

CHILD LABOUR IN HYBRID COTTONSEED PRODUCTION IN GUJARAT AND KARNATAKA

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Introduction

Hybrid cottonseed is one of the fastest growing industries in India. India is the first country in the world to introduce hybrid varieties in cotton crop for commercial cultivation. In 1970, the world's first cotton hybrid H4 was released for commercial production by the Government of India Cotton Research Station situated at Surat in the state of Gujarat. Since then, a number of new hybrids have entered the market and its use has been rapidly increasing. Approximately 22 million acres of land in India is used for cultivating cotton, out of which 10 million acres (45% of total cotton area) is currently covered under hybrid varieties. The country has earned the distinction of having the largest area under cotton cultivation in the world accounting for 21% of the world's total cotton area and 12% of global cotton production.¹ Nearly 95% of the hybrid cottonseed produced in India is used for internal consumption while the remaining is exported mainly to South East Asian countries.

The issue of child labour in hybrid cottonseed production in India recently received a lot of attention by national and international media.

The specificity of hybrid cottonseed production in India is that it is highly labour intensive and children are used in most of its operations. Cross pollination which is the vital task in cottonseed production (account for nearly 90% of total labour requirement and 45% of cultivation costs) is carried through conventional method of hand emasculation and pollination. Though hybrid seeds are used in cotton crop in most of the states in India hybrid cottonseed production is concentrated in five states namely Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Tamilnadu. These five states account for more than 95% of the area under cottonseed production in the country. During 2003-04, nearly 55,000 acres were under cottonseed production in the country, out of which Gujarat accounted for 26,000 acres, Andhra Pradesh 14,000 acres and Karnataka 4,000 acres. Andhra Pradesh was the largest cottonseed producing state in the country until recently. Gujarat surpassed its production and has now taken the lead.

The mass production of hybrid cottonseeds in India has produced a new phenomenon – the use of child labor on its farms and cotton processing units. Andhra Pradesh recently received widespread attention due to the pervasive practice of bonded child labor

An active campaign against child labour, initiated by local child rights groups is currently taking place in the state. The large national and international seed companies have

The present study is commissioned by India Committee of the Netherlands.

¹ According to Cotton Corporation of India statistics the actual area under cotton crop in India during 1998 and 2003 fluctuated between 8.6 to 9.2 million hectares.

however claimed that the child labour problem is only confined to Andhra Pradesh and that children are not used in any significant way in seed production activity in other parts of country, particularly in Gujarat and Karnataka.

One of the main objectives of the present study is to examine the validity of these claims. The study will also attempt to provide information regarding the labour market and working conditions since no prior studies on the issue in Gujarat and Karnataka states thus far existed².

Methodology

The observations presented in this report are based on a detailed study of working conditions of labourers in hybrid cottonseed production in Gujarat and Karnataka states in India. A major of this study was conducted during the months of October and November 2003. The study is mainly based on primary data collected from field interviews and discussions with labourers working in cottonseed farms, seed farmers, labour contractors, representatives of seed companies, government officials and NGO personal in three districts each in Gujarat (Sabarkantha, Banaskantha and Mehasan) and Karnataka (Baghalkote, Koppal and Gadag). For detailed analysis of the workforce composition and working conditions of labourers, data was collected on 40 cottonseed farms in 18 villages (10 in Gujarat and 8 in Karnataka).

The names of the villages in Gujarat are Sayajinagar, Asoda , Undani, Vadnagar Ukhal (in Vijapur taluk, Mehasan district) Narsipura, Surpur, Patanpur, Villar, Khedbrahma (in Idar and Khedbrahma taluks in Sabarkantha district. In Karnataka, the villages are Kanakagiri, Tippamal, Chikkedu (in Kanakagiri taluk, Koppal district) Honniganur, Kalkapura (in Rona taluk Gadag District) Mallapura, Yeragoppa and Badami villages (in Badami taluk Bagalkote District).

² The author of present study has conducted several studies on the nature and magnitude of child labour problem in hybrid cottonseed production in Andhra Pradesh. For details see following reports 1) Venkateswarlu, D (2001) ` Seeds of Bondage: Female Child Bonded Labour in Hybrid Cottonseed Production in Andhra Pradesh` Business and Community Foundation and Plan International (India Chapter), 2) Venkateswarlu, D and da Corta (2001) `Transformations in Age and Gender of Unfree Workers on Hybrid Cottonseed Farms in Andhra Pradesh` Journal of Peasant Studies, vol 28, no 3, Pp 1-36 and 3) Venkateswarlu, D (2003)`Child Labour and Transitional Seed Companies in Hybrid Cottonseed Production in AP` India Committee of Netherlands, Netherlands.

SECTION-I

CHILD AND MIGRANT LABOURERS IN COTTONSEED FARMS IN GUJARAT

Growth of cottonseed production area

Cotton is a major commercial crop in Gujarat. Among cotton growing states in India Gujarat ranks second place. Of the total 8.7 million hectares of cotton area in the country during 2002-03, Gujarat accounted for nearly 1.5 million hectares (17%) out of which nearly 70% of the area is covered under different varieties of hybrid seed³.

Gujarat has the distinction of producing the world first hybrid cottonseed 'H4' for commercial production in 1970 and since then it has been one of the important states in the production and marketing of hybrid cotton seeds in India. Since 2000, Gujarat has witnessed a significant rise in cottonseed production area and has become the number one producing state in India of cotton seed.

Table 1 presents recent trends in cottonseed production in Gujarat, indicating a significant rise in the total area under cottonseed production in the state from 1999 to 2004 from nearly 18,000 in 1999-2000 to 26,000 in 2003-04.

Cotton hybrids are of two types - public and private. Public hybrids are developed by state controlled agencies (i.e., Agricultural Universities, research centres). Private hybrids (also called research or proprietary hybrids) are developed by private seed companies through their own research. State Seed Corporations produce and market only public hybrids. The hybrids developed by public sector agencies are registered and notified to enable certification by State Seed Certification Agencies. Private seed companies produce and market both public bred hybrids as well as hybrids developed by them. The foundation seeds of public hybrids are made available by the government for any one (both public and private seed companies) who wants to multiply them and market to the farmers. In contrast, the private or research hybrids are developed by private companies themselves and they have patent rights over production and marketing of that seed. Since 1999, there has been a decline in the area under public hybrids and a significant increase in area under private hybrids. The total area under public hybrids decreased from 13,960 acres in 1999-2000 to 6,175 acres in 2003-04. During the same period, the area under private hybrids (also called proprietary or research hybrids) increased from 4000 to 20,000 acres.

³ The data published by Cotton Corporation of India .

Table: 1 Recent trends in area under hybrid cottonseed production in Gujarat

Year	Area under public hybrids (acres)	Area under private hybrids (acres)	Total (public and private hybrids) area (acres)
1999-2000	13960	4000	17960
2003-04	6175	20000	26175

Source: The data on public hybrids is taken from annual reports of 1999-2000 and 2003-04 of Gujarat State Seed Certification Agency which certifies public hybrids. No official data is available on area under private hybrids. the estimates of area under private hybrids is based on the authors interviews with representatives of various seed companies

Illegal production of BT hybrid cottonseeds

One of the main reasons for the recent growth in area under cottonseed production in Gujarat is due to illegal production of genetically modified hybrid cottonseeds (BT cotton). BT stands for bacillus thuringiensis, a bacterium whose gene is injected into cotton seeds to give them resistance against boll worms. Indian government gave permission to Mahyco-Monsanto Biotech (MMB), a 50: 50 joint venture company formed by Monsanto and Mahyco to conduct field trails of BT cotton hybrids in 1998, which was approved for commercial marketing in April 2002. Before the government of India approved the commercial release of BT cotton hybrids, a private seed company based in Gujarat developed local BT cotton hybrids through back crossing the BT gene with local hybrids and unofficially started marketing the seeds. Since the BT cotton hybrids of MMB were costly (Rs 1600 per packet of 450 grams) the illegal local BT cotton hybrids became popular in the market. This encouraged many small companies, including some individual farmers to enter into production of illegal BT cotton hybrid seeds, which led to a significant increase since 2001.

Cost of production and procurement prices

Compared to Andhra Pradesh, the per acre cost of production is low in Gujarat. One of the important reasons for the low production cost is the shorter duration of cross pollination period. Unlike in Andhra Pradesh where cross pollination work (which alone accounts for nearly 45% of total production cost) is carried over 100-120 days, in Gujarat it is restricted to 50-80 days. This has implication on farmers wage bill. It also has a bearing on crop yields; compared to Andhra Pradesh, the average per acre yields are lower in Gujarat (220 Kg in AP and 150 Kg in Gujarat). The procurement prices paid by the seed companies to the farmers is about 10% lower in Gujarat.

Relocation of production base from Andhra Pradesh to Gujarat

The recent growth of area under cottonseed in Gujarat is also due to decisions taken by a few important companies⁴ to slowly relocate their production base from Andhra Pradesh to Gujarat. This is partly due to growing media attention and campaign against child labour initiated by NGOs, government and international agencies in Andhra Pradesh. As a result, seed companies were under intense pressure to address the problem of child labour in their production farms. Since Gujarat has not received similar attention, some seed companies have relocated there to avoid public criticism. . Compared to Andhra Pradesh, the production cost for the companies is slightly lower in Gujarat, which is also another factor encouraging companies to shift their production base to the state. .

Concentration of seed production in Northern districts

Although the commercial cotton cultivation is spread all across Gujarat, hybrid cottonseed production is concentrated in northern part of Gujarat in four districts namely Sabarkantha, Banaskantha, Mehasan and Gandhinagar. These four districts together account for nearly 90% of the total area under cottonseed production in Gujarat⁵.

Buy back arrangements between companies and farmers

Seed companies are dependent upon local farmers for multiplication of seeds. In order to supply large quantities of seed to the market, companies need to multiply relatively small quantity of foundation seed either developed by them (proprietary or research hybrids) or sourced from public institutions (public hybrids). Multiplication of seed is done by seed farmers in their fields. Indian Land Ceiling Legislation prohibits individuals or companies from owning large areas of land. Hence, companies are forced to depend upon local seed farmers for the multiplication of seeds.

Most companies do not make direct agreements with the seed farmers. Rather, they operate through intermediaries known as `seed organizers`. The seed organiser is a middle person who mediates between the company and the seed farmers to organise seed production. Companies make production agreements with `seed organisers` with buy back arrangements of the resultant seed, and the seed organisers in turn make similar agreements with seed farmers.

⁴ Companies like Nuziveedu seeds (Andhra Pradesh based seed company which has largest market share in cottonseed business in the country), Syngenta, and Gujarat based companies like Navabharat seeds have recently shifted some of their seed production base from Andhra Pradesh to Gujarat.

⁵ Out of 6000 acres of public cotton hybrids in 2003-04, Banaskantha accounted for 1780 acres, Sabarkantha 1320 acres, Gandhinagar 1561 acres and Mehasa 975 acres

Although companies are not directly involved in the production process and do not directly deal with the farmers, they exert substantial control over farmers and the production process through fixing of the procurement price (price paid to farmers), advancing the capital, extending technical advice, and stipulating quality controls. The company sets the norms and procedures to be followed by the farmers while cultivating seeds in the fields. Company representatives with the help of the seed organisers also make frequent visits to the farmers' fields to check whether they are following the norms prescribed by the company. They also offer technical advice to farmers regarding the use of fertilizers and pesticides, and precautions to take while conducting cross-pollination work.

Private seed companies play a dominant role in production and marketing of hybrid cottonseeds in Gujarat; they control nearly 95% of the market share in the state. All the large seed companies have their production base in Gujarat, such as Mahyco-monsanto, Nuziveedu, Emergent Genetics, Syngenta, Ankur, Navabharat, Vibha, Nath and Vikram. Proagro and Advanta, important players in Andhra Pradesh, do not have any cottonseed production programme in Gujarat. The multinational seed companies Syngenta, Emergent Genetics and Mahyco-Monsanto account for nearly 15% of the area under cottonseed production in the state.

NATURE OF WORK AND DIVISION OF LABOUR

The production of hybrid cottonseed is labour intensive, complex and time-dependent. Hybrid seed production in a self-pollinated crop like cotton is a difficult task, especially when large quantity has to be produced for commercial production. Unlike other hybrid seeds such as paddy and jowar, cross-pollination work in cottonseed has to be done manually. Each individual flower bud has to be emasculated and pollinated by hand requiring a large labour force. Crossing is done by placing pollen grains from one genotype of the male parent on to the stigma of flowers of the other genotype, the female parent. The removal of stamens or anthers or the killing of pollen grains of a flower without affecting the female reproductive organs is known as emasculation. The purpose of emasculation is to prevent self-fertilization in the flowers of female parent.

In hybrid cottonseed production, cross-pollination is a vital task. This activity alone requires about 90% of the total labour days. Cross pollination activity begins after 50 days of sowing the seeds and this work has to be carried out regularly. Unlike in Andhra Pradesh and Karnataka where the duration of cross pollination activity is extended up to 100 to 120 days, in Gujarat, cross pollination activity is limited to 50-80days. Hybrid cottonseed cultivation generally starts during the month of June. Cross pollination starts in August and continues through middle of October. Depending on the season 6 to 12 labourers are required per day to do cross pollination activity. The labour requirement is less in the beginning and end of the cross pollination season.

The observations presented in this section are based on a detailed study of 20 cottonseed farms in ten villages in two districts namely Sabarkantha and Mehasan. The names of the villages are Sayajinagar, Asoda, Undani, Vadnagar, Ukhal (in Vijapur taluk, Mehasan district) Narsipura, Surpur, Patanpur, Villar, Khedbrahma (in Idar and Khedbrahma taluks in Sabarkantha district)

Workforce composition (dependence on migrant labour)

Most of the farmers involved in cottonseed production in the study are relatively rich (belonging to upper castes like patel, desai and rajput) and depend mostly upon hired labour. Family labour involvement is less than 10%.

Table 2 presents details of workforce composition in 20 sample cottonseed farms selected for this study in Sabarkantha and Mehasan districts. Of the total 384 workers 332 of them (86.5%) are hired labourers and 52 are family labourers. Among hired labourers 274 (82.5%) are migrant labourers. Migrant labourers come from southern part of Rajasthan (Dungapur, Udaypur and Khervad) and tribal pockets of Gujarat (Panchmahal, Sabarkantha and Santrapur). More than 50% of the migrant labourers are from Rajasthan. Udaypaur and Dungapur districts in Rajasthan from where most of the labour comes to Gujarat for cottonseed work are perennially drought prone areas and known for large-scale migration of laborers in search of wage work.

Table: 2 Workforce force composition in cottonseed farms in Gujarat (2003-04)

Total number of farms surveyed (area in acres)	20 (36 acres)	
Total number of workers engaged during cross pollination activity	384	
Type of labour		
Family	52 (13.5%)	
Hired labour	332 (86.5%)	
Type of hired labour		
Migrant	274 (82.5%)	
Local	58 (17.5%)	
Age group	Male	Female
Children (8-14 years)	54	80
Young workers (15-18 years)	46	76
Adults (above 18 years)	58	70

Age and gender divisions

Over two thirds of labour force in cottonseed production are in the age group of 8 to 18 years. Women account for nearly 59% of the total labour force. The proportion children to the total work force in Gujarat is less than in Andhra Pradesh and Karnataka. **Children below 14 years age group account for 34.9% of the total labour force.** Girl children out number boys and the majority of the labourers belong to the tribal population.

TERMS AND CONDITIONS OF EMPLOYMENT

Advance payments and agreements

Hybrid cottonseed production requires an assured supply of labour to carry out various activities, particularly, cross- pollination work. Keeping this in view, seed farmers prefer to have advance agreements with labourers before starting the seed cultivation, where upon they depend on `labour contractors/organisers`. Labour contractors are responsible for recruiting mostly migrant workers, which accounts for nearly 70% of the total labour force. Most of the labour contractors were once workers themselves, belonging to the same community of the migrants from where they recruit. Before the season starts, seed farmers approach labour contractors, place their demand for labourers, and pay some advance money. The advance money includes travel costs of the labourers from their home to work and some advance equivalent to one or two weeks worth of wage payment. The per day wage rates are fixed in advance and the agreement lasts for one crop season.

It is the responsibility of the labour contractor to identify the required number of labourers and see to it that they continuously work for the farmer for the entire agreement period. Each contractor mobilises around 20 to 100 labourers and place them with different farmers. Farmers do not make any individual agreements with the labourers and, instead they only interact with labour contractors, who in turn make agreements on behalf of the labourers. Payments are made twice or thrice during the agreement period. Substantial wage amount are withheld until the completion of the agreement period.

The labour contractor receives commission from the farmers for arranging the labourers. In addition, the contractor also deducts 10-15% of the wage payment from each labourer as his commission charge.

Ramesh Chandra : case study of a labour contractor (Phlasia village, Udaipur district, Rajasthan state)

Ramesh Chandra (36 years) is a labour contractor. He belongs to a Scheduled Tribe community from a small village called Phalasia in Udayapur district in Rajasthan. He has been working as a labour contractor since 1998. Prior to this he worked as a migrant labourer in cottonseed production for about five years. He mobilizes around 30-50 labourers every year from his native and neighbouring villages and sends

these labourers to do cross pollination activity in Vijapur taluk in Mehasan district of Gujarat. During 2003-04 crop season, he organized 35 labourers for two cottonseed farmers in Asoda village in Vijapur taluk in Mahesan district. He has been arranging labourers for these farmers since 2001. Before the beginning of the season in the month of May 2003, cottonseed farmers approached him and paid an advance of Rs 15000 with an agreement that the latter will organise 40 labourers to them. They also agreed to pay a commission of Rs 100 to him on each labourer. Though he contacted 45 labourers, he could only mobilize 35 of them. These 35 members belonged to 12 families. Most of these families are from his native village and some of them are close relatives. He paid an advance of Rs 800 to Rs. 1000 to these 12 families. He arranged a private vehicle for transportation of these workers to Mehasan district. He also accompanied these workers. The workers were given accommodation in temporary shelters built in the farms of cottonseed farmers.

During cross pollination work, Ramesh Chandra stayed with these workers and supervised their work. He collected the payment from the farmers and settled the amounts to workers. The daily wage rate agreed by the farmers for each worker was Rs 35. Out of this only Rs 30 was paid to labourers. The remaining Rs 5 was deducted by Ramesh Chardra as his commission for arranging the work and settling the payments with farmers. During 2003-04, Ramesh Charda earn nearly Rs 12000 (Rs 3500 commission from farmer plus Rs 8500 commission from labourers) as his commission charges for arranging 35 labourers.

Wage rates and working hours

The wage rates are fixed for the whole season at the time of the agreement itself. During 2003-04, the daily wage rates paid to labourers in cottonseed farms varied between Rs 25 and Rs 40. In Idar taluk Sabarkantha district where cottonseed production is highly concentrated, the wage rates are relatively high compared to other areas. Considering the long hours of work put in by workers in cottonseed farms the wage rates paid to them are low compared wage rates in the local market. Except in few area such as Khedbrahma and Sabarkantha district where children below 11 years are paid Rs 5 to Rs 10 less than adult wages, the wage rates are equal irrespective of their age and gender. During 2003-04, in Idar taluk, sabarkantha district the daily wage rates for cottonseed workers varied between Rs 35 to Rs 40, and in Vijapur taluk, Mahasan district daily wage rates varied between Rs 30 to Rs 35 These were the actual amounts farmers paid to labour contractors. Labour contractors deducted Rs 5 per day on each labourer and pay the remaining amount to them.

The agreement regarding working hours is vague and the cottonseed farmers are at their liberty to call upon the labourers to work without a schedule or set hours. . Since labourers live on the owners' farms, they are at the discretion of the farmers whenever their labour was needed. Labourers generally work for 13-14 hours a day with two-hours break for meals. They begin work around 5 AM and end at 6 PM or 7PM. A lunch break of one to two hours (only one hour during peak season) is provided between 12 PM to 2 PM. During this time labourers have to cook their own food and eat.

It is the responsibility of farmers to provide accommodation to labourers. However, in most places no proper accommodation is provided. Farmers keep labourers on the farms in small farmhouses built for storing irrigation pumpsets and farm implements. Sometimes, the laborers are kept in temporary huts/sheds constructed for them. . Most farmers also have servants of their own to look after the farm activities. These servants also stay on farms along with the migrant labourers and constantly supervise the work of these labourers. In addition to accommodation, some farmers also provide limited quantity of cooking oil and vegetables for the labourers. No payment is made for non working days and holiday time is not given.

**Nanalal and his family : Case study of a migrant labour family
(Amila village, Udaypur district, Rajasthan state)**

Nanalal, a 30 years old labourer, belongs to a poor landless tribal family in Amlia village in Udaypur district in Rajasthan. He has a wife, one son (12 years) and one daughter (10 years). His son studied up to second class and his education was discontinued. His daughter has never been to school. His family does not own any land and depend completely upon wage labour. He and his wife have been working as labourers in cottonseed fields in Gujarat. During cross pollination activity on cottonseed farms they migrate to Gujarat and spend about two to three months there as migrant labourers. During the last two years he has also taken his two children along with him to work on the cottonseed farms. His family works under a labour contractor who also belongs to his village. Labour contractor arranges work for his family and deducts 10 to 15% of wage amount they receive from the farmers as commission charges.

During 2003-04, a labour contractor paid Rs 1000 in advance to his family before beginning of the season with the agreement that his family should work in a cottonseed farm in Khedbrahma taluk in Sabarkantha district, Gujarat. . The owner is a big farmer with four acres of cottonseed farm. . He employed a total of 40 labourers, all migrants from Udaipur district, Rajasthan, out of which 30 were accommodated in a small farm house on the farm. The remaining 10 lived in a small tent temporarily built for accommodating labourers under a tree on the farm. Out of the 40 labourers, 12 were children below 14 years. Most of the children had come along with their families.

Nanalal's family worked 74 days continuously on this farm. Nanlal and his wife was paid a daily wage rate of Rs 35 and his children were paid at the rate of Rs. 25. The labour contractor collected the entire amount from the farmer and after deducting Rs 5 per person per day towards his commission charges settled the remaining amount to him. His family after deducting the labour contractor's commission charges earned about Rs 7000 during 2003-04.

From dawn to dusk : Daily work schedule of a migrant child labourer

Kamala, a 13 year old girl, started working as a wage labourer in cottonseed farms since 2002. She belongs to a poor tribal family in a small village called Amlia in Udaipur district, Rajasthan. Her father has died and she lives with her mother and younger sister. Her family owns two acres of dry land but income from the land is insufficient and they primarily depend on wage labour. She studied up to fourth class and discontinued in 2002. In 2002, her mother took an advance of Rs 500

from a labour contractor and sent Kamala to Gujarat to work in cottonseed farms. Since then she has been migrating to Gujarat for cottonseed every year. Several labourers from Kamala's village also migrate every year to Gujarat for about two to three months (during August and October months) to do cross-pollination activity in cottonseed farms.

The researcher met the Kamala in the month of September while she was doing cross-pollination activity in a cottonseed farm in Narsipura village, Idar taluk, Sabarkantha district, Gujarat. He spent one complete day in the farm observing Kamal and other labourers' activities. Kamala was entrusted with the task of cross-pollination activity. The activity has two major components- emasculation and pollination (In plants, crossing is done by placing pollen grains from one genotype - the male parent on to the stigma of flowers of the other genotype, the female parent. The removal of stamens or anthers or the killing of pollen grains of a flower without affecting in any way the female reproductive organs is known as emasculation). The daily work schedule of Kamala is as follows.

She wakes up at 4 AM to get ready by 5 AM to start work in the fields. She lives in her employer's farm house along with 18 other migrant workers. From 5 AM to 7.30 AM she works in the field removing type flowers in female lines which were not emasculated in the previous day and collecting flowers from male plants for pollination. From 7.30 to 8.30 AM, one hour break is given to cook food and have morning meal. From 8.30 to 12.30 AM, she is engaged in pollination activity. From 12.30 PM to 2 PM, lunch break was given. During this time she returns from the field, eats lunch and rests. From 2 PM to 7 PM, she is engaged in emasculation work. She returns from the field around 7 PM. She rests about half an hour after which, she prepares her dinner. After her meal she spends about half an hour chatting with other workers and goes to sleep around 9 PM.

Kamala gets Rs 35 per day for her work. Her employer does not pay directly to her. Instead, the labour contractor who arranged work for Kamala takes the amount from her employer and deducts Rs 5 towards his commission charges and pay the remaining amount to her mother at the end of the season. If Kamala wants some money for her needs at the work place she takes asks the labour contractor.

Magnitude of the child labour problem

The estimates of child labourers are calculated on the basis of total area under cotton seed production, per acre average requirement of labour and proportion of child labour to total work force. (this was already mentioned above). Based on the detailed field observations, the present study estimates the average requirement of labourers for carrying production in one acre as 11 (10 for doing cross-pollination work and one for all other activities) the proportion of children to total work force as 31.8% and girls proportion to total child labour force also as 60%. An average 3.5 children are employed in one acre cottonseed farm. During 2003-04 crop season the total estimated area under cottonseed production was 26,000 acres.

Based on the above mentioned assumptions, the total number of labourers employed in cottonseed farms in Gujarat for 2003-04 is estimated at 286,000 out of which 91,000 are children in the age group of 8 to 14 years.

SECTION-II

GIRL CHILD LABOUR IN COTTONSEED FARMS IN KARNATAKA

After Gujarat and Andhra Pradesh, Karnataka has the largest area under hybrid cottonseed production in India. Karnataka is the first state in south India to produce hybrid cottonseeds for commercial cultivation. Cottonseed production begun in Karnataka in early 1970s by migrant farmers from Andhra Pradesh. Slowly the local farmers also entered the seed production activity. In Karnataka, cottonseed production is concentrated in five districts namely Raichur, Koppal, Gadag, Baghalkot and Haveri. These five district account for over 90% of the cottonseed production in the state. In Raichur and Koppal districts, it is still the migrant farmers who are mostly involved in cottonseed production activity. In Raichur district, seed production activity is concentrated in Sindhanur taluk, in Koppal district (Kanakagiri taluk), in Baghalkot district (Badami taluk), in Gadag district (Ron taluk) and in Haveri district (Haveri taluk).

The large seed companies involved in production and marketing of hybrid cottonseeds in Karnataka are Proagro, Emergent Genetics, Advanta, Mahyco-Monsanto, Nuziveedu and JK Agritech. In addition to the private seed companies, the government owned corporation (Karnataka Seed Development Corporation) is also actively involved production and marketing of public varieties of hybrid cottonseeds. The Karnataka State Seed Development Corporation covers nearly 20% of the area under cottonseed production in the state, whereas in Andhra Pradesh and Gujarat, the state seed development corporations account for less than 5% of the production area. Both private seed companies and the Karnataka State Seed Development Corporation are dependent upon local farmers for production and multiplication of seeds, where they make buy back arrangements with seed farmers. They operate through intermediaries called `seed organisers` who mediate between the companies and the farmers.

Field work for this study was carried out in 20 cottonseed farms in eight villages in three districts namely Koppal , Gadag and Bagalkote. The names of the villages are Kanakagiri, Tippamal, Chikkedu (in Kanakagiri taluk, Koppal district) Honniganur, Kalkapura (in Rona taluk Gadag District) Mallapura, Yeragoppa and Badami villages (in Badami taluk Bagalkote District). The main part of the field work was conducted during September and November 2003.

Workforce composition

Table 3 presents workforce composition in 20 surveyed sample cottonseed farms . The work in cottonseed farms is largely carried out by hired labour. Of the total 302 workers engaged in these farms during cross pollination season 250 of them (82.8%) are hired labourers and 52 are family labourers. Unlike in Gujarat where most of the labourers in

cottonseed farms are migrants, in Karnataka most of the labourers are locals. Out of 250 hired labourers 228 (91.2%) are local and 8.8% are migrants.

Table: 3 Workforce force composition in cottonseed farms in Karnataka (2003-04)

Total number of farms surveyed (area in acres)	20 (28 acres)		
Total number of workers engaged during cross pollination season	302		
Type of labour			
Family	52 (17.2%)		
Hired labour	250 (82.8%)		
Type of hired labour			
Migrant	22 (8.8%)		
Local	228 (91.2%)		
Age group	Male	Female	Total (%)
Children (8-14 years)	24	179	203 (67.2)
Young workers (15-18 years)	21	42	63 (20.9)
Adults (above 18 years)	14	22	36 (11.9)

Age and gender divisions

Similar to Andhra Pradesh, a large proportion of the workforce in cottonseed farms are children. Over two thirds of the labour force (67.2%) are children in the age group of 7 to 14 years. Among children, girls account for nearly 88%. Women (girls and adult women) account for nearly 80% of the total labour force. 15 to 18 years age group of workers account for nearly 21% the total labour force. In areas where cottonseed production is done by migrant farmers on a large scale the proportion of child labour to the total labour force is higher compared to areas where production is carried out by local farmers on a smaller scale.

TERMS AND CONDITIONS OF EMPLOYMENT

Advance payments and long term agreements

As cottonseed production requires an assured supply of labour for carrying out various activities, particularly cross- pollination work, farmers prefer long-term agreements with labourers. Agreements are signed before the beginning of the season and an advance is paid by the labor contractors. The practice of paying advances is widely prevalent in

areas where migrant farmers are involved in cottonseed production. The amount of advances varies between Rs 200 to Rs 2000.

Wage rates and working hours

The wage rates are fixed for the whole season at the time of signing of the agreement. During 2003-04, the daily wage rates paid to labourers in cottonseed farms varied between Rs 17 to Rs 25. In Ron Taluk, Gadag district where cottonseed production is highly concentrated, the wage rates are relatively higher compared to other areas. In this area the daily wage rates varied between Rs 20 to Rs 25. Except in the case of young children (below 10 years) who are paid Rs 2 to Rs 5 less, the wage rates are the same for every one irrespective of their age and gender.

The working hours per day varies between normal and peak seasons. During normal seasons, labourers work 10 hours a day from 8.30 AM to 6.30 PM and during peak seasons, they work 12 hours a day from 6.30 AM to 6.30 PM. No payment is made for non working days and holidays are not given.

Mallamma (14 years) : case study of girl child labour

Mallamma, a 14 year girl, has been working in cottonseed farm of an employer in her village (Varagappa village, Badami taluk, Baghalkote district) for four years. She has become an expert in the cottonseed pollination activity. She has never gone to school. Her father works in a shop in the nearest town called Badami and her mother is an agricultural labourer. The family owns two acres of land, which is rain fed agriculture. The village falls in the tail end of Malaprabha left Bank Canal system. Mallamma is the eldest child in the family with two younger brothers, one going to primary school and the other is still a small baby. Mallamma is not only an expert in cotton seed cross pollination but also handles other agricultural activity such as application of fertilizer, cotton picking and other activities.

The day starts very early for Mallamma during cross-pollination activity on the cottonseed farms. She wakes up at 5 AM and gets ready by 6 AM to go to the field, which is one kilometer away from her house. She reaches the field by 6.30 AM and works there until 1 PM. From 1 PM to 2 PM, she breaks for lunch. From 2 PM to 6.30 PM, she returns to work to do emasculation in the field.

Mallamma gets Rs 25 a day for her work. The agreement between her and her parents regarding her wage payment is that the employer pays Rs 5 to her for working from 6.30 AM to 8.30 AM, and the remaining wage sum of Rs 20/- for working from 8.30 AM to 6.30 PM goes to her parents. The wage that goes into Mallamma's hand is saved with the farmers and is collected once a month to buy some clothes, earrings, and bangles in the weekly market called *Santhe* and visits to the cinema.

`I work in our farm as and when there is work, but most of the time, I am a wage labourer. I prefer working with this farmer who is a settler from Andhra Pradesh because he is the biggest farmer in the surrounding village and one or the other work we keep getting. The cottonseed plots are raised in batches with the gap of 20

days which gives employment in cross pollination activity for longer duration (4 to 5 months in a year). Further, this farmer mainly grows seeds in other crops and floriculture also, thus there is continuous labour for nearly 8 months` says Mallamma

Roshanbi (11 Years) : Case study of a girl child labour

Roshanbi, (11 years) resident of Kalkapur village, is a school going girl, studying in 5th standard in government school. Her father works in Goa State and mother is an agricultural labourer. Since 2001, she would stop going to school for almost three months during cottonseed crossing activity.

`The schoolteacher will scold us for not going to school but what to do there is no other go. Many families in the village practice this. At least I go to school after the work is over, some of them do not go at all and become school drop out. After the crossing is over my uncle come and tell the teacher to take the me back in school` says Roshanbi.

Roshanbi parents collect her wage and she is given some coins to buy some sweets in petty shop in village. She is paid Rs 20 per day for 11 hours of work from 7.30 AM to 6.30 PM.

Magnitude of the child labour problem

The estimates of child labourers are calculated on the basis of total area under cotton seed production, per acre average requirement of labour and proportion of child labour to total work force. The sample survey data indicates that an average of 6.7 children are employed in one acre cottonseed farm. During 2003-04 crop season, the total estimated area under cottonseed production was 4000 acres.

Based on this assumption the total number of child labourers (7-14 years) employed in cottonseed farms in Karnataka for 2003-04 is estimated at 26,800, out of which nearly 88% are girls.