special project in 2016 focusing on the child labour issue in seed production in Koppal district.

Due to active campaigns from local NGOs and unions like DRMU and Seva Mandir in Rajasthan more actions were seen in recent years from the state government in addressing the problem of seasonal migration of children from Rajasthan to Gujarat cottonseed farms. The district administration of Dungarpur set up border check posts during the beginning of the cottonseed production season and also took campaign at source villages to stop the trafficking of children. This has helped to reduce the inter-state seasonal migration of child labour to some extent.

The significant reduction in child labour observed in certain pockets of Andhra Pradesh, Karnataka and Rajasthan was the result of combined efforts of NGOs, local government, UNICEF, civil society groups and seed companies. While the supply of children into the labour market was largely reduced by the social mobilisation spearheaded by NGOs, which have made very crucial efforts in mobilising cross sections of the society, the demand for child labour by the farmers was controlled to a great extent by the seed companies. This has reinforcing effect both on the supply and demand for child labour.

The decline of child labour is significant in vegetable seed farms when compared to cottonseed farms. This is partly due to more initiatives to address the issue of child labour in their supplier farms.

The decline of child labour is significant in vegetable seed farms when compared to cottonseed farms. This is partly due to more initiatives that address the issue of child labour in the supplier farms of vegetable seed companies. Also a large portion of vegetable seed production (64%) is controlled by MNCs who have more obligations and pressure to pay attention

⁵⁰ While MV Foundation, Saadhana and Shramika Vikas Kendram are active in Andhra Pradesh and Telangana, Prayas, Seva Mandir are active in Gujarat and Rajasthan. CARE is working in Karnataka and Andhra Pradesh.

⁵¹ https://www.unicef.org/evaldatabase/files/OPM_Cotton_Corridors_final_evaluation_report_for_GEROS_India_2016-001.pdf.

⁵² https://www.unicef.org/evaldatabase/files/5_FINALCRE-Rajasthan-FINAL_REPORT.pdf.

⁵³ National association of the planting seed industry in India.

⁵⁴ GEW is a German based teachers' trade union.

to issues like child labour. Most of the companies, including HM.CLAUSE, East-West Seed, Sakata and Advanta (UPL) who have recently become active and implementing special measures to address the issue of child labour, are the ones who are primarily involved in vegetable seed production. East-West Seed with support from the Dutch government's 'Child Labour Fund' implemented a special project against child labour in collaboration with local partners since 2018.⁵⁵ Advanta (UPL) in 2018 started a five year special project called 'United Action against Child Labour' to tackle the child labour problem in their supply chain.⁵⁶ Similarly, HM.CLAUSE and Sakata also initiated special projects in the name of CCP (Child Care Programme) focusing on child labour on the farms supplying to them.⁵⁷ The measures initiated by these companies yielded positive results indicating the decline of child labour on farms producing for these companies in recent years.

The intensified pressure from international NGOs and social investors like Norges Bank⁵⁸ is one of the reasons for companies to pay serious attention to the issue of child labour. The decision of Norges Bank to exclude the company Zuari Seeds from its investment portfolio in 2013 and to put Advanta (UPL) under observation list in 2018, as result of the prevalence of child labour, sent strong signals to companies about human rights concerns of social investors.⁵⁹

The intensified pressure from international NGOs and social investors like Norges Bank is one of the reasons for companies to pay serious attention to the issue of child labour.

The ECHO (Enabling Child and Human Rights with Seed Organisations) forum, formerly known as CCP, a joint initiative of seed companies, NGOs and research organisations working on child labour and minimum wages issues in hybrids seed production, has become very active since 2015. The number of seed companies active in this forum increased from four in 2014 to 15 companies in 2019. The main objective of this forum is to develop common strategies to address the decent work issues in the seed supply chain. The various activities related to child labour undertaken by ECHO since 2015 helped seed companies to strengthen their efforts in addressing the issue of child labour in their supply chain.

Though more companies have become active now and were seen taking some measures to tackle the issue of child labour, the overall responses from the broader industry is still not very encouraging. Several leading companies particularly in cottonseed production like Kaveri Seeds, Rasi Seeds, Ajeet Seeds, Bioseed, Tulasi Seeds and Ankur Seeds which control more than 50% of the cottonseed production are yet to pay serious attention to the issue and implement concrete measures to address the problem. Even in the vegetable seed sector major companies like VNR Seeds, I&B Seeds, Meta-helix, Oriental Biotech which was supplying seed to Heinz Seeds, a subsidiary of Kraft Heinz, are not seen implementing serious measures to address the child labour on their suppliers' farms.

Though more companies have become active now and were seen taking some measures to tackle the issue of child labour, the overall responses from the broader industry is still not very encouraging.

⁵⁵ <https://in.eastwestseed.com/policies/multi-stakeholder-initiative-against-child-labor> (last accessed 28 April 2020).

⁵⁶ <https://www.upl-ltd.com/sustainability/united-against-child-labour> (last accessed 28 April 2020).

⁵⁷ <http://www.sakata.co.in/csr-hrpolicy.aspx> (last accessed 28 April 2020), <https://www.limagrain.com/data/medias/5054/style/default/LIMAGRAIN-Rapport-2019-DPEF-UK-VF.pdf>.

⁵³ National association of the planting seed industry in India.

⁵⁸ Norges Bank Investment Management (NBIM) manages the Norwegian Government Pension Fund Global, often referred to as the Norwegian Oil fund. The fund is invested worldwide in equities, fixed income and real estate, totalling around USD 1.09 trillion:

https://www.nbim.no/contentassets/3d447c795db84a18b54df8dd87d3b60e/spu_annual_report_2019_en_web.pdf.

⁵⁹ See: <https://etikkradet.no/files/2018/07/ENG-Rec-observation-UPL-2018.pdf>.

5.2 Non-payment of minimum wages

The data for 2018-19 shows that the gap between legal minimum wage and prevailing market wages has widened in recent years in Andhra Pradesh, Telangana and Gujarat. The prevailing wage rates for cross-pollination activity was 27% below the legal minimum wage in Telangana, 24% below in Andhra Pradesh and 41% below in Bodoli and 29% below the legal minimum wage in Idar in Gujarat in 2018-19. The wage gap was only 9% in Andhra Pradesh, 17.8% in Telangana, 6.6% in Idar location and 16.6% in Bodoli location in Gujarat in 2014-15.

The issue of non-payment of minimum wages has not received as much attention from seed companies as well as from other stakeholders compared to the issue of child labour. This issue has started receiving attention only in recent years particularly after the publication of reports by Arisa in 2015. This is one of the important agenda items in all the multi-stakeholder consultations organised by ECHO forum since 2015. ECHO has organised five national and eight regional consultation workshops on child labour and minimum wage issues since 2015. The latest multi-stakeholder consultation organised by ECHO on March 2, 2020 at Hyderabad, India was attended by around 100 participants from seed companies, NGOs, ILO, research organisations, government and universities.⁶⁰

The issue of non-payment of minimum wages has not received as much attention from seed companies as well as from other stakeholders compared to the issue of child labour.

Though several companies have taken measures to ensure minimum wages to labourers working on nurseries, research farms and processing units directly managed by them, similar efforts have not been made to ensure minimum wages to labourers working on their suppliers' seed farms. They are of the opinion that the issue is very complex and ensuring payment of minimum wages at suppliers' farms requires concerted efforts from different stakeholders.

Though several companies have taken measures to ensure minimum wages to labourers working on nurseries (...), similar efforts have not been made to ensure minimum wages to labourers working on their suppliers' seed farms. They are of the opinion that the issue is very complex (...) and requires concerted efforts from different stakeholders.

Syngenta, Bayer, BASF (Nunhems), East-West Seed and HM.CLAUSE have recently started pilot initiatives in vegetable and corn seed farms to address the problem of non-payment minimum wages on their suppliers' farms. Syngenta in collaboration with FLA implemented a pilot programme in hot pepper farms in Maharashtra and corn

⁶⁰ <https://www.facebook.com/ForumEcho/>, <https://twitter.com/forumecho> (both last accessed 28 April 2020).



farms in Andhra Pradesh in 2017-18.⁶¹ East-West Seed as part of their RVO multi-stakeholder project on child labour implemented a minimum wage pilot programme in two villages in Karnataka during 2018-19. The issue of non-payment of minimum wages to workers in contracted seed production farms has received attention from Bayer and it has been implementing an initiative called 'Project Surya' since 2014. Nunhems which was part of Bayer till 2018 was actively involved in 'Project Surya' and now under BASF it is continuing its activities to address the minimum wage issue. As part of a pilot initiative HM.CLAUSE undertook a review of its procurement policies incorporating statutory minimum wages in cost of production analysis.⁶²

Lack of awareness about the Minimum Wages Act among the seed organisers, growers, workers and company field staff has been recognised by these companies implementing pilot projects and steps have been taken to create awareness among them. The need for documentation of workers attendance and wage payments has been recognised and steps are initiated to motivate the growers to maintain records. The gap amount between prevailing market wages and statutory minimum wages was estimated and this additional amount was either separately paid or included in procurement prices paid to farmers to enable them to pay the minimum wages to the workers.

The steps initiated by these companies helped to create some awareness about minimum wages, particularly among organisers and growers. They also helped to improve the documentation of wage records at farms. However these measures have not fully yielded expected results of ensuring payment of minimum wages to the workers in the areas where there is a significant gap between prevailing market and statutory minimum wages.⁶³ The interaction with farmers who have implemented the minimum wage pilot projects indicates that there was a lot of hesitation and unpreparedness on the part of farmers to implement these projects. Though companies had paid an additional amount to farmers to pay minimum wage to workers, farmers have not transferred this benefit completely to the workers. The farmers producing seed for these companies are also cultivating commercial crops in their lands and some of them are also producing seed for other companies. The labourers used by the farmers are the same for these companies and other seed company plots and also commercial crops.

The main reason for farmers' hesitation to implement minimum wages is that it is going to increase their cost of production significantly. The farmers' argument is that if they pay minimum wages to workers for their time spent in one company's seed pilot the same will be demanded by the workers for their time spent on other company plots and commercial crops owned by them. As the workers are the same it is very challenging for them to implement differential wages for the same work in different company plots. Farmers say that unless other companies also come forward to compensate the differential amount in prevailing market and legal minimum wages it is very difficult for them to pay minimum wages for the workers. A key learning from these pilots is that while the efforts of individual companies can make a small difference, for sustainable progress this challenge must be addressed at industry level with collaboration from other stakeholders.

The main reason for farmers' hesitation to implement minimum wages is that it is going to increase their cost of production significantly.

⁶¹ "Seeds of change: a pilot project to address wage improvement in India's seed sector", FLA, December 2019: https://www.fairlabor.org/sites/default/files/documents/reports/seeds_of_change_report-final_0.pdf.

⁶² In its response to draft copy of this report HM.CLAUSE stated that an update of the cost analysis of each activity necessary for seed production considering statutory minimum wages is being done by their management.

⁶³ Syngenta-FLA pilot project was implemented in hot pepper farms in Maharashtra and corn farms in Andhra Pradesh in 2017-18. Before the pilot, the gap between minimum and prevailing wages in these areas vary significantly. Compared to statutory minimum wages, the prevailing rates were 40% lower in Andhra Pradesh where as it was only 10% lower in Maharashtra. Farm-level monitoring showed that while the project has achieved 100% compliance in Maharashtra where the wages have reached the legal minimum wage the success was partial in Andhra Pradesh where wages increased but did not reach the legal minimum wage after the pilot, suggesting that an industry-wide approach may be better positioned for meaningful impact than a single company acting alone. (Source: "Seeds of change: a pilot project to address wage improvement in India's seed sector", FLA, December 2019: https://www.fairlabor.org/sites/default/files/documents/reports/seeds_of_change_report-final_0.pdf. In the pilot projects implemented by other companies similar challenges were also reported in the areas where the gap between prevailing and statutory wages is significant.)

6 Summary and concluding remarks

The principal aim of this follow-up study is to assess the current situation and the progress made since 2014-15 on tackling the issues of child labour and non-payment of minimum wages in the hybrid seed sector in India. The findings presented in this study are mainly based on the analysis of primary data collected during 2018-19 through field visits and interactions with farmers and various categories of workers in cottonseed and vegetable seed farms in 613 sample seed farms (388 cottonseed and 225 vegetable seeds) in 124 villages producing seeds for both multinational companies (MNCs) and major Indian seed companies in six Indian states, namely Andhra Pradesh, Telangana, Karnataka, Maharashtra, Gujarat and Rajasthan.

Child labour: significant progress

The recent trends in the employment of child labour in hybrid seed production in India show a declining trend since 2015. The absolute number of children below 14 years employed in cottonseed farms in different states in India showed a decline of 20% and the proportion of children to the total workforce showed a decline of 25% during 2015-19. A similar trend is observed in vegetable seeds. The proportion of child labour to the total workforce in tomato, hot pepper and okra crops also showed a significant decline of 37.6% in Maharashtra and 39.8% in Karnataka during 2015-2019.

The extent of decline shows wide variations between different states and regions within states. The biggest decline comes from the states and regions where significant interventions took place to address child labour. The overall decline in the incidence of child labour per acre and also the total number of children below 14 years employed in several parts of the country can be attributed to interventions undertaken by different players e.g. government, NGOs, seed industry, international agencies and social investors to address the issue of child labour.

The child labour incidence data for 2018-19 for individual companies shows significant difference in the incidence of child labour between companies who have already implemented substantial measures to tackle the problem of child labour and those who are yet to begin or are in the process of implementing them. Compared to other companies, the incidence of child labour was found quite low on farms producing for Bayer, Syngenta, BASF, HM.CLAUSE, East-West Seed, Advanta, Namdhari, Kalash, Tierra Agrotech and Sakata and which have been working on the issue of child labour for quite some time and implemented some systematic measures.

Despite the decline, the total number of children still employed in seed production and particularly in cotton seed farms is high. In 2018-19, a total of around 151,000 children below 14 years were employed in cottonseed farms in Andhra Pradesh, Telangana, Gujarat, Karnataka and Rajasthan which account for more than 85% of the total production area in the country. The persistence of child labour on a large scale is due to the limited coverage and insufficient impact of the present interventions.

Though more companies have become active now and were seen taking some measures to tackle the issue of child labour the overall responses from the broader industry is still not very encouraging. Several leading companies particularly in cottonseed production like Kaveri Seeds, Rasi Seeds, Ajeet Seeds, Bioseed, Tulasi Seeds and Ankur Seeds which control more than 50% of the cottonseed production are yet to pay a serious attention to the issue and implement concrete measures to address the problem. Even in the vegetable seed sector major companies like VNR Seeds, I&B Seeds, Meta-helix, Oriental Biotech which was supplying seed to Heinz Seeds, a subsidiary of Kraft Heinz, are not seen implementing serious measures to address the child labour on their suppliers' farms. Unless all the major seed companies come forward and implement serious measures in collaboration with other stakeholders, it is difficult to combat the overall problem of child labour in the seed sector.

There is a wrong notion, which is propagated by state government and some seed companies, that most of the working children in seed production are family labourers who help their parents during school holidays and before and after school hours.⁶⁴ This is not correct. Though there is an increase in the contribution of family children in total workforce in recent years, they still constitute a small portion of total working children in many states. In 2018-19, family children accounted for less than 40% of the total working children in cottonseed and less than 25% in vegetable seed production.

Non-payment of minimum wages: limited progress

The other issue of major concern in seed production discussed in this report is payment of minimum wages to workers. The Indian laws guarantee payment of minimum wages to workers in different sectors, including the agriculture sector. In spite of this legal requirement, below payment of minimum wages has long been a serious issue in the agriculture sector, especially in the hybrid seed production.

The data for 2018-19 shows that the gap between legal minimum wage and prevailing market wages has widened in recent years in Andhra Pradesh, Telangana and Gujarat. The prevailing wage rates for cross-pollination activity was 27% below the legal minimum wage in Telangana, 24% below in Andhra Pradesh and 41% below in Bodoli and 29% below the legal minimum wage in Idar in Gujarat in 2018-19. The wage gap was only 9% in Andhra Pradesh, 17.8% in Telangana, 6.6% in Idar location and 16.6% in Bodoli location in Gujarat in 2014-15.

The issue of non-payment of minimum wages has not received as much attention from seed companies as well as from other stakeholders compared to the issue of child labour. This issue has started receiving attention only in recent years particularly after the publication of reports by Arisa in 2015. This is one of the important agenda items in all the multi-stakeholder consultations organised by ECHO forum since 2015.

An analysis of recent trends in wages and procurement prices particularly in cottonseed production indicates that there is a link between procurement prices received by the farmers and wages paid to workers. There are multiple factors that determine the wages paid to workers in seed production, of which the procurement price is an important one. Detailed insights in the production costs, yields and net income show that with the current procurement prices and yields farmers cannot pay minimum wages to workers, as they would be left with no income at all. As a first step in the direction of implementing minimum wages companies need to have a proper review of their procurement policies and ensure that growers have enough margins to pay minimum wages to workers.

⁶⁴ The new child labour law allows the children to work in family farms in non-hazardous works during school holidays and before and after school hours.

Though several companies have taken measures to ensure minimum wages to labourers working on nurseries, research farms and processing units directly managed by them, similar efforts have not been made to ensure minimum wages to labourers working on their suppliers' seed farms. They are of the opinion that the issue is very complex and ensuring payment of minimum wages at suppliers' farms requires concerted efforts from different stakeholders.

Some multinational companies have recently started pilot initiatives in vegetable and corn seed farms to address the problem of non-payment minimum wages on their suppliers' farms. The steps initiated by these companies helped to create some awareness about minimum wages, particularly among organisers and growers. They also helped to improve the documentation of wage records at farms. However these measures have not yielded expected results of ensuring payment of minimum wages to the workers in the areas where there is a significant gap between prevailing market and statutory minimum wages. A key learning from these pilots is that while the efforts of individual companies can make a small difference, for sustainable progress this challenge must be addressed at industry level with collaboration from other stakeholders.



7 Recommendations

Several companies have existing standards on child labour and wages. Having a standard in itself does not guarantee that those standards are met at the field level. The following recommendations help the companies to operationalise those standards at the field level and monitor progress overtime.

General

1 Companies should conduct due diligence as required by the UN Guiding Principles for Business and Human Rights and the OECD Guidelines for Multinational Enterprises.⁶⁵ The following actions are part of the due diligence process:

- i. Companies should have a human rights policy, or human rights should be included in a more general CSR and/or corporate governance policy. This policy should clearly stipulate the expectations, objectives and responsibilities of all employees and other business relations when it comes to Children's Rights and payment of at least minimum wages. The policy should be approved by senior management, communicated to all stakeholders and be publicly available;
- ii. Companies should identify actual or potential adverse impacts on responsible business conduct issues in operations, supply chains and business relationships;
- iii. Companies should cease, prevent or mitigate these actual or potential adverse impacts;
- iv. Companies should track implementation and results of their measures;
- v. Companies should communicate how impacts are addressed;
- vi. When a company identifies that it has caused or contributed to actual adverse impacts, it should address such impacts by providing for or cooperating in their remediation.

Lastly, companies should engage with stakeholders⁶⁶ in a dialogue to identify the actual or potential adverse impact, devising collective strategies to mitigate those risk, and finally to monitor progress in the communities, overtime.

2 Companies should collaborate at an industry or multi-industry level in order to address impacts, especially systemic issues, collectively. It can be beneficial in pooling knowledge and share solutions on how to address the issue of non-payment of minimum wages and child labour. Furthermore, companies can use their leverage with governments at local and or national level to encourage the government to affect change, for example through better enforcement of laws and regulations and in wage setting mechanisms. Companies are invited to join multi-stakeholder forums like ECHO in order to address the issues mentioned in the report collectively. However, participation in an initiative does not shift responsibility from the company to the initiative for adverse impacts that it causes, contributes to or to which it is directly linked. To resolve issues in the supply chain both individual and collective approaches go hand-in-hand. It is not either/or.

⁶⁵ For guidance on how to implement the guidelines of the OECD see:

<https://www.oecd.org/investment/ue-diligence-guidance-for-responsible-business-conduct.htm> (last accessed 24 March 2020).

⁶⁶ Stakeholders and rights holders could be communities at local level, workers and employees under informal arrangements within the supply chain, but also NGOs, local civil society organisations, industry peers, governments, business partners and investors. Companies should be aware that rights holders are not a homogenous group, and therefore should especially pay additional attention to women, migrant workers and people from scheduled castes and tribes.

- 3 Companies should use their influence to address the issues in national and international fora, including FSII (Federation of Seed Industry of India)⁶⁷, NSAI (National Seed Association of India)⁶⁸, APSA (Asia and Pacific Seed Association)⁶⁹, Euroseeds (European Seed Association)⁷⁰, ISF (International Seed Federation)⁷¹ and Plantum (Dutch Seed Association)⁷².

Children's rights

- 4 Companies should have systems and procedures in place to identify, assess, prevent, mitigate child labour in their supply chains.⁷³ The ILO-IOE child labour guidance tool for business⁷⁴ which provide guidelines for companies doing business with respect for children's right to be free from child labour could be helpful in this regard.
- 5 Companies should consistently create awareness amongst their internal field-staff, amongst farmers and seed organisers on child labour, and work with them to provide remedy in cases where child labourers are found.
- 6 Companies should not rely on code of conducts, contracts and external audits only. Companies should implement a stringent monitoring system to regularly identify cases of child labour, create awareness amongst farmers and seed organisers and provide remedy in cases where child labourers are found. Regular independent audits who have expertise on child labour in the agricultural sector could validate the monitoring data of the company.
- 7 Providing workers, farmers, and children access to a grievance mechanism could be a way to ensure that children's voices are heard. Companies need to develop a grievance redressal mechanism either internally or in collaboration of third parties who have the trust of the children and their representatives. As children may not be able to access grievance mechanisms themselves, they should therefore be accessible to those who can raise incidences on behalf of the children, such as (local) committees tasked with monitoring child labour, trade unions, community members, staff who regularly visit suppliers in the field or local NGOs.
- 8 Solutions to the problem of child labour require their access to quality formal education as part of their remediation after having worked in the seed fields. When children below the legal minimum age are found working, the goal of remediation should first be withdrawal from child labour, consult with the caregivers of a child and see to enrol the child in school.

⁶⁷ <https://fsii.in/> (last accessed 20 April 2020).

⁶⁸ <https://nsai.co.in/> (last accessed 20 April 2020).

⁶⁹ <https://www.apsaseed.org/> (last accessed 20 April 2020).

⁷⁰ <https://www.euroseeds.eu/> (last accessed 6 April 2020).

⁷¹ <https://www.worldseed.org/> (last accessed 6 April 2020).

⁷² <https://plantum.nl/> (last accessed 6 April 2020).

⁷³ According to the ILO 138 Minimum Age Convention the minimum age for employment is 15 years and in case of countries whose economy and educational facilities are insufficiently developed, this can be lowered to 14 years. India ratified the ILO 138 Convention in June 2017 and amended its law prohibiting the employment of children below 14 years in any occupation or process, except in family enterprises before and after school hours.

⁷⁴ https://www.ilo.org/ipecc/Informationresources/WCMS_IPEC_PUB_27555/lang--en/index.htm (last accessed 26 March 2020).

Wages

- 9 Non-payment of minimum wages should be a priority of all departments of a company, including the procurement department and top-level management. If a company is not ensuring the payment of legal wages to the workers in their supply chain, their operations can be considered unlawful in any court of law.
- 10 Companies should strengthen their contractual relationship with business relations, seed organisers or growers by explicitly requiring to pay the legal minimum wages or more.
- 11 Companies should involve and engage with stakeholders, including seed organisers, growers, civil society organisations and trade unions in order for everyone to be aware of the minimum wages per state and per activity (in the case of few States). It is to be noted that the minimum wages are revised periodically, and a government circular is released. Hence, the latest circulars should be referenced at all time.
- 12 Companies need to have a proper review of their procurement policies and ensure that farmers have enough margins to pay minimum wages to workers. Companies should assess whether their procurement prices are calculated in such a way that they account for minimum wages instead of the prevailing wages (in case they are lower than the legal minimum wage).
- 13 As minimum wages often fall short of the cost of living, companies should progressively work towards paying living wages.⁷⁵
- 14 As the workforce in the seed sector consists largely of women, companies should ensure a meaningful participation of women in all stages of their due diligence and especially build the capacity of seed organisers and farmers to address gender discrimination in the allocation of tasks. Women should be made aware about their rights, including the right to organise in order to negotiate for higher wages.
- 15 Companies should monitor whether minimum wages are paid to workers by implementing proper wage documentation and train seed organisers and growers on how to use these documents.
- 16 Regular independent external assessments by civil society organisations and labour rights groups with expertise on wages in the agricultural sector could validate the payments received by the workers and awareness of the supply chain partners on wages.
- 17 Companies should collaborate at industry-level to address the issue of non-payment of minimum wages (as this is a systemic issue where prevailing wages fall short of legal wages). Companies should collectively engage with the government, ILO, trade unions or other relevant stakeholders to address the factors that prevent workers from receiving the minimum wages

⁷⁵ Examples on how to calculate a living wage can be found here: <https://www.globallivingwage.org/countries/india/>, <https://wageindicator.org/salary/living-wage> and <https://www.shiftproject.org/sdgs/living-wages/> (last accessed 26 March 2020).

8 Responses from companies

A draft version of this report was sent to all companies mentioned in the report for their comments or modifications. In this chapter a summary of the responses is included. Arisa tried to include most of the comments given. The responses of companies are written below in alphabetical order. The companies that did not respond to our request are also listed. In general Arisa appreciates a constructive dialogue with the companies addressed in this report and believes that an open and honest dialogue with local and international stakeholders is crucial for the industry to combat the issues of child labour and the non-payment of minimum wages. Arisa respects the effort of the companies which took time to respond substantively.

1 BASF (Nunhems)

In their response BASF mentions that the company globally acknowledges its responsibility to respect and support human rights. The company mentions that, earlier as part of Bayer and now under BASF, it has continuously adhered to the commitment of progressively eliminating child labour. Its model is based on a standard operating framework which is consistently checked for any deviations. As a standard procedure it continuously strives to validate information that they generate for transparent reporting and that meets the auditable standards. It has engaged with external auditors in the past and has plans for comprehensive auditing systems in the present. BASF states that through its contractual obligation and systems and processes it makes it mandatory for growers to pay minimum wages for their workers. They understand that ensuring wage compliance is a challenge and recognises that it can often have underlying root causes. BASF states that it is aware that addressing the minimum wage issue requires serious and lasting commitment from other seed companies as well as government and other stakeholders. BASF is progressively and seriously committed to engage with all such actors for evolving diligent and transparent methods on its quest for continuously improving agricultural labour practices.

2 Bayer

In their response Bayer mentions that Bayer as a group takes the issues addressed in the report very seriously and recognises them. They ensure that no children are found working in their contracted farms through amongst others monitoring the contracted seed production farms multiple times and to take Corrective and Preventive Actions, checking and maintaining of age related documents, ensure appreciation and rewards given to growers who do not employ child labourers and penalise them for having hired children at their sites. Bayer publishes a Sustainability Report 2019 with information about numbers of child labour incidences in the seed production for Bayer in India.

Bayer initiated a pilot programme in its cottonseed production farms and vegetable seed nurseries to encourage the contracted farmers to comply with the minimum wages regulation. The pilot includes awareness raising programmes, ensures procurement prices account for minimum wages and improving documentation processes to ensure labour wage registers are well maintained and gender neutral. Bayer acknowledges that some of the issues pertaining to minimum wages still prevail because of the reasons as hesitation and unpreparedness on the part of farmers, benefit of additional amount paid to the farmers through the companies to compensate the minimum wage paid to workers does not reach the workers by the farmers. Lastly, workers working simultaneously on plots of different companies lead to a challenge for the farmers to compensate and implement differential wages for the same work in different company plots.

3 East-West Seed (EWS)

In their response EWS mentions that they carry out audits regularly to verify whether there are incidences of child labour. They did not observe any recent incidences of child labour in the field of their production farmers. EWS supports the findings of the report that progress towards minimum wage compliance is limited. Addressing this problem in isolation is quite difficult according to EWS as their production farmers operate in a regional labour market where underpayment of labour is common market practise rather than an isolated incident. EWS further mentions that it may put the farmer and his labour at risk of physical threats by competing farmers and/or labour. The problem should ideally be addressed by all agribusiness in a given region, supported by strong government encouragement. As part of their child labour programme in India EWS conducted a small-scale pilot programme specifically addressing minimum wage compliance by farmers in some of their seed production communities.

4 Indo-American Hybrid Seeds (IAHS)

In its response Indo-American Hybrid Seeds mentions that it has taken initiatives to address the issue of child labour and minimum wages in the seed production plots of farmers. The company has incorporated a no child labour clause in the farmer and organisers production agreements and regularly organise awareness meetings with them. With regard to minimum wages the company states that it works out the annual procurement policy factoring in all statutory cost, production cost, yield parameters, net margin and inflation rate for the growers involved at the farm level. Farmers and production organisers are regularly educated and informed to pay minimum wages during the seed production program. Constant effort by seed companies and government agencies has resulted in narrowing the difference between the prevailing market wage rate and legal minimum wages at the seed suppliers farm according to the company.

5 Kraft Heinz

In their response Heinz Seeds mentions that Kraft Heinz does not tolerate child labour, nor the use of forced labour as mentioned in their Global Human Rights Policy. They expect their suppliers and other business partners to adhere to their policy which is shared with their seed producers. Beyond that the company has a Code of Conduct and the supplier contract requires the seed procedures to comply – with any other behaviour constituting a breach of contract. Their policy is also reinforced in their seed purchase order which Oriental Biotech received and signed. The issue of child labour was first brought to the attention of the company by a report of Arisa, and they added the child labour provision to the Oriental Biotech purchase order in 2018. Lastly, Heinz Seeds states that they terminated their relationship with Oriental Biotech in August 2019. As the research was conducted between July 2018 and February 2019 we have kept the name of the company in the report.

6 Limagrain (HM.CLAUSE)

Limagrain mentions in a response to the draft version of the report that HM.CLAUSE team is preparing an update of the cost analysis of each activity necessary for seed production in order to ensure minimum wages are paid. Limagrain states that since summer 2018 they have had an external audit company to conduct supplementary audits. They focus their audits on the most at-risk areas. Limagrain recently asked the audit company to integrate in their audit process a part on minimum wages although it seems difficult to get the information from the farmers.

7 Mahyco

In their response to a draft of this report Mahyco mentions that as an organisation they are committed to the cause of child health and education. The company states that they randomly sample and audit around 1800 production fields annually and understand where improvements are needed. It was not possible for Mahyco to comment to the findings of the research as the company requested raw field data which was not given to the company.

8 Namdhari Seeds

In their response to a draft of this report Namdhari Seeds acknowledges the issue of child labour addressed in the report. The company mentions that they implemented measures as a warning system for growers, awareness raising during village meetings, frequent visits by field staff, motivating farmers to send their children to school and conduct of visits to production fields by internal and external personnel of the company. According to Namdhari Seeds there is reduction in the gap between minimum wages and actual wages as well as minimum wage gender disparity due to the effect of electronic media, improved economic states and improved literacy level. Training is given to field staff and farmers are encouraged to pay legal wages.

9 Rijk Zwaan

Rijk Zwaan mentions that they read a draft version on this report and that they have no further comments nor modifications to propose.

10 Sakata

In their response Sakata mentions that they acknowledge the reality of child labour in India and that they have initiated actions to address this issue, including an internal assessment system on legal minimum wages and CSR related activities. Since September 2019 around 100 staff members are hired for the internal assessment process. As a pilot project the company advised a main vendor and a main grower to maintain wage registers for seed cleaning activities and work in the production farm respectively. Sakata India commissioned an external auditor to conduct assessment for 3 years on Sakata's seed producers' farms. In their CSR reports from 2017-2020 several initiatives are mentioned including scholarships for girls and awareness raising activities for growers and organisers. Sakata shared its internal and external audit reports with Arisa.

11 Seed Works

In their response Seed Works mentions that the company conducts cross functional and third party independent audits within its supply chain. It conducted various awareness programmes on transformation including identifying the root causes which forces families and communities to allow children to be engaged in child labour, interaction with parents, farming community leaders on child rights, scholarships, and an awareness programme on education among farmers. Seed Works states that in their code of conduct with farmers and organisers employment of children is prohibited and safety trainings for workers are given.

12 Syngenta

In their response to a draft version of this report Syngenta states that the company implemented the Syngenta Fair Labor Program which follows different steps of an implementation plan dedicated to ensure better working conditions, to detect weaknesses or non-conformities, and to constantly improve through corrective action plans. Syngenta addresses the issue of child labour through awareness raising and motivation campaigns for the growers, strict provisions against child labour in contractual agreements, consultation with stakeholders for developing remediation plans and development of international monitoring systems to identify non-compliance issues. Syngenta states that the minimum wage underpayment is complex and that farmers and workers lack awareness on legal wages and benefits. Therefore FLA and Syngenta launched a joint programme in 2016 to address this issue. Syngenta acknowledges that paying decent wages is the best remedy to many other labour issues and a lack of decent wages is directly related to an increase in child labour and forced labour. As mentioned in the report FLA and Syngenta started a pilot to ensure minimum wage payment in hybridseed workers on selected supplier farms. One of the measures was to review the procurement prices to ensure that they accounted for paying minimum wages.⁷⁶ Syngenta mentions that as next steps they will amongst others support government efforts to enforce minimum wage laws and ensure that those wages meet the needs of farm workers.

⁷⁶ <https://www.fairlabor.org/report/seeds-change-pilot-project-address-wage-improvement-indias-seed-sector>.

13 United Genetics

In their response United Genetics mentions that the company for 90% of their production is directly engaged into production activities with growers and a few with 'production contractors'. Farmers are directly supervised by their employees in production department. As they have a big fleet of people who monitor strictly under their supervision the company does not foresee any chance that any of the growers will be engaging in child labour on his farm. They have an internal control monitoring and since 2017 they are regularly involved in creating awareness of not engaging child labour in all their seed production areas in Karnataka and Maharashtra.

List of companies from whom no response was received

- 1 Advanta (UPL)
- 2 Ajeet Seeds
- 3 Ankur Seeds
- 4 Enza Zaden
- 5 Green Gold Seeds
- 6 I&B Seeds
- 7 JK Seeds
- 8 Kalash Seeds
- 9 Kaveri Seeds
- 10 Krishidhan Seeds
- 11 Meta-helix (Dhaanya Seeds)
- 12 Nath Seeds
- 13 Nuziveedu Seeds
- 14 Oriental Biotech
- 15 Rasi Seeds
- 16 Tierra Agrotech
- 17 Tulasi Seeds
- 18 Vibha Seeds
- 19 VNR Seeds