FAIR LABOR ASSOCIATION

Improving Workers' Lives Worldwide

LABOR RISKS, MONITORING AND REMEDIATION ON COTTONSEED FARMS IN INDIA

Prepared by Fair Labor Association

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EXECUTIVE SUMMARY

The Fair Labor Association (FLA) conducted this task and risk mapping study in India in 2004 to assess the labor risks in cottonseed farms, with a focus on child labor; to map potential internal and external workplace monitoring systems; and to map local remedial programs. The study consolidates data from two assessment visits made in April 2004 and October 2004 to Andra Pradesh (AP) and Gujarat, two of the largest hybrid cottonseed producing states in India. The visits consisted of interviewing over 100 stakeholders at the village level, seed companies, civil society organizations, workers, child laborers and experts.

About 200 seed companies are involved in the production and marketing of hybrid cottonseeds in India, including multinationals such as Monsanto, Advanta, Bayer, Pioneer Seeds and Emergent Genetics. The multinational companies represent less than 20 percent of the total production of hybrid cottonseeds in India, with local Indian companies representing 80 percent of the cottonseeds market. Companies producing hybrid seeds in India do not contract directly with seed farmers and instead have a buy-back arrangement. They operate through an intermediary known as the "seed organizer." The seed organizer identifies the farmers who are willing to undertake seed production according to the targets and conditions set by the company. The seed organizer makes a separate agreement with each farmer; most of these agreements are oral and based on trust. Although companies are not directly involved in the production process, they exert substantial control over farmers and the production process by the way of selecting organizers, setting production targets, supplying foundation seed, advancing production capital, fixing procurement prices and setting quality controls.

As the production of cotton hybrid seed is labor intensive, there have been several reports of large-scale bonded labor and child labor in the industry. This study found a number of issues related to child labor in the sector. Most of the stakeholders know that children under 14 years who are not attending school and working as hired labor on the farms constitute child labor. However, none of them was clear about benchmarks for children working on family farms, during vacations or before and after school. Farmers tend to employ children as they cost less, work long hours, are more productive, and are easy to control. Elements of bonded labor were also observed during the study as advances are made to the parents of children or adult workers before the season starts and the workers are not in a position to negotiate prevailing market wages (based on labor supply and demand). In the study locations no distinction was made between adult labor and young workers (14-18 years), and thereby no precautions or special protections for young workers were practiced. Health and safety was another major concern; health and safety issues identified in the study were mostly related to exposure to chemicals, lack of safe storage, use and disposal of pesticides, and lack of awareness of health and safety issues.

In general there is a lack of internal management systems at the seed company level. They need to put in place extensive measures to improve working conditions in their supply chain. This will involve training and capacity building, followed by monitoring of progress made and remedial

interventions. A number of local initiatives are currently operating in the sector. The government and civil society organizations run child labor prevention and rehabilitation programs. Involvement with local civil society and government by the seed companies is imperative in order to make sustainable interventions and achieve long-lasting results.

INTRODUCTION

I. OBJECTIVES

The Fair Labor Association conducted this task and risk mapping study in cottonseed farms in India with the following objectives:

- To assess the labor risks in cottonseed farms, with a focus on child labor
- To map potential internal and external monitoring systems to assess working conditions
- To map locally available options for remediation

II. METHODOLOGY

The study consolidates data from two assessment visits made in April and October 2004 to Andra Pradesh (AP) and Gujarat, two of the largest hybrid cottonseed producing states in India. The study draws from both primary and secondary data. Primary data was collected through the verification of cottonseed's supply chain and through interviews with staff of seed producing companies, growers and workers. An independent external expert, Martine Combemale from Human Resources Without Borders, conducted the study with the involvement of local representatives (technical advisor and supervisor) of a seed company and a third party seed organizer. Secondary data was obtained mainly from reports and existing documentation—studies from Dr. Venkateswarlu Davuluri, MV Foundation; World Bank; ILO; U.S. State Department; the U.N. Committee on the Rights of the Child; and general information from the Association of Seed Industry.[1]

The data from the first field visit in April 2004 was gathered through face-to-face interviews with the Dr. V. Davuluri, the Executive Director and other members of the MV Foundation (MVF);[2] the Director of the ILO-IPEC[3] Program in India; representatives from T-Group Solutions, Integrated Social Development Consultancy (ISDC), and SGS. [4] Field visits were made to a local hospital to review the admission records for the identification of work-related accidents during the season; to local government-run schools to verify the range of available records; and a village where MVF has an intervention program - where farmers formerly employed bonded child laborers and decided to give up the practice under pressure from the villagers. Visit of two bridge schools run by the MVF and the government allowed the research team to interview, without the presence of adults, former bonded child laborers to understand their experiences and review the approach

1 Also called Seed Industry Association (SIA).

2 Mamidipudi Venkatarangaiah Foundation

3 ILO-IPEC: International Labour Organisation - International Programme for the Elimination of Child Labour.

4 These are some of the third-party labor conditions monitoring organizations currently operating in India.

and quality of instruction at the schools. Information related to the cottonseeds supply chain was collected through interviews with a seed company's representatives, third-party seed organizers, technical advisors and supervisors. A visit was also made to two pesticide stores and three villages, where farmers, representatives of Panchayat,[5] teachers, and children in and out of school were interviewed.

Data from the second field visit in October 2004 focused on labor risks assessment during high-risk activity (hybridization—comprising of emasculation and pollination). Dr. V. Davuluri took part in field visits and discussions with various stakeholders as an assessment team member. The team visited the fields and stayed at farms from dawn to dusk to observe and collect information on production practices and working conditions. Interviews were conducted with young and adult workers, farmers, seed organizers, staff of local non-governmental organizations (NGOs), and company representatives. The team interviewed a doctor and collected information about the most common diseases likely to affect children working on the farms due to their exposure to pesticides, sun or rapid movements for extended periods of time. Detailed discussions were carried out with company representatives, field staff and seed organizers on internal monitoring procedures. Over 100 interviews were conducted during the course of this study.

III. BACKGROUND

Cottonseed Production in India and Child Labor

Hybrid cottonseeds were introduced in India in the early 1970s. This raised the quality and quantity of cotton produced[6] and generated a substantial amount of additional employment in the agricultural sector. About 200 seed companies are involved in the production and marketing of hybrid cottonseeds in India, including multinationals like Monsanto, Advanta, Bayer, Pioneer Seeds[7] and Emergent Genetics. The multinational companies (MNCs) represent less than 20 percent of the total production of hybrid cottonseeds, 80 percent of the cottonseeds market is accounted for by local Indian companies. As the production of hybrid cottonseeds is labor intensive, there have been reports of large scale bonded labor and female child labor in the industry, an issue that was recognized by the Seed Industry Association (SIA) of India during our interviews.

According to an earlier study,[8] 450,000 children carry out 90 percent of all activities in the Indian cottonseed sector. The study found that the percentage of children working is lower on family farms that are under ½ acre in size (50 percent of the studied sample). Growers secured the labor of girls by offering advance loans to their parents before the start of the production season. This compels the girls to "work at the terms set by the employer for the entire season. The girls work long days, are paid very little, are deprived of an education and are exposed for long periods to dangerous agricultural chemicals," according to the study.

5 Village level Governing Body comprising of elected members of the community.

6 The hybrid seeds were disease resistant and therefore had lower crop losses resulting from infestation by diseases.

7 Seeds Division of Dupont

8 The study was commissioned by the India Committee of the Netherlands (ICN) and conducted by Dr. Venketeswarlu Davuluri, titled "Child Labor and Trans-National Seed Companies in Hybrid Cottonseed Production in Andhra Pradesh."

The Government of Andra Pradesh, civil society organizations working in the area of child labor (like MV Foundation) and international organizations such as the International Programme on the Elimination of Child Labour of the International Labour Organization (ILO/IPEC), the United Nations Children's Fund (UNICEF) and the United Nations Development Program (UNDP) began taking actions to address the child labor situation in early 2002-2003. At the start of 2004, the SIA decided to create a multi-stakeholder monitoring committee whose mandate was to monitor and remediate child labor issues in cottonseed production. Additionally, a number of initiatives were undertaken by SIA in collaboration with MVF to motivate seed organizers and farmers against the practice of employing children through meetings, posters, pamphlets, print and electronic media, and by offering incentives and securing oral and written commitments from farmers at the time of making contracts with them to purchase seed. The research team found the leaflets to be wordy, without images and difficult to read even for a literate audience, ignoring that a majority of farmers in India are illiterate.[9]

Organization of Cottonseed Supply Chain

Companies producing hybrid seeds in India do not contract directly with seed farmers; instead, they operate through an intermediary known as the 'seed organizer.' The seed organizer is often a farmer or an important person in the village. Most of the time he is a landlord and often illiterate. The relationship between companies and seed organizers, and between seed organizers and farmers, is based on mutual trust. Some companies train the seed organizers in all aspects of seed production and quality management. However, there is no training or awareness building on labor standards, health and safety or child labor issues.

Companies do not select farmers, but set targets that are incorporated into the contracts between the seed organizers and the companies, e.g., the type and quantity of seed to be purchased, the procurement price based on genetic purity, and so on. The seed organizer identifies the farmers who are willing to undertake seed production according to the targets set by the company. The seed organizer makes a separate agreement with each farmer, which are generally oral and based on trust. Typically, companies extend an advance of 20 percent-30 percent to the seed organizer to cover expenses that are passed on to the farmers. The seed organizers visit each farm three to four times a season to ensure a smooth production process. In addition some field supervisors (either employed by the seed organizer or by the company itself) also visits the farms to manage quality.

Each seed organizer is free to arrange his/her activities. One of the seed organizers interviewed, for example, works with a team of supervisors and technical advisors. After the harvest, farmers deliver seeds to the seed organizer, who in turn delivers them to the company. The seed companies conduct quality testing (germination and genetic purity) over a three to four month period. If the quality is as per the requirements, the companies pay the organizers, who in turn pay the farmers the agreed price. The farmers, as well as the seed organizers, can wait up to four to five months for their payments. According to a seed organizer, the risk of not getting paid because of the quality of the seed is real for the farmers, but the profitability is much higher than other crops (25000 - 35000 Indian Rupees (INR)[10] per acre vs. INR4000 per acre for other crops).

9 The leaflet is based on ILO Convention 138 (Minimum Age to Work), which has not been ratified by India.

10 1USD = INR 50 at the time of the study.

Although seed companies are not directly involved in the production process, they exert substantial control over farmers and the production process through the way in which they select organizers, set production targets, supply foundation seed, advance working capital, fix procurement prices and set quality controls. The seed organizers receive service charges or commissions from the company.

FINDINGS

I. UNCLEAR DEFINITIONS

No Common Definition of Child Labor

The definition of child labor shared by most individuals interviewed is: "Children up to 14 years of age who do not attend school." However, views differ regarding children working after school and during vacations and the work done by family members. The MV Foundation does not make any distinction between family child work and child labor. The ILO, seed companies and farmers make a distinction and do not consider a child working in the family farm as child labor, as long as the child attends regular school. This view is supported by the Child Labor (Prohibition and Regulation) Act of 1986 that does ban children working in family operated agricultural operations. However, this law is not in accordance with Article 24 of the Constitution of India, which protects all children under the age of 14.

The international definition of child labor that sets the minimum age of work is derived from ILO Convention 138 (not ratified by India), which states: "Child labor is any economic activity performed by a person under the age of 15 years."[11]

Not all work is considered harmful to children or exploitative. ILO Convention 182 (Elimination of the Worst Forms of Child Labor),[12] not ratified by India, defines child labor as work that prevents children from attending and participating effectively in school or/and is performed by children under hazardous conditions that place their healthy physical, intellectual, or moral development at risk. Under this definition, there is no difference between children working for their families and children working for a living for independent employers.

Based on interviews, child agricultural workers face many of the conditions outlined by the ILO under Convention 182 as work likely to harm their health and safety. In particular, this would include work in an unhealthy environment, including exposure to hazardous substances (notably pesticides) and working for long hours without rest, water and shade from the sun.

11 This fundamental convention sets the general minimum age for admission to employment or work at 15 years (13 for light work) and the minimum age for hazardous work at 18 (16 under certain strict conditions). It provides for the possibility of initially setting the general minimum age at 14 (12 for light work) where the economy and educational facilities are insufficiently developed.

12 This fundamental convention defines a "child" as a person under 18 years of age. It requires ratifying states to eliminate the worst forms of child labor, including all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; child prostitution and pornography; using children for illicit activities, in particular for the production and trafficking of drugs; and work which is likely to harm the health, safety or morals of children. The convention requires ratifying states to provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration. It also requires states to ensure access to free basic education and, wherever possible and appropriate, vocational training for children removed from the worst forms of child labour.

Lack of Concern for Young Workers

The ILO and MV Foundation are aware that young workers should be protected but nothing has concretely been done for 'young' workers between 14 and 18 years of age. Farmers, seed company employees and organizers interviewed consider a 'young' worker who is over 14 years of age as an adult worker.

According to the U.N. Convention on the Rights of the Child (CRC), ratified by India, "all persons under eighteen have a right to be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development." Besides, the definition of worst forms of child labor set out in ILO Convention 182 applies to all children under 18 years. The FLA's benchmark is aligned with Convention 182 and calls for special protection for young workers under 18 years of age.

The Farm Labor Act of 1991 and the Minimum Wages Act of 1948 protect children, adolescents and adults. An adolescent is defined as a person between 14 and 18 years. According to interviews and various studies reviewed, the protections afforded by these two acts are not respected in practice. A definition of hazardous work in cottonseed production is necessary in order to monitor children and young workers in the field.

Bonded and Forced Labor

Bonded labor represents 90 percent of the child labor on cottonseed farms, according to the above-mentioned ICN study. In agriculture, as in other economic endeavors, bonded labor is considered illegal under the international conventions ratified by India and under India's own laws. Additionally, by law, bonded laborers have to be released, rehabilitated, and their employers prosecuted. Article 23 of India's Constitution prohibits the practice of debt bondage and other forms of slavery, whether modern or traditional. The Indian Supreme Court defines 'forced labor' thusly: "[W]here a person provides labor or service to another for remuneration which is less than minimum wage, the labor or service provided by him clearly falls within the scope and ambit of the word 'forced labor'..." According to this definition, all labor paid less than the minimum wage constitutes forced labor. The Minimum Wages Act of 1948 fixes the minimum wage in agriculture, which is generally not respected according to interviews made during this study. According to other reports, there is no enforcement of this policy. According to the ICN study, the procurement price paid by the seed companies to the growers is not sufficient to allow them to replace children with adults in work in the fields.

II. TASK AND RISK MAPPING OF COTTONSEED PRODUCTION IN INDIA

According to interviews with civil society organizations, researchers and seed organizers, hybrid cottonseed production is a highly labor- and capital-intensive activity. It requires about ten times more labor and four-and-a-half times more capital compared to a commercial cotton crop.[13]

13 Commercial cotton requires investment of about INR 12,000 - 15,000 per acre, whereas seed cotton requires about INR 50,000 to 60,000 per acre.

Description of Tasks

The first field visit was conducted in April, which is not a peak production month (in terms of planting, hybridization or harvest). Therefore, the description of tasks in Table 1 is based on interviews with key informants and their description of reported activities.

TABLE 1: TASK MAPPING BASED ON FIRST FIELD VISIT

TASK	SAVAC (ORGANIZATION RUN BY A SEED ORGANIZER)	GLOCAL RESEARCH	INTERVIEWS WITH CHILDREN AT THE BRIDGE SCHOOL
Total: From May to February		2200 labor days are required per season (crop year) for one-acre field growing hybrid cottonseed.	
Land Preparation, Plowing	Mostly done by bullock-driven implements or mechanized tools attached to tractors. Child labor is not involved.		Children interviewed in bridge school said they perform this activity.
Seed Sowing	Skilled job; performed mostly by experienced, older women laborers. No child labor.	Children perform this task.	Boys and girls from bridge school (bonded labor) said they perform this task.
Watering (Irrigation)	Sowing from late March to mid-May. There is very little rain in this period and the seedlings need repeated watering until the middle of June. Child labor is used. Most of the growers have access to very little irrigation infrastructure so they use children to fetch water and irrigate the plants individually on a daily basis.	Children perform this task.	A lot of farmers and chiefs of villages were concerned about irrigation. Most of them said that with access to proper irrigation facilities, they could send their children to school. All children interviewed said that they have to fetch water for the farm and for the house.
Crop Management	Weeding, inter-cultivation, plant protection measures and fertilization. Need adult labor. Child workers are not involved because doing so is not economical.	Child labor is used for weeding and fertilization. Adults do pesticide application. However, children return to the field just after spreading and spraying fertilizer.	Some children said that they do weeding and were hurt by weeding tools. Some farmers said that they use children for weeding. There is no training in the use of pesticides. Workers do not have any protective gear and use a towel to cover their mouths and noses.
Hybridization The method involves the removal of bracts first by hand, and then the petals; with the nail of the thumb, without damaging the stigma, style or ovary. Crossing needs to be done as soon as the flowers blossom before the female flowers bear fruit (and consequently produce non-hybridized or `fake' seeds).	Emasculation and cross-pollination is done by manual laborers. More than 60 percent of labor input is required for this task. Child labor is used because of low cost and a disciplined workforce.	Unlike other hybrid seeds like paddy, cottonseed cross-pollination has to be done manually. 90 percent of labor goes to this task (2000 labor days out of 2,200 for one acre).	Small farms do not hire child labor but employ their own children and some of them do not go to school. (Dr. Shantha Sinha, MV Foundation).*Most of the children interviewed performed these tasks. They said that this work is mainly done by children in the fields.
Cotton picking and harvesting	Operations include plucking the bolls from the plants, carrying them to the homes, separating cotton from the bolls and drying the cotton. Child labor is mostly used in this activity but adult labor can replace them without additional cost to the grower. Child labor is mostly used because they are already kept captive.		Some children (bonded laborers) said that they have to pick cotton (same pay).*Harvesting is often done by children

The second visit, conducted in October, occurred during the time of pollination (90 percent of labor goes into this task) and revealed the following tasks and risks (Table 2):

TABLE 2: TASK MAPPING BASED ON SECOND FIELD VISIT

PRODUCTION PROCESSES	TIMING/MODE OF OPERATION/RISKS INVOLVED IN GUJARAT	TIMING/ MODE OF OPERATION/ RISK I NVOLVED IN ANDHRA PRADESH
1. Emasculation of each individual bud flower. The buds, which are expected to open up the next morning, are selected for emasculation and this activity is undertaken in the afternoon. • Emasculation involves three steps: • Removal of bracts by hand. • Removal of petals along with the entire anther-sac whorl using the nail of the thumb, without damaging the stigma, style or ovary • The emasculated flower is then carefully covered with red plastic paper bags	From 2PM after break to 6.30/7PM and early morning from 6 AM to 7.30AM. Most of the female workers stand on their knees in order to avoid bending. The workers labor under the sun without shade or protection (no hat).	From 2PM after break to 6.30/7PM and early morning from 6 AM to 7.30AM. All workers bend. Children are supposed to avoid bending when the plants reach their shoulder, but they still bend to remove the petals at the bottom of the plants. The workers labor under the hot sun without shade or protection (no hat).*
2. Pouring flowers in a bag in order to count them	After 6.30PM	After 6.30PM
3. Removing male flowers	5AM to 6AM	6AM to 8AM, with a break
4. Pollination. The pollination has to be carried out in the morning hours with the pollen of male parent's flowers	From 9/9.30AM in the morning to noon/1PM	Morning from 9/9.30AM to noon/1PM
5. Removing the leaves from the flowers	6AM to 6.30/7AM	
6. Removing the petals of the male flowers with a razor blade in order to get the flowers with the pollen	6AM to 6.30/7AM. Risk involved due to the use of razor blade that can cause injury	9AM during pollination. The workers don't use a razor blade
7. Arrange the male flowers on a plate without the petal and with the pollen up to the sun	No risk	N/A
8. Create skewer with iron	Injury risk involved	N/A
9. Pierce each flower with a skewer	Injury risk involved	N/A
10. Pollination	Workers take the skewer either in the mouth (especially the children) or in the hand. The workers either hold the skewer in the hand, bend to find flowers and scrape the pollen of the male flowers on the emasculated female flowers, or bend with the skewer in the mouth to scrape directly the pollen on the emasculated female flower. As soon as the pollination is done, the worker takes off the red tissue plastic covers and puts them in a basket attached to his belt. Thus they continue repeating the same operation, which lasts less than 30 seconds.*Workers continue these operations for more than three hours at a stretch, while constantly keeping the skewer in the mouth or in the hand. In order to grab the skewer, they have to bring their hands or the mouth in the same puckered positions repeatedly for hours together.	Each worker has a basket attached at his belt, which is filled with the male flowers he harvested the very same morning. The worker turns each time he has to pick a flower from the basket. He removes the petals of the male flowers in order to get the flowers with the pollen. Then he scrapes the pollen of the male flowers on the emasculated female flowers. As soon as the pollination is done, the worker takes off the red plastic covers. He keeps the cover in a basket attached to his belt and repeats the same operation. Each operation lasts for less than 30 seconds.

11. Pesticide Application	No specific timing was observed with respect to applying pesticides. The operations are carried out even when the sun is high. Pesticides are applied twice a week even when workers are working in the field. No protection for workers while mixing and spraying pesticides. Pesticides are stored separately in a storeroom.	No specific timing was observed with respect to applying pesticides. The operations are carried out even when the sun is high. Pesticides are applied twice a week, even when workers are working in the field. No protection for workers while mixing and spraying pesticides. No separate arrangements for storing of pesticides. The pesticides are kept in the same and only room where the family lives. Children and food items are open to exposure to pesticides.

Health and Safety Risks

Table 3 provides an overview on health and safety risks. The individual issues are subsequently discussed in more detail.

TABLE 3: HEALTH AND SAFETY RISKS

RISKS	GUJARAT	ANDHRA PRADESH	A. CHILD LABOR ACT (PROHIBITION AND REGULATION) B. FARM LABOR ACT, 1991
Biological Hazards	**Yes**	**Yes**	Health measures and safety precautions need to be followed.
Insect Bites	Malaria is widespread in the country and not confined to these farms alone.	Malaria is widespread in the country and not specific to these farms alone.	
Snake Bites	Risky because most of the workers are bare footed. In Gujarat, a few cases of snakebites have been reported; snakebites could be fatal.	Risky, because most of the workers are bare footed.	
Physical Hazards	**Yes**	**Yes**	Health measures and safety precautions need to be followed.
Razor blade	The blade the young workers use to remove the petals of the flowers are generally rusty. In case they cut their fingers accidentally, there is no protection against tetanus. No provision of first aid kit in the field.	N/A	
Skewers made up of iron are used to pierce flower.	In case of accidental cut of the finger or face by the rusty skewer, there is no protection against tetanus. No first aid kit in the field.	N/A	
Heat (sun)	Women working in the sun are seen with their heads covered with a cloth or towel. However, boys do not use any such protection. Sometimes there is no shade. There is a risk of workers getting sunstroke or skin diseases.	Male workers are often seen working in the sun without covering their heads. Sometimes there is no shade. Women keep their heads covered with a towel or a cloth. There is a likelyhood of workers getting sunstroke or skin diseases.	
Chemical Hazards	**Yes**	**Yes**	Health measures and safety precautions need to be followed.
Pesticide application	No protection. Risks detailed below	No protection. Risks detailed below.	
Re-entry in the fields after pesticide application	No re-entry procedure. Risks detailed below	No protection. Risks detailed below.	
Pesticide storage	In a storeroom.	No separate arrangements for storing. Kept in the same room where the family lives (usually single room houses.). Children and food items are open to exposure. Risks explained below.	

Ergonomic Hazards	**Yes**	**Yes**	Health measures and safety precautions need to be followed
Torso bent forward or twisted causes stress on the lower back.	Long hours of working without a break is harmful for children because it puts too much strain on their lower backs. Some women were observed sitting with their legs crossed and a straight back while emasculating or pollinating flowers.	Because of long hours of work without rest, it can cause muscular-skeletal problem for children because of too much stress on the lower back.	
Fast and repetitive movements for long periods of time may cause fatigue resulting in injuries.	Pollination and emasculation require fast and repetitive movements, which may damage muscles of the hands and thus cause inability to hold and use a pen (especially in the case of children). Less than 30 seconds is required to complete each operation, which according to researchers can be termed as "highly repetitive." The activity is damaging because the interval between movements is too short to release the fatigue.	Pollination and emasculation require fast and repetitive movement that can damage gthe muscles of children's hands and prevent them from using a pen. Researchers classify a job as "high repetitive" if the time to complete such a job takes less than 30 seconds, which is the case for pollination and emasculation. Work involving repeated movement over and over is very tiring because the worker cannot fully recover in the short periods of time between two movements.	
Muscles become atrophied under too much of stress for long duration.	In Gujarat, children or adults have to hold the "skewer" in their mouth or hand while performing the tasks. As a result, healthy muscles subject to repetitive or prolonged restrictive movements for extended periods of time get atrophied and weak. This type of movements can provoke carpal tunnel syndrome and tendonitis and thus prevent children from going to school.		
Working for long periods in a standing position	Can cause sore feet, general muscular fatigue, and pain in the lower back.	Can cause sore feet, general muscular fatigue, and pain in the lower back.	
Psychological Hazards	**Yes**	**Yes**	
Isolation	Isolation from family for migrant child workers may lead to loneliness, depression and erratic behavior.	Isolation from family for migrant child workers.	
Harassment and abuse	Risky, especially for girls, when migrant and isolated from family. Likelihood of exploitation and harassment.	Risk especially for girls when migrant and isolated from family.	
Forced labor	Children can be forced to work to pay for the debt.	Indebted labor is not rare and children can be the targets.	
Working Conditions	**Yes**	**Yes**	No children or adolescents shall be required or allowed to work in any farm unless following conditions are met: (a) a certificate of fitness granted with reference to him under Section 27 should be in the custody of the employer; (b) Such adolescent children carry with them while they are at work, a token given in reference to such certificate.
Hours of work	10-12 hours a day. From 5AM to 6.30 PM	10-12 hours a day. From 6AM to 6.30PM	A. Maximum work/day = 6 hours*B. Adolescents and children should work less than twenty-seven hours a week*C. Except with the permission of the State Government, no woman or child worker should be employed in a farm to work between 6 A.M. and 7 P.M.*D. An adult should work less than forty-eight hours a week
Rest Periods	Only one rest period	Only one rest period	An hour of rest after three hours of work

1. Pesticide Usage

There is high pesticide usage on cottonseed farms. According to a representative of a seed company interviewed for this study, hybrid seeds crop varieties and cropping patterns are more vulnerable to pest attacks compared to normal crops. Fifty percent of all pesticides used in India are applied on hybrid cottonseed farms during the production process. A number of pesticides—Endosulphan, Monocrotophos, Cypermethrin and Mythomyl—are widely used. These are considered highly toxic and dangerous for humans. Exposure to certain chemicals can increase the skin's sensitivity to ultraviolet light through photosensitization. Pesticides are dangerous for adults and still more dangerous for children and young workers, since the capability of the latter to expel toxins from the body is much lower as compared to adults. Moreover, the breathing rate of children is much higher than adults and their larger surface area of skin per unit of body weight, make them breathe in and absorb higher concentrations of toxic chemicals.

Interviews with children did not highlight any symptoms of exposure. However, the study team, during a visit to a farm in Jammalamadugu, Andhra Pradesh, found a boy resting under cotton plants complaining of a severe headache. A recent study by Physicians for Human Rights (PHR) reports that children working in cottonseed farms are exposed to several health risks such as headaches, fever, dizziness, nausea, rashes and diarrhea. In severe cases, pesticide exposure can lead to convulsions, coma and death.[14]

2. Lack of Material Safety Data Sheets (MSDS), Personal Protective Equipment and Awareness on Pesticide Application

Upon visiting two retail stores where growers purchase chemicals, it was learned that none of the stores sells protective gear or provide the farmers with information on safe usage of chemicals. In the storeowners' opinions, the information written on the box (label) is sufficient. The problem, however, is that most of the farmers are illiterate. The storeowners did not know where to procure protective equipment and none of the farmers or the organizers knew where to do so either.

Personal protections appear to be nonexistent at the fields. The only precaution a farmer takes while applying pesticides is to wrap a towel around his face. The applicators do not wear gloves, boots or eye protection. The farmers wear open toe shoes. During the second field visit, young workers and adults were seen spraying pesticide and preparing for pesticide application throughout the day both in Gujarat and Andhra Pradesh. Pesticide was being sprayed at the same time that other workers were working in the field. Persons handling pesticides and spraying them, did not use any protection such as gloves, masks, shoes, etc.

14 Mathews R, Reis C, Iacopino V. "Child labor. A Matter of Health and Human Rights." J Ambul Care Manage. 2003 Apr-Jun; 26 (2):181-2. PubMed PMID: 12698932. From May to July 2001, PHR investigated the health experiences of 100 children in hybrid cottonseed production in rural Andhra Pradesh. Eighty-eight percent of the survey participants were girls, ages 7 to 14. PHR found that children worked on average 12 hours a day, were frequently exposed to pesticides, and were not provided with safety equipment, not even shoes or water to wash their hands and clothes. Children reported having frequent headaches and dizziness and skin and eye irritations after pesticide spraying. All 100 children reported that they were unable to go to school during the hybrid cottonseed season due to work demands. Ninety-four children reported to PHR that they would rather be in school. In addition, a majority of child workers interviewed by PHR reported physical and/or verbal abuse by their employers. Moreover, PHR interviews with representatives of multinational and national companies revealed knowledge of child labor practices for up to 10 years. THIS LAST SENTENCE: WHAT DO YOU MEAN? THAT NATIONAL AND INTERNATIONAL COMPANIES KNEW ABOUT CHILD LABOR BEING USED FOR 10 YEARS AND DID NOTHING ABOUT IT? SOMETHING ELSE? NOT CLEAR.

3. Lack of Observance of Re-entry Intervals on Cottonseed Farms

According to interviews conducted during study, during cross-pollination work, children stand among cotton plants, which reach up to their shoulders, and bend the plants over themselves as they identify flowers ready for pollination. In ordinary cotton production, in order to avoid exposure to pesticides, no work is done on the days when pesticides are sprayed. But in cottonseed cultivation, cross-pollination work is carried out even during the days when pesticides are sprayed in the fields. Exposure to Endosulphan, which is an organochlorine, affects the nervous system; the typical symptoms of acute Endosulphan exposure are precisely those that children working in cottonseed fields often experience: headaches, weakness, disorientation, convulsions and respiratory problems. In the absence of a longitudinal study of the health of these children, there is no way of assessing the long-term impact that such exposure would have on their health.

Pesticide is sprayed two times a week during high plant growth period The assessment team noticed during the second field visit that pesticide spraying was being carried out while workers were working nearby—children, young workers and adults working in the cottonseed fields were directly exposed to pesticides. In the course of pollination work, children, and young workers are exposed to pesticides for a lengthy period of time during the day, under the sun.

4. Storage of Chemicals

On the visited farms, no separate arrangement for storage of pesticides was identified. Farmers kept pesticides in the same room where the family resides (usually single room houses). Thus, the children and food items were open to pesticide exposure. In Gujarat, however, the team observed during visits to farms that pesticides were stored in a storeroom.

5. Lack of Training

The assessment team found that workers were not aware of the dangers of pesticides and did not know how to protect themselves from exposure and side effects.

Other Health Issues

The following summary of tasks (Table 4) was completed after a task mapping exercise was performed to identify dangers for children, young workers and adults.

TABLE 4: TASKS AND INVOLVED RISKS FOR CHILDREN, YOUNG WORKERS, WOMEN AND ADULTS

TASK	RISKS FOR CHILDREN	RISKS FOR YOUNG WORKERS AND WOMEN	RISKS FOR ADULTS
Land preparation, plowing	Children experience hands, back and leg pain.		
Seed sowing	Children suffer cuts from use of sharp tools. Due to repeated bending, they experience back pain.	Sharp tools.	
Watering	Carrying heavy weight; neck aches at the end of the journey.	Carrying heavy weight. Need risk assessment of this task.	

Crop management	Children return to work in the fields immediately following pesticide applications. The seed company said that this is not possible because pollination requires dry plants. However, a study by Dr. Davuluri Venkateswarlu, as well as the interviews of the organizers, their supervisors, farmers and children confirm the lack of adherence to re-entry intervals. *Lack of protection from pesticides. Some children have fainted; others experience dizziness, vomiting and headaches. No water and soap available for hand washing when exposed to pesticides during work activities.	No protection. Can spray pesticides.	No protection when spraying pesticides.
Weeding	Cuts in legs and fingers.		
Hybridation	Repetitive movement can result in stress and strain to the hands, wrists and elbows, causing carpal tunnel syndrome and muscle spasms. This can prevent children from being able to use a pen. One child complained of numbness of fingers in his hand.		
Cotton picking	Excessive working hours without rest leads to body aches. Cuts and bruises due to contact with dry cotton plant.	Excessive working hours without rest leads to body aches. Cuts and bruises due to contact with dry cotton plant.	Excessive working hours without rest leads to body aches. Cuts and bruises due to contact with dry cotton plant.
Heat	Work under the sun for hours without breaks; no safe drinking water provided.	Work under the sun for hours without breaks; no safe drinking water provided.	Work under the sun for hours without breaks; no safe drinking water provided.

Sun Stroke and Availability of Potable Water

Agricultural workers often work under the sun in temperatures exceeding 100 degrees Fahrenheit (40 degrees Celsius). Under such conditions, health experts recommend that workers drink two to three gallons of water a day. Without sufficient drinking water, workers run the risk of dehydration and heat strokes that can cause death or brain damage. Children are more susceptible to heat stress and dehydration. Child agricultural workers mentioned that they do not have access to shade or water at the worksite and that they have to bring their own water to drink. The assessment team found some pots of water kept for the workers in common places in the villages; however, they were insufficient and difficult to reach for most of them. Even though the assessment team was in the fields for most part of the working day, it did not observe any worker drinking water during the working hours.

The Director of a local hospital that was visited during the study informed us that cases of sunstroke and severe headaches, weakness, convulsions and respiratory depression are common on the farms. Children, young workers and adults do not have any protection from the sun or availability of shade during long hours of work. The team stayed the whole day in one field. Farmers did not provide any shade for the workers even during the break. This may pose danger of different types of skin cancers, especially the Squamous cell cancer.[15]

Sanitation Facilities

No toilets are provided for workers on the farms. Hence they have no alternative but to urinate in public. This is humiliating, particularly for girls. At times, they do not get chance to urinate and are forced to retain urine for a long time, which causes them discomfort and poses the danger of urinary tract infections. In some farms in Andhra Pradesh, water for hand washing was also not

15 Squamous cell cancer occurs most frequently on skin exposed to sunlight over long time periods. As such, this type of skin cancer tends to develop where maximum exposure to radiation occurs—forehead, cheeks, nose, lower lip, and top of the ears. It also usually develops in areas where the skin has been damaged by the sun, e.g., areas with blemishes or sun freckles.

available. This poses hygiene issues as workers often eat their lunch with unwashed hands.

Sexual Harassment

Migrant child workers and young workers are at a high risk of harassment and abuse. Lack of facilities such as proper housing, debt bondage, lack of bath and sanitation facilities, are some of the reasons for their vulnerability.

III. OTHER RISKS RELATED TO COTTONSEED FARMING AND THE FLA CODE OF CONDUCT

Presence of Child Labor

During the study, the assessment team found children in all cottonseed farms in Andhra Pradesh and in Gujarat. In Andhra Pradesh, children began to run away and hide whenever they saw the research team. When interviewed, they mentioned that the farmer and labor contractor had asked them to run away whenever strangers came to the farms. According to Dr. Davuluri, the percentage of children in farms had dropped significantly in some areas in Andhra Pradesh from the time he conducted his last study in 2001 (to 20 percent-30 percent compared to 90 percent previously). Still, child labor is abundant in some other parts of Andhra Pradesh and in farms producing seed for local seed companies. In the local farms where children are employed in large numbers, farmers specifically request the labor contractors to supply child laborers as they are easy to control, make fewer demands, are more productive and are paid less.

In Gujarat, though the child labor component of the total workforce is lower than in Andhra Pradesh, seed production is largely dependent upon migrant workers. Migrant workers generally move with their families but in some cases, children migrate for work without their parents. In Gujarat, migrant children with or without their families are at risk of working in other informal sector activities (perhaps even more dangerous) if they are forced to leave the field without other sustainable solutions. This needs to be considered seriously by those concerned about children's exploitation. Lack of community-based programs and NGO intervention was noticed in Gujarat, which makes the risk of child labor very high in the state.

Displacement of Child Labor from Cottonseed to More Dangerous Situations

A child in a bridge school mentioned that his parents made him switch from cottonseed production to construction and he does not know why. After reports in the media regarding the trafficking of children on cocoa farms in West Africa,[16] children were shifted to informal work, such as mining and prostitution, which are much more difficult areas to monitor to ensure child rights are preserved.

The intention of the Government of Andhra Pradesh, as well as the MV Foundation and other NGOs, the World Bank and ILO, is to track the children who are removed from one child labor situation in order to avoid them entering work in another sector. However, their action is often limited to Andhra Pradesh and they do not have the ability to follow migrant workers during the drought season.

16 A BBC documentary in 2000 highlighted the problem of children living in slave-like conditions on cocoa farms in West Africa. In 2001 additional news stories in the international press about children being trafficked between countries in the region aboard the MV Eterino, again reminded the world about trafficked labor and its consequences on children.

Another issue is that the children from cottonseed farms are currently receiving help and assistance through organizations like the MV Foundation. Such assistance is extremely beneficial; however, it may not be available for child laborers in other sectors. Children who leave cottonseed production and end up in other more hazardous labor situations, may suffer as a result.

Low Wages, Excessive Hours, Limited Benefits and Consequence of Forced and Bonded Labor

According to the interviews, most children employed in cottonseed farms are in debt bondage. The farmers recruit them on a long-term contractual basis—generally for the entire crop season—by giving loans or advances to their parents. The ICN study reported that in Koilkuntla and Sanjamal mandals of Kurnool district, where seed production is highly concentrated, seed farmers engage migrant child workers. They bring children of families to whom they have advanced loans from 30 to 100 kilometers away. Children stay with the seed farmers throughout the season. It is the responsibility of the farmer to provide children with boarding and accommodations. Migrant children are often placed into camps consisting of 10 to 30 children and are provided food. The working conditions of migrant children are worse than those experienced by local children: there are no specified working hours for them, going to the fields at about 5 am and working until evening (6 to 7 pm). After returning from the fields, they are required to do a few additional hours of work at the employers' house. Of a total of 480 children surveyed during the ICN study, 135 were migrant.

Table 5 highlights other issues present in the production of cottonseeds in India.

TABLE 5: ISSUES REGARDING COMPENSATION AND HOURS OF WORK IN COTTONSEED PRODUCTION

	INTERVIEW WITH GLOCAL RESEARCH	INTERVIEWS WITH LOCAL CHILDREN	INTERVIEWS WITH FORMER BONDED LABORERS/MIGRANT CHILDREN	BONDED ADULT/ MIGRANT	MAN/WOMAN
Hours	9 to 9.5 hours per day Winter: 11 to 12 hours per day Migrant and bonded children, under the control of farmers, work 12 to 13 hours per day	9AM to 5PM	5/6AM to 6PM + home work	7AM – 7PM	
Wages		INR 18 - 20 per day	INR 450 - 600 per month (for 30 days) but children have to work at night in the employers' house.	INR 18 per day	According to study and interviews of farmers, men earned around 50 percent more than children. Women earned 35 percent more than children.
Day off	No	No	No	No	No

Children interviewed in this study did not mention their status as bonded labor. In Gujarat, the team observed educated young people working as migrant laborers. When interviewed, they mentioned their willingness to go back to school after work was over. Incidentally, one of such young girls was a postgraduate student. Migrant children, and especially girls, are under the authority of the farmers and the labor contractors as long as they stay in the field and thus are more vulnerable to be abused.

IV. EDUCATION OF CHILD LABORERS

According to various studies, 60 percent of children working in cottonseed production are school dropouts. Seed producers extend loans to parents of the children at a crucial time during summer. At this time, work is not available in villages, often due to drought, and parents are most likely to face financial problems. Parents feel pressure to agree to the contracts because they need the money; once school begins, they send their children to work in the cottonseed fields in order to respect the agreement settled earlier in the season.

During the field visit in Andhra Pradesh, local school Principals told the research team that children were dropping out of schools mainly between the 8th and 10th grades to join the labor force. Villages are located far from each other and some villages don't have schools. There is no transport facility, which discourages children from attending school. In Andhra Pradesh, the schools are ready to work with NGOs and companies in order to monitor retention of children at school. In the Gujarat region, the schools do not have a plan or interest in keeping migrant children at school. They do not have any information about these children. Currently, in the area where the research team visited, there is no NGO working specifically on migrant children and their education.

Most children working in Gujarat cottonseed fields belong to tribal communities. The literacy rate is very low among these communities. According to Manav Kalyan Trust, one of the few NGOs accepted by the tribal population, the tribal population suffers from discrimination.

V. WHY ARE CHILDREN EMPLOYED ON COTTONSEED FARMS?

The explanations provided by farmers, organizers and companies to the question why do farmers hire children for cottonseed production, mainly centered on the skills of the workers, poverty and the cost of hiring children being much lower than the cost of hiring an adult. Amongst others, key reasons were provided to the assessment team are presented in Box 1.

The primary explanation provided by the parents as to why they send their children as workers in the farms is poverty. Nevertheless, this cause may be directly linked to their lack of understanding about the long-term benefits that an education can provide for their children in the future. As schooling is currently structured, children are unable to secure jobs after they complete their formal education. Thus, they consider that learning a job skill, even as harsh as it might be in cottonseed production, is better

BOX 1: REASONS FOR EMPLOYMENT OF CHILD LABOR IN COTTONSEED FARMS

- Young girls are thought to have more nimble fingers than women and their work is better. (The process of emasculation is a delicate process, and therefore girls do a better job)
- Height of the plant on an average is 5 feet and is just the right height for girls
- Girls work faster and are trustworthy
- Children are cheaper than adult labor
- Children are more docile and can be controlled more easily
- Children are more patient
- Drought and poverty create the economic stimulus
- Lack of adequate and accessible credit forces parents to engage their children in the harsher forms of child labor, such as bonded child labor
- Some parents feel that a formal education is not beneficial and that children learn work skills through labor at a young age

than parents spending the resources to send their children to a school that results only in their returning to work in cottonseed production when they are older.

The MV Foundation conducted a survey in 1987 in some villages around Hyderabad, India to determine the factors that motivated children to go to school. The conclusion reached was that children attended school in spite of poverty and that non-economic factors, such as motivation of parents and good teaching, were important. Indeed the parents interviewed wanted to understand why they should send their children to school, since they cannot get a job after school.

At the request of the MV Foundation, a study entitled "The Impact of Withdrawal of Girl Children from Cottonseed," conducted by Glocal Research, found that for the period from 1998 to 2001, the withdrawal of children from work had a positive impact on the economic status of their families. The total income of the families increased from INR 6,410 in 1998 to INR 8,375 in 2001. The income of a family where one child was still working slightly declined. Children's earnings accounted for a significant portion of family income in 1998. On average, they contributed 28.7 percent to the family's income; adult male and female earnings accounted for 42.8 percent and 28.3 percent, respectively. By 2001, the situation had drastically changed. The contribution of children had fallen to 4.2 percent, while the contribution of male and female adults increased respectively to 55.5 percent and 40.1 percent. The withdrawal of children brought about significant changes in work sharing. For example, in one family in 1998 a child worked 30 days, the father 18 days and the mother 24 days; in 2001, the father worked 27 days and the mother worked 27 days and the child did not work any days at all.

One can therefore conclude, based on the experience of the MV Foundation and Dr. Davuluri's study of farmers who gave up the practice of using bonded labor, poverty is not the main reason for hiring children and adults can perform the task of hybridization. However, the cost for the farmer will substantially increase.

VI. ACTIVITIES OF CIVIL SOCIETY ORGANIZATIONS WITH REGARD TO CHILD LABOR MONITORING AND ERADICATION

A few organizations have been working in the area of child labor for many years and some new initiatives have started in the region to address the issue of child labor in the cottonseed sector. Presented here is a preliminary scoping of organizations, initiatives and activities.

MV Foundation (MVF), established in 1981, works mainly through a group of 600 volunteers and is one of the more experienced organizations in child labor rehabilitation and education. The goals of the foundation are threefold; (1) create awareness; (2) facilitate processes towards building a civil society through collective action, participation and community-based initiatives; and (3) work towards elimination of child labor. Its activities seek to strengthen the existing schooling infrastructure by appointing para-teachers in government run schools and to run child labor free villages – MVF's philosophy is that each child needs to be in full time schooling. Any child out of school is considered to be a child laborer, regardless of whether they are engaged in wage or non-wage work, working for a family member or others, employed in hazardous or non-hazardous occupations, or employed on a daily wage or contract basis as a bonded laborer. Additionally, the MVF considers that all work or labor is hazardous and that it harms the overall

growth and development of the child. The MVF began working with youth but soon realized that the elders in a village need to be motivated first, since they are trusted and respected by families. In addition, they found that the elders are often landlords who kept bonded children. The landlord in the villages where the MVF has conducted interventions explained that there is peer pressure not to use child labor; children cannot be employed when the entire community sends children to school and a landlord who does so will be singled out. A child right protection committee is created or established in each village at the mandal level to ensure proper monitoring. Another key approach is to follow-up on the activities of each child because it is easy to skip school to work or drop out from school entirely. According to MVF, the long–term solution is not to provide monetary incentives to the parents in order for them to send their children to school but to make them believe in education. MVF runs a number of bridge schools were child laborers can be sent if they are found in the fields; these bridge schools provide children an opportunity to "catch up" on years of education on which they have missed out and feel part of the system when they are integrated with the regular schooling system. The Andra Pradesh State's Department of Social Welfare adopted the MV Bridge School Model in their "Back to School Program" for the entire state. The Department of Social Welfare was trained by MVF to implement this program. The education department has instructed all headmasters to admit students at any time during the year in response to pressure from the parents.

The interviewed farmers, ILO representatives and employees of seed companies do not consider children of farmers as child labor as defined by the ILO, as long as they go to school. Parents interviewed complained: "If we saw a benefit to send our children to school we would" or "there are no benefits now, no work for them after school." In India, there is only one agricultural vocational school at the level of the 12th grade and almost nothing exists after 10th grade. The ILO has indicated that they will try to organize a light "vocational school," but nothing is planned for agriculture. With the high level of unemployment prevalent in India—government will need to create 70 million jobs within 5 years—children will be forced to go back to whichever fields still offer jobs. The ILO, World Bank, and NGOs have programs similar to the MVF; ILO-IPEC and the UNDP have also initiated special projects for addressing the issue of child labor in areas where cottonseed production is concentrated. Several NGOs like APMS (Andhra Pradesh Mahila Samatha) and SHECS (Sri Hanumantharaya Educational Charitable Society) are also actively involved in the elimination of child labor in some parts of the state.

In 2002, a consortium of employers representing the Seedsmen Association and of seed-producing companies, seed organizers and seed farmers together with 21 other organizations including the ILO eliminated child labor in the Bhutpur Mandal of Mahabubnagar district. The association contributed INR 500000 ($11,000) and the ILO INR1000000 ($22,000) towards an initial investment for launching a residential bridge school for child laborers.

Seed multinationals Monsanto, Emergent Genetics, Hindustan Lever, Syngenta, Advanta and Proagro (a subsidiary of Bayer), and some leading Indian seed companies—all members of the Seed Industry Association (SIA)—set up a Child Labor Eradication Group (CLEG) for internal monitoring of labor practices. They also worked out a plan with the MVF for external monitoring. It was determined that the companies would provide a list of farmers with whom they have a contract for cottonseed production and local Child Rights Protection Committees would monitor the labor employed by the farmers. At the SIA's annual assembly, a resolution was

passed "to proactively discourage directly and through its members the practice of child labor in hybrid cottonseed production and further take effective steps, along with other stakeholders, towards the eradication of this evil from the hybrid cottonseed industry." SIA set up an external monitoring mechanism through the child right protection committees and decided to also set up a child rights protection group. Some actions have already been undertaken by the latter group, such as caps with the slogan, "No Child Labor," and development and distribution of leaflets and posters within the villages.

CEASE-Child Labor (Consortium of Employer Associations for the Elimination of Child Labor) in Andhra Pradesh has set a target to eliminate child labor by 2004. It has initiated various programs to achieve this goal and is implementing them through the District Primary Education Program (DPEP).

Sevac is an NGO comprising farmers and landowners. Sevac conducts analysis of tasks in cottonseed farms and works towards finding solutions to eradicate child labor through the improvement of crop management. For example, with pot watering, Sevac works with IDE (International Development Enterprises), a U.S. NGO, in developing micro-level irrigation techniques. IDE promotes the use of micro-drip technology that may take care of the entire water requirement of the plants while controlling weeds, optimizing water usage by plants, cutting down fertilizer input and, most importantly, eliminating the use of child labor for irrigation and weeding. The potential results for the farmer are better quality seeds. As an incentive, Novartis (Syngenta) gave INR 10 per packet of 750 gram of seed to growers who implemented the micro-drip process in their fields. Sevac observed that the cultivation of seed by large, leased-land farmers increased the risk of child labor. Small farmers in Karnataka and Gujarat do not employ child labor; three adult working family members are able to handle seed production in 1/2 acre. Sevac discourages production by large leased land producers and promotes the use of small local farmers.

CONCLUSION

As described in the study, the main labor standards issues on cottonseed farms—in addition to child labor—are forced labor (bonded labor), wages, overtime and health and safety. All these are compounded by lack of awareness, training and capacity building. Discrimination, harassment, abuse, and freedom of association, although also important, were not the focus of the current study.

Child labor is a multi-dimensional problem in the Indian cottonseeds sector. Much of it can be attributed to poverty but other root causes—such as lack of awareness by companies, growers and parents of the child laborers, lack of other employment opportunities, lack of internal management and monitoring systems with in companies' production programs, and lack of effective government schemes—contribute to the presence of child labor. Desire on the part of employers not to pay minimum wages was also identified as one of the root causes of child labor. As growers tend to pay less and seek to extract more work out of workers, they prefer to employ children on the farms. Most health and safety problems are mainly due to lack of awareness and knowledge about personal protective equipment, which can be addressed easily with awareness raising campaigns and change behavior programs.

With regard to child labor, there is a growing consensus that no program can legitimately be considered successful if it makes children worse off than they were before. For example, the withdrawal of children from work cannot be considered a success if it results in keeping children at home to take care of siblings, displaces them to worse or similar work sectors, or leaves children in a situation where they do not have access to proper education at schools. Therefore, the involvement of families and of the community at large is necessary to define the social value of a program. There are some relevant initiatives by local civil society organizations which do take into consideration some of the above-mentioned issues; companies and governments could leverage these to supplement their own initiatives.

In the current situation, a number of initiatives are required to target child labor and other issues from various perspectives. This would involve training and capacity building followed by monitoring of progress made. Involvement of local civil society and government is also imperative to make interventions sustainable and capable of achieving long-lasting results. In Annex I we make certain recommendations that the seed companies working in the hybrid seeds sector can consider as they develop their individual strategies.

An immediate need is to define and create a common definition, understanding and benchmarks for child labor, young workers and children working on family farms. These tasks could be carried out through stakeholder consultations. Establishing internal information management and documentation systems will help companies know their upstream supply chain. Task and risk mapping in production locations could help determine high-risk areas and strategies that need to be put in place. There has to be training and capacity building for all stakeholders involved in the program to improve working conditions. A scoping study of available remediation and preventive programs available from governments and CSOs needs to be conducted, so that in the long term the companies can interface with these programs directly as they develop interventions in their production locations. Finally a program to monitor progress and impact of the company program needs to be developed and implemented.

ANNEX I: RECOMMENDATIONS

The recommendations are divided into short-term (1 year), medium-term (2-3 years) and long-term (3-5 years) strategies.

SHORT-TERM STRATEGY

I. Clarify Definition and Scope of Child Labor

- Define the days and hours of work for children under 14 years on family farms
  - Set criteria for work before and after school[17]
  - Set criteria for non-hazardous work on Sunday and during vacations[18]
  - Define the scope of work that can be performed by children under 18 years
  - Conduct a multi-stakeholder convening to define the above-mentioned definitions and criteria
  - Include these criteria in business contracts with seed organizers
- Set criteria for work for young workers

II. Develop Internal Information Management Systems and Documentation System

Based on task and risk mapping, the companies should assess the risk of child labor before choosing farmers by identifying areas where child and bonded workers are concentrated. Seed organizers could be instructed to choose farms/farmers where the risks of child labor are lowest because certain programs to address child labor are in place. Areas where government schemes or civil society organizations are not operating should be treated as at-risk; it will be necessary to find educated youth, community members and community workers in the villages to support compliance and remediation programs.

Companies should require seed organizers to maintain documentation derived from task mappings including all details of the farms and production locations (water supplies, local organizations, number of schools, attendance at school, acreage of each farm, and number of people working on the farm). This should also include the names of people who work in the fields and the compensation they receive. If migrant workers are present, seed organizers or farmers should record the name and address of the laborers. Such records will help the internal company

17 Excessive hours of work lead children to miss classes and leave them too tired to study. Eventually, they fall behind in their schooling and frequently drop out of school completely. Of those children interviewed who were still in school, several explained that they often missed school to work. Dropping out of school is a very high risk for these children. Seed companies should therefore discourage the work of children less than 14 years of age, whether or not in family farms, before and after regular school hours.

18 Non-hazardous work is viewed in India as socially acceptable, especially when a family member performs the tasks. There are no rules or regulations preventing the children of farmers from going to the fields and there is no legal protection except for dangerous activity. The benchmark against which performance will be measured will have to be very clear on the types of hazardous work children cannot perform or that require special protections. The benchmark should integrate the protection framework provided by the Child Labor (Prohibition and Regulation) Act of 1986, the Farm Labor Act of 1991, and the Minimum Wages Act of 1948.

monitors and external independent monitors assess the risks and help make a comparison during the field visits by seed company representatives, organizers, and external monitors. This will help to overcome the problem of children hiding or running away from the fields when they see inspectors and monitors.

III. Initial Mapping and Relationship Building with Stakeholders

The companies should work towards establishing proper field level cooperation between seed companies' field staff, organizers, local civil society organizations and other state institutions. Civil society organizations and the ILO have already established reliable groups and networks in villages where older adults, youth and the women are involved. These existing networks and programs should be leveraged to avoid duplication of work and put in place grievance systems and third party complaint mechanisms. In some villages the local administration have also put in place preventive programs for child labor. Seed companies' field staff should make frequent visits to the fields and should meet the local NGOs and village personnel at least once a month. Sharing of information and joint field inspections are important.

IV. Contractual Agreements with Organizers

A "no child labor" clause on contracts with organizers is not enough to provide protection against child labor. The vague definition of child labor and the unclear format of the contract make enforcement challenging.[19] Therefore, it is necessary to clarify the issues and fix accountabilities among organizers, contractors and farmers before a contract is finalized. Some points to keep in drafting a contract include:

- Contract should define child labor, child work, and young worker, hazardous work and the expectations of the seed company.
- Organizers should be trained to define and identify code of conduct issues and the organizer should confirm in writing that he understands and accepts the code commitments specified by the seed company in the contract and appendices, and that he will select farmers taking into consideration their ability to respect the terms of the seed companies' code of conduct.
- The contract should bind the organizer to:
  - install a system to combat child labor and meet other code standards;
  - monitor child labor and other code components as required by the seed company;
  - ensure that corrective actions and other remedial measures are taken in response to violations.
- The contract with organizers should include additional tasks required in order to assess child labor and other labor issues such as:
  - complete the checklist about the pre-selected farms by collecting accurate information from the farmers, NGOs and the community, including the availability of schools, prior to accept any contract with the farmer.

19 (1) Organizers cannot be directly responsible for contracts between farmers and labor contractors or workers. (2) The probability that an organizer will terminate a contract with a farmer during pollination in nearly nil because his income is directly related to production. (3) Seed organizers often have a strong link with the farmers that will prevent them from terminating contracts. In several cases seed organizers also have pesticide and fertilizer business and they supply these inputs to farmers on a credit basis.

- wherever applicable, the organizers should provide the name and address of the labor contractor they are working with. It would be important to select labor contractors who do not employ child labor and to conduct training for other code elements.
- provide to the seed company lists of the workers in charge of spraying pesticides in order to organize training for them.
- encourage all farmers with whom they make agreements to receive training on pesticide application, safety regarding pesticide application and re-entry, safety issues, and work by child labor and young workers; trainings should be organized with the help of seed companies.
- put in place or organize safe storage facilities for pesticides in each village.

V. Contracts with Farmers

Contracts with farmers should include provisions that will allow internal and external monitoring. Written contracts with farmers should be signed in order to ensure that farmers are aware of and understand the commitments they must meet. Because many farmers are illiterate, literate witnesses should also sign the contract to attest that the farmer understood the contract. Copies of the contract should be sent to the seed company. The seed company should see to it that the contracts between farmers and organizers are consistent. Following are some recommendations on what the farmers may do:

- Employ a trained and certified adult worker responsible for spraying pesticides.
- Employ only workers above 15 years of age.
- Protect young workers according to the standards set.
- Work with labor certified contractors if possible.
- Provide personal protective equipment for all workers in the field.
- Work in cooperation with the seed company and the NGO selected by the seed company to improve working conditions.
- Provide any information requested by organizers, seed companies field staff, NGO selected by the seed company, and external monitors.

VI. Chemical Protection and Training

The companies should name a representative to assist farmers in developing a concrete action plan for workers' safety training, education, and protection from chemical exposure. Ensure that each farmer and worker spraying pesticides receives protection equipment and formal training on proper use of chemicals and re-entry into fields. This training should be conducted at the beginning of each season. After the training, follow up actions (training in the field and monitoring) should be taken up by the company to see if the training was properly understood and implemented.

The indiscriminate use of pesticides by farmers is escalating their costs of production. Seed companies should provide training on effective crop management strategies and other integrated

pest management practices that could be utilized effectively not just for cottonseed but also for other farming activities. This includes training on the appropriate methods for mixing, loading and applying pesticides, safety in use and application, selection of appropriate chemicals for cottonseed farms and other crops, and health, safety and child labor issues.

Mandatory protection for workers spraying pesticide:

- The task of application of pesticides on the farms should be restricted to trained adult workers (above 18 years old).
- Pesticide application should be done in the early hours of the day or late in the day.
- Pesticide application should be forbidden when the sun is at its highest.
- Pesticide re-entry procedures should follow international rules.
- Seed companies should provide protection equipment (i.e., hand gloves, facemask, and cloths) free of charge after the training. Wearing protective devices should be made mandatory.
- A free storage facility must be provided by or with the help of the organizer in each village to store the growers' pesticides.

Mandatory protection for all workers:

- Shoes and hat/towel.
- Short rests for young workers and pregnant women, especially when the tasks are repetitive and during the afternoon when the sun is at its highest.
- Shade should be provided in each field.
- Drinking water and water to wash hands should be provided at convenient places.
- Workers should get training about safety issues (how to bend or maintain right posture).
- First aid box in each field/common locations.
- Restricted-entry intervals (REIs) - the time period after pesticide application when entry to the treated areas is banned or limited – should be strictly observed. Special REIs for children should be established; taking into consideration the greater risks they face from exposure to toxic chemicals.
- Organizers should check on the proper storage of pesticides and the proper disposal of empty pesticide containers.

VII. Compensation

Interviews with farmers, particularly in Andhra Pradesh (AP), indicated their dissatisfaction regarding compensation. At the current procurement rates they receive from companies, they are unable to pay adult minimum wages and attract sufficient number of adult laborers to work in their fields. In most locations in Andra Pradesh the wage rates paid to cottonseed workers vary between INR800 - INR1200 per month. In the Adoni area in AP, children are employed on large

scale and they are paid INR20 - 25 per day (as compared to adults who are paid INR 30 – 40 per day) . Considering the long hours of work, the wage payments currently made for both local and migrant workers are below the local market wages for adult workers. A detailed study of cost of production, wage rates and price should be conducted, and if required, procurement prices of the farm products may need to be increased. If the farmers cannot afford to pay adults, they will continue hiring children and monitoring efforts will be in vain.

MEDIUM TERM STRATEGY

I. Internal Monitoring

Once the initial mapping exercises, management structures and trainings as described above have been implemented, seed companies need to develop an internal monitoring system.

An internal monitoring program may consist of setting standards based on the FLA code of conduct, [20] a process to measure conditions and progress at the farms, systems to secure feedback from the farmers, and putting in place remedial measures. The initial checklist filled out by the organizers will form the foundation of the internal monitoring tools. The seed company should provide organizers and field officers (supervisors) the internal monitoring checklist and train them to collect data from the field. Organizers will also need to be trained on code of conduct elements and their applicability in the agriculture sector. The organizer should provide to the company any feedback regarding resistance or problems encountered by farmers in complying with FLA Code of Conduct.

- This monitoring checklist should be sent, after each visit, to the seed company.
- The seed companies' representative should cross-check the initial checklist filled out by the organizers against the internal monitoring check lists as well as any information provided by the stakeholders. This analysis should be conducted after each field visit in order to develop and put in place a remedial plan immediately.
- A team comprised of organizers, representatives of the seed company and the community (youth committee, child labor committee) could undertake monitoring at the farm/village level.

Role of Organizers and Supervisors (Representatives of the Seeds Companies)

Organizers and supervisors play a crucial role since they select farmers and conduct three to four visits to the farms during each season. They are in a position to collect valuable information on code compliance using a short monitoring tool. Organizers and supervisors will have to assess the potential risks in each area and focus their monitoring efforts accordingly. The seed company will be able to collate and analyze monitoring results to determine the overall risk profile of the area and the priorities for compliance training and remediation. That information will guide the choice of areas to be externally monitored.

Organizers and supervisors have a crucial educational role to play in raising the awareness of farmers on the dangers of child labor, the need for greater occupational health and safety and

20 http://www.fairlabor.org/our-work/labor-standards

the means to achieve code compliance. To perform this role, organizers and supervisors will need training on code issues, which could be conducted by the FLA, the ILO and/or other civil society organizations and subject matter experts.

The work of organizers and supervisors needs to be complemented and extended by local counterparts in the villages who are literate and aware of the issues. With the assistance of grass-root level organizations, organizers and representatives of seed companies will need to meet with literate representatives in villages to establish or work with committees that can cooperate with compliance efforts by educating children, parents and farmers and assisting in the communication and resolution of complaints. Seed companies should concentrate on establishing or working with village committees in order to ensure that there are local advocates of code compliance who can also help in the resolution of complaints. This will take the form of a Community Based Monitoring System.

Sanctions and Incentives

Although the threat of sanctions seems to be a way of achieving compliance by farmers, it has several drawbacks. Firstly, it can drive children into some undesirable—or even more exploitative—workplaces. Secondly, the effect may be short-lived because the attitudes about child labor have not been changed. Strict enforcement alone—except in the case of evident life threatening hazards—is unlikely to be successful in the long term without additional measures that make it cost-effective for the family to release the child from work. Farmers should be held responsible for the burden of the children's education and wages if they employ migrant children through a labor contractor. However, the organizer should also be held responsible if he didn't take the measures mentioned in his contract pertaining to avoidance of risks of child labor and safety issues. If a labor contractor has hired the children, they should be banned from working with the seed company and the farmers working for the seed company, from the next season onwards. In case of farmers' children or relatives engaged in the farm work, the seed company should study the situation of each child, on a case-to-case basis, with the help of the NGO concerned.

Based on the information provided by the organizer when he selected the farmers, internal monitoring, external monitoring and the advice of the NGO, the seed company should provide an incentive for farmers who do not employ children and who have implemented safety measures at work. This incentive, and the reasons for the incentive, should be prominently publicized.

II. External Monitoring

Objectives and Action

External monitoring should assess:

- Contracts between the seed company and organizers
- Information management systems at the seed companies' offices
- Internal monitoring systems developed by the seed companies
- Contracts between organizers and farmers
- Selection of farmers by the organizers

- Risk profile based on task mapping and reports from the organizers, representatives of the seed company, NGOs and village committees
- Random selection of farms in high-risk areas
- Conditions on the farms in high-risk areas

The seed company should maintain an updated database containing the compliance information supplied by organizers and other stakeholders. That information should be used to generate risk profiles that guide internal and external monitoring efforts. The external monitors should use this information to derive a sample for monitoring.

LONG TERM STRATEGY

Child Labor

If child labor is found in the fields, seed companies should collaborate with local Civil Society Organizations for their removal from farms and rehabilitation. For children under 14 years old, seed companies should work with the existing bridge schools or regular governmental schools. As soon as a child is found, representatives of the seed company should make appointments with the farmers, parents, the monitoring committee (if in place) and the local civil society organizations working in the field in order to find a solution for the child. In many instances, schools do exist and NGOs are sufficiently competent to take care of the problem.

Young Workers over 14 Years Old

Seed companies could work with young workers above 14 years of age who are educated to provide special training on crop management and safety that could help them to improve productivity and quality. This training could demonstrate to the farmers that sending children to school can lead to better production and quality and to a better life. If young workers are trained and perceive the value of school, they could help to prevent child labor in their own family and in the community. Farmers would be able to improve crop management.

For young workers who are not educated, literacy courses should be combined with vocational education. Vocational literacy programs are the basis or key to learning crop management. Literacy courses with a vocational objective such as crop management is viewed by workers interviewed as relevant and beneficial to the life of a farmer.

Vocational Training - Cotton School

One farmer complained that they do not have the necessary training. If the children could learn how to manage the crops, they would send their kids to school. According to seed company employees and organizers, it is in their best interest to have trained farmers in order to achieve the quality standards desired and to avoid crop waste. The creation of a vocational “cotton school” for young workers above 14 years of age would provide many opportunities and benefits for children, farmers and seed companies.

Agricultural Employment to Avoid Bonded Labor

A critical issue for cottonseed producers and one of the factors stimulating bonded labor and child labor in cottonseed production is that children and workers are readily available. Drought and poverty spur the ready supply of children for work. Cottonseed production is labor intensive and occurs at regular times (4 months per year). As children are withdrawn from cottonseed production there will be an increase in the demand for adult labor, which could lead to bonded labor if steps are not taken to ensure that this is prevented. This indicates the need for an adult labor recruitment mechanism that generates an adequate number of adult agricultural workers who are available and ready to work at harvest time. If contract labor is used, seed companies should require a license from the seed company and evidence that these workers are trained on OSH issues, child labor and bonded labor. Farmers should be encouraged to hire people from the certified labor pool.