Chapter 3

Contract Farming: Changing Dynamics of Agro-industrialisation

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3.1 Introduction

Since the time of industrial revolution, development of industry was considered as synonymous with the overall development of a region. Transition of a region from its self sufficient phase to one of vibrant and emerging region in international development map was considered to be contingent on the development of the industries in that region. It meant increase in the percentage of population deriving their livelihood from industry as well as increase in the contribution of industrial sector to region’s income. This also implied corresponding decrease in the importance of the agriculture in the economy. Establishment of the industry as a sector separate from agriculture was crucial historical event in the human development. Then onwards, industry enjoyed the centre stage in all the development efforts and agriculture took back stage. Poverty and backwardness became synonymous with agriculture and all the efforts to mitigate poverty and backwardness necessarily involved infusion of industry in the agriculture. A greater interface between agriculture and industry led to growth of a new sub-sector known as agro-industry. Development of agro-industry proved to be crucial in bridging the gap between agriculture and industry and overall development of a region. Developing a sound base of agro-industries has since become a critical element in the developmental thought. In the earlier phase of ‘developmentalism’ the state led industrialisation focused on certain key industries for the development of agriculture. These industries mainly dealt with the processing of the agricultural produce such as food processing industry. However, later the other industries such as fertilizer, seed and agriculture tools and machinery which produced products for the use in agriculture were considered to be as crucial in the development of food processing industry (Leckie, 1958). India also emphasized on the development of agro-industries through various five year plans. Among Food Processing sector the emphasis was given to unorganised and small scale sector as they were supposed to be highly labour intensive and therefore could contribute greatly in rural labour absorption. Organised Food Processing sector could not get desired attention both from policy makers as well as industrialist due to numerous constraints posed by prevailing atmosphere. Seed industry another important element of the agro-industrialisation was reserved for the government institutions as private sector was not having desired know-how and capital
to foray into this sector. The combination of widespread poverty and hunger and commitment of government under socialist framework to feed the citizens prepared an atmosphere where ‘production’ got overwhelming emphasis. Utilisation of the produce was not a matter of concern as the growing population provided a ready-made market and government’s readiness to subsidise consumption did not induce any efficiency in the production.

With the change in the ‘development’ paradigm, the earlier phase of agroindustrialisation has also witnessed a turn around (Boehlje et al., 1995) The overwhelming emphasis provided on the efficiency and cost reduction has led to reduction and withdrawal of state subsidy (Christensen, 1992). A desire to benefit from the global finances and technology has led to opening up of the sectors for foreign investment. Burgeoning upwardly mobile class centred in the cities has given a new fillip to the demand. Rapid inventions in information and communication technology have increased penetration of media which in turn has increased awareness of the issues. The amalgamation of all these has prepared an atmosphere where a new wave of agroindustrialisation has come to dominate the socio-economic thought (Burch and Pritchard, 1996).

The undercurrent of this wave of agroindustrialisation is the profit maximisation through agricultural commercialisation. It means much more than simply marketing of agricultural output. It implies principles of profit maximisation impact on the input use decisions and products to be grown. It also implies greater substitution of non-traded inputs to traded inputs, replacement of integrated farm practices with specialised ones (Pingali, 2001). Importance of agroindustrialisation lies in its capacity to take agriculture from its subsistence stage of provider of food and raw material for the other sectors of economy, to the one where agriculture is considered as an entrepreneurial activity and a measure to provide economic welfare to the population engaged in this activity (Desai 2002, 2000; Burch, 1996). The essential requirement is to increase the total factor productivity of agriculture which only can bring about resource efficiency and remove the poverty trap in rural areas (Hayami and Damodaran, 2004; Desai and Namboodiri 1998).
Three related sets of changes which mark new wave of ‘agroindustrialisation’ are:

- Growth of commercial, off farm agro-processing, distribution and input division activities;
- Institutional and organisational changes in the relations between farms and firms both upstream and downstream, such as a marked increased in vertical integration and contract based procurement (Dunham, 1995);
- Related changes in product composition, technologies and sectoral and market structure (Reardon and Barrett, 2000).

Agroindustrialisation brings closer integration of farming with equipment and input suppliers, financial institutions, food processors and distributors to form an integrated chain of network (Ray, 2000; Goodman et al., 1987). Dawn of this new wave of ‘agroindustrialisation’ is accompanied with a new ‘entrepreneurial catalysm’, where agri-entrepreneurs rooted in retail and manufacturing have sought to increase their trade networks through new operational means (Leisinger, 1987). For them ‘Contract Farming’ is a new channel to facilitate their sourcing network. As cost minimisation is the necessary preamble for profit maximisation, more and more agri-entrepreneurs wanting to benefit from rapidly opening agriculture sector are trying to foray into ‘Contract Farming’ (Chidambaram, 1997). Changing economic, social and ideological conditions have further propelled a move towards consolidation in agriculture sector.

3.2 Contract Farming Ventures in Punjab

Contract Farming historically been considered as a means to incorporate risks related to ‘resource inconsistency’ in the agri-production network and its relevance has increased with the increase in demand of the processed food (Glover and Ghee, 1992). “Contract Farming is especially suited for perishable horticulture commodities because, it allows, in theory, for standardised production, efficient distribution and sophisticated marketing, while taking advantage of ‘careful crop husbandry’ of the small farm households” (Friedberg, 1997: 104). First Contract Farming venture in India and also in Punjab seems to replicate the theoretical logic of Contract Farming.
3.2.1 Contract Farming in Tomato by Pepsi Foods Ltd

Pepsi Foods Ltd. launched its agri-business operations beyond the traditional beverages market in India, with special focus on exports of value-added processed foods. It started its operation in 1989 by installing a Rs. 22 crore tomato processing plant at Zahura in Hoshiarpur district of Punjab. The company intended to produce packed pastes and purees for the international market. However, before long, the company recognised that investment in agro-processing plants would not be viable unless the yields and quality of agricultural produce to be processed were up to international standards. “At that point of time, agricultural practices in India and Punjab did not reflect quality consciousnesses” (Spice, 2003). Tomato was never cultivated in Punjab for its solid content, with a focus on high yields and other desirable processing characteristics such as colour, viscosity and water binding properties. Furthermore, little effort had been made to create a database on the performance of various varieties and hybrids. There were no logistically efficient procurement models for fruits and vegetables that could be built on by the company. These apart, there were simply not enough quantities of tomato available even if the grown varieties/hybrids were procured from the open market. The total Punjab tomato crop was 28000 tons, available over a 25-28 day period, while PepsiCo required at least 40000 tons of tomato to operate its factory, which had a capacity of 39 tons fresh fruit per hour. The company required this intake over a minimum 55-day time frame and in 1989, the season in Punjab did not last beyond 28 days. This led to rethinking about the sourcing of the tomato. Contract Farming was considered appropriate for fulfilling the company’s need of the quality tomato produce. A joint venture was formed between Punjab Agro-Industries Corporation, PepsiCo and Voltas an Indian Corporate. Apprehending that changing the mindset and winning the confidence of farmers would not be an easy task therefore PepsiCo preferred to incorporate local agri entrepreneurs, government body and a political outfit. This venture had the support from the farmer lobby (Bhartiya Kissan Union BKU) or Indian Farmers Union and a farmer based party Akali Dal (Singh, 2000b). The entry of Pepsi was followed by another local entrepreneur (Nijjer) who also set up tomato-processing plant with half the capacity of Pepsi plant’s capacity. This company got the financial support from the Punjab Financial Corporation. With
establishment of the processing and procuring set up many more companies followed the suit. Hindustan lever Limited (HLL, a Unilever subsidiary) set up its processing unit and entered into contract farming in 1995. With these companies taking lead in establishing the contracts, many more companies both local and multinational started exploring the opportunities.

Initial foray into Contract Farming was marked by food processing firms who intended to process the agricultural produce and market them in the domestic as well as international market. These start ups contributed considerably in the internationalisation of Punjab agriculture. As they involved bringing in the global production processes, international capital and trading regime to the door step of the Punjab’s farmer. It encompassed all the three dimensions through intervention in input supply and production decisions, supply of capital and finance and global sourcing of agro-products.

These initial experiments laid the foundation for further opening up of agriculture to the national and international agri-business firms. Punjab government’s ‘Crop Diversification Programme’ opened a new vista for agri-business firms as it tried to utilise Contract Farming as a means to solve the crisis prevailing in its agriculture sector (Singh, 2004). The modus operandi adopted by PAFC helped in the emergence of new agri-business firms who got the opportunity to diversify their agriculture operations to include production also. An analysis of the profiles of the firms engaged in the Contract Farming and their mode of operations will help in understanding the emerging agricultural space.

3.3 Emerging Companies in Contract Farming in Punjab

Besides Food Processing Industries like PepsiCo India Limited, Hindustan Liver Limited, Naranjan Rice Mills, etc. Contract Farming has attracted a number of firms who are trying to benefits from new openings provided in the field of agribusiness. Punjab Agro Foodgrain Corporation has engaged private companies to provide the host of consultancy services required to popularise Contract Farming. Four companies engaged for providing consultancy services namely Escorts India Limited, DCM Shriram Consolidated Limited, Mahindra Shubhlabh Services Limited and Rallis India Limited are the subsidiaries of the companies that have considerable presence in
the agriculture machinery operations. These companies were floated by their respective parent companies to take the advantage of increasing business opportunities that came with the liberalisation and opening up of Indian economy. With the Indian Government beginning to encourage private enterprise in agriculture and related industries, value added services in farming came up as new avenues for these agribusiness firms. In order to strengthen their forward linkages these companies have entered into agreements with different processing and distribution firms and to streamline their backward linkages they are in process of setting up farm management and service centres. Mahindra Shubh Labh is setting up ‘Mahindra Krishi Vihar’, Rallis (a subsidiary of Tata group has given its operation to another sister concern Tata Chemicals limited) is establishing ‘Tata Kishan Sanchar’ and Tata Krishi Vikas Kendras and DCM Shriram is setting ‘Hariyali Kisan Bazaar’ and Shriram Krishi Vikas Kendras. Escorts attempt to set up similar such venture has not yet materialised. These centres have been planned to act as a one stop facility for the farmers where they can get all the inputs as well as advice needed for their crops.

**Figure 3.1 Service Centre Model**

![Diagram](image)

*Source: Modeled on the bases of data provided by Contract Farming firms*
Firms are trying to expand rural retail initiatives to create a rural hub that purports to make agri and consumer products (of all manufacturers) and agri services available to farmers in a new format.

Through such initiatives these companies proclaiming to address some of the key constraints of the Indian farming sector, which are:

- Lack of last mile delivery mechanism of modern agriculture know-how & practices.
- Lack of availability of critical good quality agri-inputs.
- "Middlemen" driven farmer interface.
- High cost credit.
- Lack of direct access to buyers of varied & high value crops.

Service centers would operate in the ‘Hub and Spoke’ model where each centre would cover a catchment varying from 8 kms to 20 kms and catering to agricultural land of about 50000-70000 acres covering approximately 15000 farmers. Strategic focus is to build on their existing activities & infrastructure in agri-inputs, while also exploring opportunities in agri-outputs, food processing and agri-based end use products by building direct relationship with the farming community with supply of agri-inputs, education and training and providing end-to-end agricultural solutions to farmers. The move is to treat farmer not only as producer but as a valued consumer who should be treated as loyal brand consumer.

These attempts in establishing rural infrastructural by farm implements companies represent a new direction in the agroindustrialisation and farm capitalisation process. However in this process a major and in fact dominant part is played by off farm players and represents the trend where relative importance of farming declines, as proportion of value added beyond farm increases (Goodman and Redclift 1991, Winson, 1990). Source of much of the 'entrepreneurial spirit' of these 'pioneering modern day agri-enterprises' can be attributed both to the changing economic and ideological conditions. Spirit of liberalisation and globalisation accompanied by the examples of successful global agribusiness ventures might have motivated these firms to extend their operations to farm services also. India's low consumption of high-yield seeds, fertilizers, and pesticides in comparison with other countries indicates a huge potential for market growth (ITCOT, 2004).
Some of the firms such as Tata Chemicals Ltd, DCM Shriram Ltd, and Mahindra and Mahindra had their service centres even before the formal commencement of Contract Farming promoted by the Government. These service centres were established to act as outlets for their original business, and when opportunity came up with the introduction of crop diversification programme, they converted those outlets into service centres which could be used as multipurpose resource centres. Fresh infusion of capital by the firms seems to be an effort to consolidate agribusiness operations and gain a greater foothold in the 'food chain' by aiming to participate in ever growing 'value added' and 'knowledge added' food product market.

3.4 Nature of Contract Farming Operations

3.4.1 Reasons for doing Contract Farming

Seven firms engaged in Contract Farming operations with PAFC were surveyed, out of which Naranjan Rice Exports, Hindustan Liver Limited, PepsiCo India and KRBL were engaged in basmati Contract Farming and were packaging and exporting basmati to international markets. Other firms like Mahindra Shubhlabh Services Limited, Tata Chemicals Limited and Escorts were mainly involved as service providers. All the firms engaged in the Contract Farming programme were highly appreciative of the Contract Farming and believed that it can help in improving the competitiveness of Indian agriculture in world market. They believed that it has a great potential not only to increase India’s export income but also for the expansion of the food business. Traditional rice exporters viewed Contract Farming as a major institutional intervention to make India’s export competitive in the world market. They believed that through Contract Farming they can not only achieve substantial cost reduction in their input sourcing operations but also can secure reliable supply chain through it. Reliable supply chain has been a crucial element in the food export operations and any achievement in this direction can be a major gain for them in increasing their competitiveness. Packaging and exporting companies were adopting two major ways for the cost reduction in their operations. In the upstream operations it was the 'business under one roof' and in the down stream 'straightening of the supply chain' through Contract Farming. Business under roof model involves operations
through the retail chain networks, either company owned or operated by other business ventures and the straightening of food chain involved removing the middlemen and uncertainties related to purchasing operations. All the companies agreed that Contract Farming has a beneficial impact on agriculture and farmers should join Contract Farming. Depending upon on the present operations and future plans different companies gave different reasons for the farmers to join Contract Farming. Main reasons given by the companies for the farmers to adopt Contract Farming are as under:

- Protection from price fluctuations
- Availability of fixed buyer in the market
- Availability of modern farm inputs at reasonable prices
- Easy availability of loans
- Facilitation in the adoption of eco-friendly practices

All the companies attributed the protection from price fluctuations to farmers as the most important and beneficial aspect of Contract Farming. They believed that price fluctuations especially the ones leading to decrease in prices are the most negative feature of the spot markets and that Contract Farming provides safety net against these kinds of fluctuations. Another feature of the Contract Farming applauded by firms is the facility of fixed buyer, which according to them is one of the most important benefits to the farmers from Contract Farming. Fixed buyer is advantageous as it provides succour from the trader-middleman controlled spot market operations. Firms believed that Contract Farming provides the opportunity to establish strong consumer-supplier bond. Contract Farming fits into the business model of secured clients and resource chains and therefore companies wanted that Contract Farming should be promoted. However, companies are not sure about the duration of such long term relationships, as they prefer to sign contract for one crop year only and again sign contract for next crop depending upon their requirements. According to them, long term relationships are not revealed by the duration of the contract but working of the contract, which is more a matter of informal functioning rather than the strict clause by clause adherence to the contract by the parties. Another feature highlighted by the companies especially by the service providers was the facility of modern farm inputs at the reasonable prices. As most of the service providers were engaged in development of
one or other farm machinery, they believed that those farmers who will do Contract Farming with them will be the first to get the technology and at the most reasonable prices. It can be said that companies wanting to extend their farm operations view Contract Farming as a platform which can be used as a launch pad for new technology and machinery. With the contract farmers as their secured client they can minimise on the advertisement cost and can get some base customers for the development of the technology. This was quite visible in the launching of its own brand of maize seed-Mahindra Indicom by Mahindra Shubhlabh Services Limited, which they are promoting amongst their contract farmers. This brand does not contain any new seed variety; instead it has been purchased from an independent supplier, graded and launched as the brand of MSSL. This step demonstrates the efforts to consolidate farm business management by the contracting companies. However this process has its own pitfalls and some cases of loss of the crop, especially of maize were reported to PAFC because of supply of faulty and uncertified seeds by the service providers to the farmers. In some cases trial and not tested seed were delivered by the companies. Reporting of such cases was only responsible by PAFC to indicate the certified seed suppliers from which seeds should be purchased by service providers. Other facilities reported by the companies provided under Contract Farming were easy availability of loans and facilitation in the adoption of eco-friendly practices; however these reasons were given by limited number of companies. Naranjan Rice mills gave promotion of loan accessibility to farmers through Contract Farming and Tata Chemicals Limited and Pepsi reported promotion of eco-friendly practices through Contract Farming. Other companies agreed to the future prospects of these benefits under Contract Farming, but at present their functioning does not include these aspects.

3.4.2 Factors Affecting Spatial Spread of Contract Farming

The spatial differences in the spread of Contract Farming depend upon the criteria which companies apply for the selection of villages for Contract Farming. Companies can either select villages at random persuading farmers to adopt the new crop under a new system, or go according to the certain preferences.
Most important criteria reported by the companies which they take into account while selecting villages were:

- Existing cropping pattern in the region,
- Infrastructure availability in the village,
- Agro-climatic suitability of the contract crop,
- Government policy

Table 3.1 First Preference Criteria for Companies to Select Villages for Contract Farming

<table>
<thead>
<tr>
<th>First Preference Criteria</th>
<th>Companies</th>
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<tbody>
<tr>
<td>Infrastructure availability in the village and agro-climatic</td>
<td>MSSL, Naranjan Rice</td>
</tr>
<tr>
<td>suitability of the contract crop</td>
<td>Exports, HLL and KRBL</td>
</tr>
<tr>
<td>Existing cropping pattern in the region</td>
<td>PepsiCo and TCL</td>
</tr>
<tr>
<td>Government policy</td>
<td>Escorts</td>
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Source: Field Survey conducted in the study area in 2004-05.

Four companies gave first preference to the infrastructure availability and agro-climatic suitability of the crop, followed by the existing cropping pattern in the region. While two companies (PepsiCo and TCL) gave first preference to the existing cropping pattern in the region then to the availability of the infrastructure and agro-climatic suitability of the crop and one company (Escort) gave the sole preference to the government directions and did not take into account other considerations before venturing into villages for contracting with farmers. The basic approach of this company was to try to contact with farmers in the neighbourhood of their machinery outlets and utilise that network to forge contracts with farmers. Most of the companies giving first preference to infrastructure imply that better developed regions have better chances of selection in the Contract Farming network, if the crop promoted has agro-climatic suitability for the region. Since most of the crops chosen for the Contract Farming have basic agro-climatic suitability for the Punjab, regional differences in the spatial spread of the Contract Farming may be more due to companies preferring more approachable and developed regions as the launching ground for the Contract Farming programme. On the whole Punjab has good infrastructural network because of green revolution prosperity and NRI investment. However, at more local level differences
exist in terms of nearness to urban area, nodal position and better and more frequent transport services etc. which give localised advantage to these places. Second preference given by most of the companies to existing cropping pattern demonstrates that companies hope for penetration of Contract Farming in the areas where these crops already have a place in the cropping pattern. This shows that companies hope for institution shift more than the crop shift due to Contract Farming. This can be a more realistic assessment as it is based on the hope that farmers already familiar with the crop will be more enthusiastic to take up Contract Farming in the initial phase and later motivated by the success of these farmers other farmers might be persuaded to shift to the contract crop. But targeting those regions where crops are already grown and not reaching to those areas where these crops have been replaced by wheat and paddy has not augured well for Crop Diversification.

Among the infrastructure factors, main factors considered by the Contracting firms are as under-

- Accessibility of the village,
- Education and general awareness level in the villages (presence of school and colleges in the village or in nearby area),
- Nearness to urban area,
- Quality of perennial irrigation,

Accessibility of the village was given highest priority by the companies, as saving on the transaction was an important factor while trying to sign contracts in the villages. As companies are required to submit list of contract farmers to PAFC and get reimbursed for the services provided to farmer on the basis of that list, approachability of the farmer becomes a crucial element in getting the desired number of contract farmers for the crop. Success and failures of the company in Contract Farming depends on the area brought under Contract Farming by that company. The larger the area brought under Contract Farming greater the success company has achieved in Contract Farming. To maximise their reach, companies adopt strategy of targeting the villages more accessible first. This is especially significant for the spread and acceptance of the Contract Farming by the farmers. It was hoped that services provided by companies will not only popularise alternative crops among the farmers due to access to awareness
and farm technology, but will also help farmer get the hitherto unavailable farm consultancy services increasing efficiency of farming operations. But, concentrating the operations in the more accessible areas means that the objective of wider spread of alternative crops and farm services in the more remote areas is not taken into account while carrying out contract operations. This indicates that the objective of providing services to the farmers would be restricted to farmers who already have better access to facilities and knowledge network. Minimisation of transaction costs, which would tend to increase profit margins of the firms, thus comes in way of spreading out the possible benefits of Contract Farming to all farmers across different sub regions of the state.

One of the importance factors closely related to infrastructure influencing selection of villages by the firms is educational and awareness level in the villages; presence of school and colleges in the village or in nearby areas would to a large extent facilitate the knowledge network. In turn, this once again would restrict the village selection to better-off parts. In sum, 'utilising existing awareness' instead 'creating awareness' takes precedence while carrying out contract operations. This might be practical thinking from a business point of view, but demonstrates a major limitation of involving private business ventures in promoting the social and environmental objectives with limited welfare gains.

Nearness to urban area was given third priority by the companies for selecting the villages. Farming areas nearer to cities have the dual advantage of minimising the transaction-costs and greater commercialisation and market oriented farming. A better access to an alternative urban market increases the willingness among the farmers to experiment with a new market mechanism.

Another aspect considered by companies while selecting villages was the quality of perennial irrigation. Controlled water delivery minimises the risk of failure to deliver desired yield and quality of the produce. As compared to other parts of the country, general availability of irrigation infrastructure is good in Punjab; in fact, in many of the villages 100 percent of the net sown area is under irrigation. However better quality of irrigation have been associated with share of area irrigated by tubewells; electrified tubewells, while maintaining a high quality of irrigation, is cheaper compared to diesel tubewells, particularly due to heavy state subsidies on
electricity. It is of no surprise thus that one of the companies mentioned duration and quality of power supply in the villages as important for making it desirable for selection. Villages having electric supply for longer duration and having less power cuts have cost advantages over those where electric supply is poor and witnesses more frequent power cuts.

Among agro-climatic suitability, soil characteristics and ground water table were the important factors considered by companies while selecting the villages for Contract Farming in particular crop.

3.4.3 Criteria Adopted for the Selection of Farmers for Contract Farming

The success of the Contract Farming depends upon the company and farmer interface. The companies prefer to contract with farmers having a certain desired characteristics. The major criteria followed by firms while selecting farmers for the contract are:

- Previous experience of the crop (Avoid Experimentation),
- Size of operational land holdings of the farmer (Big Farmer),
- Previous record of the yield (Efficient Farmer),
- Ownership of mechanical implements and irrigation infrastructure (Access to Capital),
- Educational level of the farmer (Awareness of the Farmer),
- Socio-economic strength reflected in the debt status of the farmer (Freedom From Arhatiya) and
- Non-farm income of the farmer household (Reliance on agriculture as a means of livelihood).

All the companies give first priority to the experience of the farmer. According to them a farmer with prior experience will not only understand crop mechanism better but will also give better results than an inexperienced farmer. Besides, farmers with previous experience of the same Contract Farming crop will also have some basic crop-specific infrastructure and institutional mechanism in place and therefore will not require much additional investment on infrastructure creation for the new crop. Companies believe that it is easier for a farmer to adopt a new mechanism for the same crop than adopting a completely new crop. Therefore companies prefer –an institutional shift over a crop shift. In terms of the second preference companies differed in the their
choices; while five companies give second preference to yield history of the farmer, two companies give second preference to size of the operational land holding of the farmer. These companies interchange second and third preferences. Giving yield history a preference for the selection of the farmer means companies wants to contract with best farmer in the village. The policy of adopting the most efficient farmer in the network will not only help them to project the record of the high yield but will also minimise the chances of crop failure due to various factors, as farmers with better yield history are supposed to be more efficient and more knowledgeable in their farming operations. Giving preference to yield history means that there are chances that some of the small farmers can also be adopted in the Contract Farming network on account of their better yield status. However, the preference given to size of operational land holding of the farmer means that, companies wants to deal with a few large and efficient farmer and is not inclined to spread their operations and incur high operational costs. So the services provided by the companies are basically concentrated with already better off farmers and are not reaching the more marginalised groups. It can be said that objective of the companies to maximise profitability does not have the scope for promoting equity and efficiency amongst a wide spectrum of the farmers. Next factor considered by the contracting companies is the ownership of the farm implements by the farmer households. Six of the seven companies considered this to be the fourth important factor while selecting the farmer for Contract Farming. This variable is important for the companies, as it represents the capability to undertake farming operations with modern technology and also capacity to invest in the farm machinery. Farmers having large number of farm equipments have greater capability to undertake large operations and also have greater chances of showing more favourable attitude towards any new development in farm machinery innovations. This factor is especially important for companies manufacturing farm implements as they have large stakes in selling of farm implements through Contract Farming. One company (Escort) gives higher preference to the education status of the farmer compared to ownership of farm implements. This company considers that farmers with higher educational level have greater awareness about various issues and it is easier for them to understand and adopt the new technology. Two other companies (PepsiCo and Tata Chemicals
Limited) also consider educational level as one of the factors while deciding upon the selection of the farmers but give this factor lesser weightage compared to Escorts. Most of the other companies did not consider education be a factor to be considered for selection of the farmer. Some of the other factors considered by companies while selecting farmers are non-farm income of the farmer household (Mahindra Shubhlabh Services Limited, Tata Chemicals Limited, Escorts, and PepsiCo) and indebtedness of the farmer (Mahindra Shubhlabh Services Limited and Escorts). Households with higher proportion of non farm income have lesser dependency on farming and therefore tend to be less interested to adopt innovative farm procedure to maximise farm income; on the other hand, more farm income also gives greater capability to transfer resources from non-farm to farm sectors in the event of need. Households with greater non farm income may also have higher propensity to adopt mechanised farming instead of trying to involve more household labour for the farming, thus giving a greater chance to farm implements companies to extend their operations. This would have been one of the main reasons for the farm implements companies to consider this factor also while selecting the contract farmers. Level of indebtedness of the farmer considered by two companies while selecting the contract farmer demonstrates their thinking of bringing into their fold the farmers who might be in the need of credit. As service providers have been planning to extend operations of Contract Farming by adopting the ‘consortium approach’ by tying up with credit providers, so they are giving greater preference to farmers who are in the need of the credit. Consortium approach not only involves greater number of players but also tries to bring them under one market mechanism.
Figure 3.2 Consortium Model of Contract Farming

Source: Singh, 2005c
For creating awareness and popularisation of the Contract Farming camps are set up in the villages and Kisan Melas in collaboration with PAFC. Based on the attendance at these camps, farmers are contracted individually. PAFC on its own also undertakes popularisation operations by giving advertisement on the TV and newspaper. Contracting companies while trying to contact with the farmers do not like to involve any cooperatives or any other body and instead prefer to contract with farmers on the individual basis or on the reference of other farmers. Role of farmer's organisation in this model has not been envisaged by PAFC, and contracting companies also don't want any role of organisation with bargaining power. Involvement of farmer's organisation in the Contract Farming has produced different results in different projects. In some of the cases contracting companies did not directly contracted with farmers and instead preferred to contract with farmer's organisation which in turn distributed production amount amongst themselves (Birthal et al., 2005; Singh, 2005a). This model not only helped the company in minimising the transaction costs but also allowed the participation of small farmers. On the other hand in some of the Contract Farming projects the failure of project was reported chiefly due to the excessive politicisation of farmer's organisation (Glover and Kusterer, 1990).

The failure of the first Contract Farming venture launched by Pepsi with the help of PAIC and with the support of local farmers' organisation Bhartiya Kissan Union (BKU) or Indian Farmers Union and a farmer based party Akali Dal (Singh 2000b) must have been afresh in the minds of the companies. This experience might have prompted both the PAFC and contracting companies to expressively avoid the participation of farmers' organisation.

All the Contract Farming companies have written contract with the farmers as they are required by PAFC to submit list of farmers who have done contract with farmers. Contracts follow the prescribed format provided by PAFC and now with the Contract Farming Act providing the basic contents that should be incorporated while formulating the contract, companies have incorporated those contents. Terms of condition in the contract include tenure of contract, area to be out under the contract crop, quality of produce that will be accepted by the firm, rate at which company will purchase the produce, particulars of the seed provided by the firm, rate of selling of seed by firm and the conditions in which company can terminate the contract. Although
companies envisage long term relationships with the farmers’ contracts are signed for one crop cycle only. Companies don’t want to enter into long term written contract, as price and demand uncertainty forces them to engage farmers’ for one crop cycle only.

Most of the companies reported of providing varied degree of services, although they were not verifiable at the farmer level. Seed was provided by almost all the service providers. In fact, farmers have to purchase seeds by making the down payment to the booking agency. A farmer cannot do Contract Farming by planting his own seeds and then sell produce to company. Other than seed, facilities like fertilisers, pesticides, post harvest services and farm implements were also reported to be provided by the companies. By these facilities were optional and farmer was free to take or refuse the services. Except MSSL and Escorts all companies reported that they are providing the fertiliser and except Escorts all the other companies also reported to be providing pesticides facility to the farmer. MSSL, TCL, Escorts and PepsiCo also provide farm implements to the farmers. Consultancy services related to monitoring the health of the crop and timely delivery of the inputs were also reported to be provided by all companies. In these visits field officers of the company were required to suggest to farmers regarding the amount of inputs and time of application of inputs. Charges for these services were paid to companies by PAFC.

None of the companies provide transport facility and farmers are supposed to bring the crop at the designated point at their own expense. The designated points (Special Mandis) have been set up by the PAFC in consultation with the private players and the agriculture department for procurement of contract crop. At these centers buyers are exempt from paying mandi taxes. These mandis are decided by the PAFC according to the area brought under Contract Farming. The mandis are selected so that farmers don’t have to travel more than 8 km.

All the companies have reported that they have introduced some new technology in the Contract Farming areas, although this was not verifiable at the farmer level. Farm implements companies reported of having introduced some new farm implements for example MSSL said that they introduced implements like maize sowing drills, Cob thresher with husks, Combine Harvester for maize, similarly Naranjan Rice Mills reported of having introduced organic pesticides and fertilisers in their Contract...
Farming areas. Payment to the farmer was made through banks and all companies reported that money is deposited in the farmer’s accounts within 15 days of delivery of produce.

3.5 Challenges faced in the Contract Farming

The Contracting companies are highly optimistic of opportunities provided by Contract Farming but they have also reported of certain challenges faced by them. Some challenges are more specific to extension service providers who had contract both with the buyers and farmers while others have to be borne by the buyers.

- Challenges from the government pricing policy.
- Challenges from the farmers,
- Challenges from the side of buyers,
- Challenges from the local level middleman and
- Problems in selling seeds of some companies which are of high cost.

3.5.1 Challenges from the Government Pricing Policy

Contract Farming efforts to bring Crop diversification face severe challenges by the Minimum Support Prices (MSP) offered by the Government for the very crops for which it is trying to provide alternatives. There is unanimous agreement among the contracting agencies that regular hiking of the (MSP) prices for the wheat and Rice has artificially boosted the profitability of these crops (Table 3.2). This has been preventing farmer from adopting alternative crops. Although purchase prices of some of the crops under Contract Farming are decided by the government and have been raised more than the prices of wheat and paddy, that still doesn’t matches the profitability of the wheat and paddy system. In the 2005, PAFC fixed the purchase price of maize at Rs. 550/quintal but that was not sufficient compared to the return form the rice, where purchase price was Rs. 570/quintal for normal variety and Rs. 600/quintal for the grade-A variety. In case of basmati, which is an export crop, international prices don’t follow the trend of the domestic prices of Rice, which is a competitive crop for the basmati. Fall in the international prices makes basmati un-remunerative for the farmers, who prefer to continue with the Rice, where government revises purchase prices yearly.
### Table 3.2: Minimum Support Prices According to the Crop Year (Rs. Per Quintal)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<td>1410</td>
<td>1520</td>
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<td>1200</td>
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<td>1925</td>
<td>1960</td>
<td>1980</td>
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<td>1340</td>
<td>1355</td>
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<td>1500</td>
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<td>1185</td>
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<td>1250</td>
<td>1340</td>
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<td>795</td>
<td>840</td>
<td>900</td>
<td>900</td>
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<td>885</td>
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<td>930</td>
<td>1000</td>
<td>1010</td>
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<td>Wheat</td>
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<td>Rapeseed/Mustard</td>
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<tr>
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<td>1300</td>
<td>1500</td>
<td>1550</td>
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<td>1295</td>
<td>1565</td>
<td>1665</td>
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<td><strong>Other Crops</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Copra (Calendar Year)</td>
<td>Miling</td>
<td>3250</td>
<td>3300</td>
<td>3300</td>
<td>3320</td>
<td>3500</td>
<td>3570</td>
<td>70(2.0)</td>
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<tr>
<td></td>
<td>Ball</td>
<td>3500</td>
<td>3550</td>
<td>3550</td>
<td>3570</td>
<td>3750</td>
<td>3750</td>
<td>70(1.9)</td>
</tr>
<tr>
<td>Jute</td>
<td>TD-5</td>
<td>785</td>
<td>810</td>
<td>850</td>
<td>860</td>
<td>890</td>
<td>910</td>
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<td>Sugarcane</td>
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<td>62.05</td>
<td>69.5</td>
<td>73</td>
<td>74.5</td>
<td>79.5</td>
<td>5(6.71)</td>
</tr>
</tbody>
</table>

* Figures in Brackets Indicate Percentage increase

Source: www.indiastat.com

### 3.5.2 Challenges from the Farmers

Unpreparedness of the farmers’ and overzealousness of the PAFC to protect farmers’ interests is also considered to be responsible for certain practices, which companies think are harmful for the Contract Farming. Absence of any legally binding contract on the either parties is the most challenging feature of the model being followed by PAFC. Buyer companies reported that while they were forced to give
license fees for doing Contract Farming to the PAFC, no such fees was charged from the farmers. And in case companies are not able the buy the contracted crop due to some problems, they are threatened their fees would be confiscated. While farmers are free to sell the produce if market price exceeds the contract price, buyers are not free to opt out in the event of drop in the market price. Buyers also reported that they have introduced a bonus to tackle the problem of farmers’ quitting the contract in the event of increase in the market price. However, they don’t have the option of negotiating the prices in the falling market and are forced by the PAFC to buy the produce at the contracted rate. Basmati buyers especially reported the problem faced in 2003 due to sudden crash of prices in the international market, when they were forced to buy the produce at the higher prices than the prevailing market prices. Challenges are also faced by the extension service providers to bring the farmers to sell the produce in the event of rising market. As farmers think of maximising the gain in the rising market they did not worry of keeping to the terms of the contract. Companies view that farmers have only short term goals and do not think of cultivating long term relationships with companies.

3.5.3 Challenges from the Buyers

The extension service providers who have signed the agreement to search the market for the contract crops and sell the crops to buyers at specific prices face this challenge. In the case of basmati which is an export crop, there have been wide fluctuations in export prices. Besides, large numbers of established exporters compete with each other to grab best variety of produce. But in the case of crops such as oilseeds and pulses where number of processors and buyers are limited, PAFC has been the single largest buyer. In 2002, when PAFC started Contract Farming as a means to diversify the cropping pattern it selected basmati as one of the important crop to help farmers’ make a transition to environmental friendly high value added crop. As the rates of basmati in the international market (in 2002 rates were between Rs. 2000 to 2040/Quintal) were high it appeared as a good option for the farmers’ to take basmati as an alternative crop. Exporters were also keen on purchasing basmati through Contract Farming as it appeared as a safe bet against continuously rising prices of basmati. However, with fall in the international price of basmati in 2003 there was some
reluctance on the part of buyers to carry on their commitment to purchase the crop at the predetermined rate, which was higher than the market rate. With the threat of withdrawal from buyers, there was pressure on the extension service providers to purchase the crop as they have been signatories with the farmers' to purchase the crop. With no export and processing infrastructure it was difficult for the extension service providers to purchase the crop. This situation necessitated government intervention, and when government intervened with strict guidelines on cancellation of exporters' license if they don't fulfil their commitment of buying the stipulated amount of produce, they agreed to buy the crop but gave very stiff quality norms and rejected the crops in large amount. This necessitated the involvement of an external (neutral) agency to evaluate the crop and suggest the appropriate purchase price. In Kharif 2003, M/s Société Générale de Surveillance (SGS) International was deployed to assess the quality of the produce brought by the contracted farmers, so that there would be no dispute between the buyers and the farmers. Contracting agencies/buyers purchased 25000 tons of basmati valued at Rs.33 cores. However, some produce was rejected for not meeting the quality norms, and in order to protect the farmers interest PAFC intervened to buy the produce from such farmers. PAFC intervened in the market and purchased 2800 MT of basmati. Such a high level of purchase by the PAFC was the extension of Procurement Price mechanism and a method to prevent the failure of Contract Farming. This demonstrates the fragility of risk minimization effort through Contract Farming. Buyers always have the decisive power of deciding upon the quality of the crop at the time of purchase and rejecting the produce of farmers on the behest of not meeting the quality norms. Therefore, Contract Farming in case of export crops competing with produce from different nations will always involve great challenges and the vulnerability of farmers from price fluctuations will not be minimized unless governing authority intervenes to enforce the contract.

3.5.4 Challenges from Local Level Middleman

Farmers rooted in the tradition of dealing with the local buyer (Arhatiya) in the local mandis have difficulty in coming out of the relationship. These local buyers who act as intermediary between the farmers and processing and exporting firms have close bonds, which is not limited only to buying of crops. These Arhatiyas also act as a
lender of last resort, whom a farmer can access at any time of the year and is sure to get the timely help. It is not the rate of lending which plays an important role but the 'help' which he extends to the farmer. Farmers rely on him not only for the credit lending but also for the advice which varies from agriculture i.e. which crop to sow, which seed to use, amount and time of inputs and the rates which he can expect to get in the market to the advices related to the personal and social problems. Being a neighbourhood lender he is part of the social set up of the village and therefore has the clout to manipulate the information (Gill, 2004). Contracting Firms face serious competition from these local level middlemen. There have been several cases where farmers sold their contracted produce to the Arhatiyas. By offering the spot price above the contracted price Arhatiyas were successful in luring the farmers to their fold. As Arhatiyas can exert social pressure on the farmers for going outside the prevailing norms of the village, farmers don't feel any hassles in breaking the contract with companies.

There have been of examples Contract Farming in some countries, where these local level middlemen have acted as the middle level brokers and companies found it economically more feasible and logistically easier to contact these brokers than to deal with the individual contract farmers (Glover, 1990; Singh, 2005b). Besides the kinship loyalty playing dominant role in deciding the commercial relations in rural agriculture system, incorporating these relations into new business mould seems to be a sound business strategy for the agribusiness ventures. Incorporation of these middlemen into the formal marketing networks has been the options for the contracting companies, but that would have gone against the contracting framework devised by the government. And, with government focus on straightening the food chain by reducing the number of middleman, involving the middleman by the companies as the sub brokers would been difficult. In the crop diversification programme service charges are paid by the PAFC to the companies and not by farmers, which requires the submission of the list of contracted farmers by the companies to the PAFC. This has been source of some conflict between the PAFC and the companies. Companies feel that power of verification and final approval given to the district authorities provides them unnecessary clout and the companies often require to make additional payments to get payment for their services by PAFC.
3.5.5 Problems in Selling High-Cost Seeds

Although Contract Farming is a mechanism to bring input providers and buyers on a single platform, there have been some internal incoherencies in the application of this mechanism at the ground level. In the crop like basmati, where single company like Pepsi and Hindustan Lever Limited operates the whole Contract Farming chain, both as a buyer and service provider, there has been little discomfort in selling the seeds to the farmer. However, in the cases where seed provider, service provider and buyer are different, some tension and internal incoherencies have been noticed. While the seed companies are required to provide seed for certain crops in the crop diversification programme, and service providers deliver those seeds to the farmers, buyers are the ones who have final say about quality of the produce. In the case of crops like hyola, where service providers have to sell seeds at the rates determined by the PAFC, high rates have been the major problem preventing the farmers to adopt the crop. In case of other crops like maize and sunflower where service providers can buy seeds from certified seed providers, there is some scope for negotiating the rates with the seed providers. But even in this case when service providers are not able to provide seeds at the competitive rates, it acts as a deterrent for the farmers joining the Contract Farming.

Another problem faced by the extension agencies and the contracting companies is the employment of the field staff. Seasonal nature as well fixed period of a crop poses a great limitation in maintaining the field staff. If the service providers continue to employ the staff for the entire crop year then they have to incur the huge expenditure on the salaries and if they hire staff for a limited period and then remove that staff then they lose experienced staff. This is a problem particularly faced in the crops which are grown in the scattered areas and require more intensive technical services.

3.6 Crop- Wise Feasibility Differences for the Contract Farming for the Firms

Transaction cost plays an important role in the decision making of the contracting firms. Minimisation of cost has been one of the most important aspects of the operations undertaken by the contracting firms. Thus, cost of travel, communication, extension services, market fee, commission charges and cost of employing field staff all make an impact in the decision making for contract firms. According to the contracting firms, nature of the crop, its growing area and time duration affects the nature and intensity of the service required for the crop. Besides, factors related to the crop, nature of the buyer and their quality norms also make a
difference in the transaction cost of the firm. Crops which are of short duration, grown in a relatively concentrated area and require less intensive services are more attractive to the contracting firms. On the other hand crops having wide coverage, long duration and requiring intense services have high transaction costs are not preferred by these private companies. Among Contract Farming crops, basmati was found to be most attractive to the firms (Table3.3). Although the crop required intense service and more skilled professionals to undertake field operations, moderate duration of the crop and high international market prices adequately compensated the contracting firms. However, vulnerability of basmati Contract Farming was exposed when international prices for basmati crashed in 2003. Contracting firms’ refusal to purchase the contract crop and high rejection rate on the false quality premises brought down the myth of risk mitigation arguments of the Contract Farming.

Amongst the Contract Farming crops, maize was other crop for which transaction cost was not considered very high by the firms. However, general level of low receptiveness amongst the farmers’ made it not a very attractive option for the firms.

Table 3.3: Crop Wise Feasibility Differences

<table>
<thead>
<tr>
<th>Crops</th>
<th>Maize</th>
<th>Basmati</th>
<th>Hyola</th>
<th>Sunflower</th>
</tr>
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<tbody>
<tr>
<td>Area</td>
<td>Concentrated Area</td>
<td>Separate Area</td>
<td>Scattered Area</td>
<td>Specific Blocks</td>
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<tr>
<td>Receptiveness of the farmers for the crop</td>
<td>Low/Farmers growing Potato adopting in the cycle Maize-Potato-Potato</td>
<td>Moderate/Price Specific</td>
<td>Low</td>
<td>High/Fits in crop combination pattern of Paddy-Potato and Sunflower</td>
</tr>
<tr>
<td>Duration of Crop</td>
<td>Relatively Short</td>
<td>Moderate</td>
<td>Very Long</td>
<td>Short</td>
</tr>
<tr>
<td>Intensity of Service Required</td>
<td>Moderate</td>
<td>Intense</td>
<td>Moderate</td>
<td>Intense</td>
</tr>
<tr>
<td>Staff Requirement</td>
<td>Less Technical Staff Required</td>
<td>More Technical Staff required</td>
<td>Less Technical Staff Required</td>
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<td>Purchase</td>
<td>PAFC</td>
<td>Private</td>
<td>PAFC</td>
<td>Private/PAFC</td>
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<tr>
<td>Results</td>
<td>Not very expensive</td>
<td>Good for business when prices high</td>
<td>Expensive per acre</td>
<td>Expensive per acre</td>
</tr>
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</table>

Source: Data provided by Contract Farming Firms
3.7 Conclusions

Agri-business avenues provided by the opening and global-linking of the economy have catapulted new ventures. Some of these ventures modeled on the new economy formulations do not take into account agricultural specificity and cultural variability of the Indian agrarian operations. Contract Farming is considered as a client-building preposition, useful for backward chain consolidation and an instrument rural penetration by some of the firms. Instead of adopting the wide area reach approach, contracting firms are trying to reach some of the best and most capable farmers, which will not only fulfill the requirements for agricultural operations but will also, minimize transaction cost. This reflects adoption of the ‘consumer differentiation’ model for maximizing the returns by the agri-business firms. However, the extent to which this model has been accepted by the farmers and been able to fulfill broader objective of crop diversification will be analysed in the further sections.

At present the contracting firms are facing constraints at several fronts which are related to both structural and institutional set up, as well as the cultural web of rural areas. The resolution of these constraints will unfold with the further opening and globalisation of the Indian economy and society.