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CONTRACT FARMING IN PUNJAB
An Analysis of Problems, Challenges and Opportunities

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Abstract. Private sector participation in agriculture is envisaged through promotion of contract farming and land leasing arrangements, which will accelerate the technology transfer process and bring more cash inflows to the cash strapped farm sector. In this paper, an effort has been made to analyze the working of contract farming in Punjab as practised by a private industrial unit, which is engaged in the agro processing. This paper also tries to find answers to many questions related to contract farming on the basis of survey of farmers contracting with private agro-industry. As there remain many unanswered questions about the rationale, performance and benefits of contract farming, as a way out from the present mess Punjab agriculture finds itself in, our concerns in this paper are the issues at the micro level rather than assessing the performance of contract farming at macro level. Contract farming provides many opportunities as well as challenges to the farmers. This is the most transient and speculative form of contract farming and it runs a high risk of default from both sides. Contract farming lends stability to the farmers income and minimizes the inter and intra year variations. On the basis of present survey, it can be concluded that adoption of contract farming is more prevalent among medium size farmers. Big farmers due to high capacity to undertake risks find open market more lucrative than the contract farming. Its adoption is also more prevalent among more educated farmers. No doubt, contract farming give farmer an assured income but there is feeling of exploitation among the farmers due to varying quality norms adopted by the company. The farmers also act dishonestly some times which leads to failure of contracts or dropping of such farmers by the firm. Though the problems faced by contracting farmers are numerous still the promotion of contract farming for other perishable commodities is recommended. In order to

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encourage new cropping pattern, participation of private players is welcome but while using contract farming a vehicle for the diversification state cannot leave unorganized peasantry at the mercy of MNCs because corporate giants can certainly exploit the unequal power relations while signing or implementing a contract. Government must play a pro-active role for the implementation and monitoring of the contract.

I. INTRODUCTION

The Government of India's national policy on agriculture has assigned a key role to the private sector. Private sector participation is envisaged through promotion of contract farming and land leasing arrangements, which will accelerate the technology transfer process and bring more cash inflows to the cash strapped farm sector and ultimately will create assured market and high value added to the farm produce. Basic purpose of adoption of such a policy is to provide a proper linkage between the "farm and market" by giving farmer an assured price and procuring the farm produce on the one hand and insuring timely and adequate input supply to the agro-based and food industry on the other. Need for such a policy has its genesis in the demand and supply disequilibrium that agriculture faces, where farmers have to dump there produce for the want of buyers on the one hand and agro-based industries face difficulties in procuring quality inputs on the other.

The term 'contract farming' generally refers to situations in which a farmer raises or grows an agricultural product for a vertically integrated corporation under a forward contract. Existence of one of the following conditions leads to the emergence of the contract farming: (1) high value specialty crops with lucrative 'niche' market; (2) the need for consistent and reliable supplies on the part of the buyer; (3) a system of input and output market which can not be met through open market purchases and (4) a labour intensive commodity which small holders can produce efficiently (Little and Watts, 1994). Prohibition of captive farming also drives agribusiness firms in to contracting. Moreover firms in their conquest of specialization do not want to indulge in captive farming as it amounts to making huge financial and human investments in to production of raw material. Basically, involvement of four things is necessary for working of such contracts (*a*) pre-agreed price; (*b*) quality; (*c*) quantity (which can be in the forms of minimum and maximum acreage) and (*d*) time of delivery (Singh, 2002). While price, quantity and time of delivery depend upon the mutual understanding of the contracting parties, the quality norm may be decided or monitored by any other agency also. Under contract farming, farmer is required to plant the contractors' crop on his land and is supposed to sell the contractor, an agreed quantity of produce with prescribed quality norms at a pre-agreed price. Contractor on the other hand may supply the farmer with selected inputs, including the required technical advice (Glover, 1987; 1990). Contract can be classified according to the operations of the contracting agency. Normally contracting agencies or firms carry two types of operations. One, they act as marketing channel between the farmers and any other big firm at national and international level. On the other hand, they may be involved in the processing of the farm produce. These two categories of firms are not mutually exclusive and there are instances where a firm is involved in both kinds of operations at different stages (Porter and Philips, 1997). Marketing contracts are practised with varying degrees and can be classified in two categories. Under first category a known buyer specifies only sale and purchase conditions. This type of contract is informal in nature and usually these are practised by the state or by agencies that have a state approval. In such contracts state approval is must so that the farmers take them seriously. The procurement of food grains particularly wheat and paddy by the Government of India under minimum support price comes under this category. Under second category of marketing contracts, contracting firm not only specify the sale and purchase conditions but also provides some inputs to the farmer for a price. Production contracts on the other hand are quite comprehensive in nature, where all the inputs, know-how and technical assistance are provided by the contractor and in turn he procures whole of the farmer's crop. These contracts are practised by the agencies who themselves are engaged in the agro processing. Contract practised by some multinationals like Pepsi Co. falls under this category. The terms and nature of the contract may differ according to variations in the nature of crops to be grown and the context in which they are practised.

Pepsi Foods was the first corporate giant to enter in to contract farming in Punjab. It started contract farming of tomato crop in early 1990's. Pepsi sold its plant to Hindustan Lever Limited (HLL), another corporate giant, a subsidiary of Unilever in 1995. HLL worked with about 400 farmers in early 1990s for its tomato paste plant with capacity to process around 650 tons of tomatoes per day. Nijjer Agro entered the scene in 1991 to prepare tomato paste with plant capacity of around 350 tons per day. It started contracting farmers in the same year working with 400 farmers in the beginning.

Many studies (Binswanger and Rosenzweig, 1984; Glover and Kusterer, 1990; Haque and Birthal, 1998; Key and Runsten, 1999; Pari, 2000; Rangi and Sidhu, 2000; Roth, 1992; Simmons, 1994; Singh, 2002) which looked in to the operations of contract faming of the different contracting firms, and the economic benefits, that accrue to the participating farmers are unanimously of the view that contract farming although leads to increase in gross returns of the farmers but cost of production also increases. Contracting agencies generally deal with relatively large producers and their contracts are biased against the farmers. Such model of contracting perpetuates the existing problems of farm sector rather than solving them. No doubt, such contracts lead to increase in income of the farmers but these are also accompanied by the problems of high input intensity and social differentiation. There exist an inherent contradiction in the objectives of contracting parties and those of local economies. Study by Rangi and Sidhu (2000) concluded that tomato crop give better returns than the traditional non-contracted crops like wheat and paddy.

Contract farming has the potential to substitute for the state in the wake of neo-liberal reforms in the agrarian sector. Private firms can enter to fill the same role and are believed to do so more efficiently. But this may hamper the development of rural infrastructure, being presently supported by State Mandi Board. On the other side, critics see contract farming, through the political economy view where contracting is considered as a tool through which multinational agro-industrial firms can exploit unequal power relationships with growers (Singh, 2002).

Though, contracting poses problems for both the parties still it seems beneficial for both the farmers and the companies. The prime advantage is that the company will purchase all the produce grown, within specified quality and quantity parameters. Contract can also provide farmers with access to a wide range of managerial, technical and extension services that otherwise may be unobtainable (Eaton and Shepherd, 2001). One of the major attractions of contract farming for farmers is the availability of credit provided either directly by company or through a third party. However, farmers can face considerable indebtedness if they are confronted with production problems, if the company provides poor technical advice, if there are significant changes in market conditions, or if the company fails to honor the contract. This is of particular concern with long-term investments, either for tree crops or for on-farm processing facilities. If advances are uncontrolled, the indebtedness of farmers can increase to uneconomic levels. Sometime 'compassionate' advances for school fees, wedding etc. results in farmers receiving very less or no payments at the end of the season. This will result in high drop out rates, as farmers will consider such contract farming non-profitable.

Punjab agriculture is facing many problems. Major problem is of diversification. Diversification cannot take place till some alternative to existing wheat paddy cropping pattern is developed which is as remunerative, if not more as wheat-paddy is and similar assured marketing facilities exist for these alternative crops. Contract farming is being perceived as one of the many other ways, to increase the income of the farmers by making them to grow more cash and commercial crops. Even in case of wheat and paddy it is basically a contract farming where the sponsoring party is the central government, which declares the support price for the wheat and paddy and there is an unwritten agreement to buy whatever amount is brought to the market. It was because of this assured market and the support price that farmers, particularly of Punjab, adopted the wheat-paddy as the main crops. Although, under WTO, government is slowly backing out of this unwritten contract, but still the other party – farmers are keeping to the agreement, as there is no viable alternative available to them. Many other experiments in contract farming in the state have failed because of the fact that the contracting companies have not fulfilled their part of the agreement on one pretext or other. It has happened in case of sugarcane, tomato crop contract with Pepsi, oilseeds and recently in case of 'basmati' where the contracting farmers were forced to sell in open market at much less price when the contracting party did not buy the produce on one pretext or another.

In this paper effort has been made to analyze the working of contract farming in Punjab as practised by a private industrial unit, which is engaged in the agro processing. This paper also tries to find answers to many questions related to contract farming on the basis of survey of farmer contracting with Nijjer Agro Industries. Though the sphere of contract fanning regarding number of players involved and magnitude of farmers is quite large present study focus on the terms and working of contract between farmers and the Nijjer Agro Industries. As there remain many unanswered questions about the rationale, performance and benefits of contract farming, as a way out from the present mess Punjab agriculture finds itself in, our concern in this paper are the issues at the micro level rather than assessing the performance of contract farming at macro level. Apart from looking into the question of age, education and land holding of contracting farmers study makes an attempt to look into the problems of participating farmers. For this purpose, paper has been divided into five sections including the present one. Second section deals with database and methodology and also give a brief profile of the contracting firm and methods and measures adopted by it for choosing the farmers, fixing contract price and quality control. Detailed analysis of contract farming as practised by the farmers, income from contract farming and problems faced by contracting farmers form the parts of section III. In section IV, an alternative model of contract farming based on equal power relations between contractor and farmer is suggested as a remedial measure, followed by conclusions in section V.

II. DATABASE AND METHODOLOGY

This section deals with a brief profile of the contracting firm and database and methodology. Study was undertaken to analyze the working of contract farming as practised by Nijjer Agro Industries, a medium size private sector unit located at the outskirts of Amritsar city, with the local farmers on the periphery of the city. Nijjer Agro is a public limited company and is listed on the stock exchange. It is undertaking tomato contract farming since its inception in 1990, for manufacturing the tomato paste. Total installed capacity of the firm is 500 tons of tomato paste. Firm supplies major part of its product in the form of tomato paste to Nestle (Pvt.) Ltd. and also markets its tomato sauce on its own. Nijjer Agro also manufactures other forms of paste like guava, chilly and apple along with milk and other products. Firm contracts farmers in the whole of Punjab and some areas of Haryana and Rajasthan bordering Punjab. Annually it enters into contract for tomato crop with 1,000 to 1,200 farmers for about 3,000 to 3,500 acres of area. Average contracted area per farmer for the firm turns out to be around three acres. The firm being a local entity knows the farmers personally and thus is very selective while choosing the farmers. Though visibly firm does not discriminate between small and big farmers still it has a preference for small farmers as they work very hard while raising the crop. It also becomes easy for the firm to ensure proper quality control. Firm has large number of farmers who have entered in to contract only for one acre. Firm does not charge any registration fee from the farmers. Contracting farmers are required to buy nursery (seedling) from the firm and Rs. 1,500 is charged for the same from the farmer. Firm provides nursery to farmer on credit basis also which is deducted at the time payments are made to the farmers. However, no other credit facility is provided while raising the crop. Firm owns research farm where it carries out various improvisations and prepare nursery for tomatoes. Firm recommends fertilizer and pesticides, their dosages and about the time of their application. It also oversees the transplanting of the crop and monitors the crop to safeguard against diseases and pests. In case of crop failure due to natural calamities though firm does not render any direct help still it claims that it tries to compensate farmers by other means. According to firm enforcement of contract is the most difficult part. There is around 30 percent contract failure each year. In spite of this high default rate, company has never sued any defaulting farmer, as it will distract the firm from its main function and also result in loss of its clientele as well as brings disrepute to the firm. Farmers default whenever market price is higher, which normally happens once in every four years. The firm on its own drops around one fourth of its existing contracted farmers every year whose performance has not been up to mark on quality front or otherwise. Company also feels that it is at an advantageous position as compared to any MNC involved in contract farming because they (the owner) being local and from the farming community know the farmers personally and talks in their dialect which the MNC's executives can't. This notion is corroborated by the failure of Pepsi Co. plant in Hoshiarpur District, which was ultimately sold out, to some other MNC. Contract farming according to the company integrates international and national markets vertically, and the contract price handed over to the farmers by Nijjer Agro is determined internationally. Nijjer Agro supplies its tomato paste to the Nestle at a price based on the international price trends. The contracting firm in turn, by taking into consideration this price, determines the contract price for per kilogram of tomatoes to be paid to the farmers. The farmers are required to deliver the crop at factory gate and no extra freight is paid however those farmers who are contracted at far off places are given a higher rate than the local farmers to cover the freight cost. The firm has a team of 25 graduates and postgraduates in agriculture who act as support staff and look after the problems of the farmers. The farmers are booked in advance and their booking confirmed close to start of sowing season. In order to ensure that enough supply of the crop is available in the open market, firm also supplies the tomato nursery to non-contracting farmers though at a higher rate of Rs. 2,500 to 3,000 per acre than the contracting farmers.

SELECTION OF FARMERS

For the purpose of study and analysis, 70 farmers of Amritsar district who had undertaken tomato cultivation under contract farming with Nijjer Agro were selected. For the purpose of selecting farmers a list of names of the growers and the area contracted was obtained from the contracting firm. The villages in which Nijjer Agro is carrying out its contracting operations are spread over different development blocks in Amritsar district. In first stage 3 blocks namely Jandiala guru, Tarsikka and Khadoor Sahib were randomly selected from the whole lot of blocks by using the lottery method. In the second stage among all the villages falling under these blocks, three villages from each block were selected. All the contracting farmers of the nine selected villages were interviewed with the help of a pre-designed questionnaire. Information regarding size of land holding, leasing in and leasing out of acreage of land, their education and age profile, what kind of contract they enter into, problems faced by them and suggestions to over come these problems were also obtained from these contracting farmers.

III. ANALYSIS OF CONTRACT FARMING

NATURE OF THE CONTRACT

In this section effort has been made to analyse the contract farming as practised in the sample villages. Nature of the contract, most farmers entered in to was informal one, as the company registers all the farmers without charging any fee and contract is legally forcible although no party ever indulge in litigation. Moreover, contract is done for the number of acres and not of the quantity of output to be procured meaning thereby that whole of the output will be procured by the agency with certain quality norms at a prefixed price. Under the contract, contracting firm provides seedlings of tomato for which farmers will have to pay at the rate of Rs. 1,500 per acre either in advance or at the time payments are made for the produce.

Firm guides farmers about the fertilization and timing of the sprays and also technical advice regarding grading and quality control. Thus the model, which company (Nijjer Agro Industries) practice, is the informal model of contract farming, which is also a bipartite contract farming model. This is a simple (or perhaps the simplest) form of contract farming where individual entrepreneur company makes simple production and procurement contract with farmers on seasonal basis. Farmers are not advanced any credit to meet their other needs for raising the crop.

FARM SIZE OF CONTRACT FARMERS

An important aspect of the contract farming arrangements is the farm size of participating farmers. There are instances where companies deal differently with different categories of farmers while contracting for the same crop. An agribusiness firm may opt for big farmers as they have more resources at their command, are not dependent on contracting firms for financial help and are in a better position to avail economies of production. Small growers, on the other hand may prove beneficial in those crops where intensive cultivation and relatively labor-intensive techniques are used. Thus, an attempt was made to find out the size of farm and acreage under contract farming. Average size of land holding of the contracting farmers is presented in Table 1. Perusal of the table shows that most of the farmers who opted for contract farming owned between six to 15 acres of land. Biggest land holding is of 50 acres and smallest is of three and half acres. Average size of land holding comes out to be thirteen acres. Table shows around 70 percent of the farmers of the sample have land holding ranging between five to fifteen acres. Even within this category around forty three percent farmers have holding between five to ten acres. Among the farmers who adopted contract farming only 12 percent have more than 20 acres. Thus, the study found that adoption of contract farming is more prevalent among the medium size farmers and small and big farmers seem reluctant to adopt it. The reason for this trend may be the fact that big farmers can avail economies of production and marketing even in the open market. Availability of means of transportation makes them more mobile and they can explore lucrative markets even at far off places. Contract farming also means that committing to a particular price, even though the market price, which a farmer can avail, might be more than the contracted price. Thus big farmers who have potential to undertake such a risk do not find the contract farming much lucrative proposition.

TABLE 1

Size of Landholding of the Contract Farmers

Farm size (Acres)	No. of Farmers	Percentage of Farmers	Total Land (Acres)	Average Holding
0-5 Acres	4	5.71	17.5	4.37
5-10 Acres	30	42.85	209.5	6.98
10-15 Acres	19	27.14	247	13
15-20 Acres	8	11.42	151	18.87
20-25 Acres	3	4.28	70	23.33
26-30 Acres	2	2.85	55	27.50
31-35 Acres	2	2.85	68	34
46-50 Acres	2	2.85	97	47.50
Total	70	100	915	13.07

Medium and small farmers are often driven by the risk minimisation behaviour rather than the profit maximization, and contract farming does minimize such risk and drive a farmer in to contract farming.

Effort was also made to find out the pattern of the land brought under contract crop. The pattern of land brought under contract farming by contracting farmers is presented in Table 2. Study found out that none of the farmers put their whole land under the contracted crop. They opted for contract farming on a part of their land. It is clear from the table that about 79 percent of the contracted farmers adopted contract farming on 1 to 4 acres of land. Furthermore, none of these farmers put more than 10 acres of their land under contract farming. About Sixteen percent of farmers used 4 to 6 acres under contract farming and very small proportion of the farmers (4 percent) put in more than 6 acres of land under contract crop.

TABLE 2

Size of Landholding Put under Contract Farming

Size (Acres)	No. of farmers having land between				Percentage of Total
	0-5	5-15	15 and above	Total	
1-2	4	29	–	33	47.1
2-4	–	18	4	22	31.5
4-6	–	1	10	11	15.7
6-8	–	1	2	3	4.2
8-10	–	–	1	1	1.4
Total	4	49	17	70	

Important inference can be made by looking at the percentage of contracted land to total land. It reveals that most of the farmers in middle size category (*i.e.* having land between 5 to 15 acres) put just a part of total land holding under the contract crop. As size of total land holding increases land put under contract crop also increases but it does not increase proportionately. Smallest area put under contract crop was found out to be one acre and largest was 10 acres among the sample farmers. Average area put under contract crop was found out to be 3.05 acres, which is approximately one fourth of the average land holdings of the sample farmers.

As contract farming is different from the normal farming, an effort was made to know the education and age profile of contracted farmers. This was done to find out whether age or education of farmers plays any role in opting for contract farming or not. Education and age profile of the contract farmers is presented in Table 3. It is clear from the table that 76 percent of the farmers who opted for contract farming were matriculate or possessing higher educational level. Further, about 28 percent of the farmers had education level up to graduation or above. Highest education level was found out to be masters. On the other hand twelve percent of the farmers did not have any formal education and were totally illiterate but were found to be perfect in their profession. Thus study found out that adoption of contract farming and education level has very high and positive correlation.

TABLE 3

Education and Age Profile of the Farmers

Education level	No. of Farmers	Percentage	Age (Years)	No. of Farmers	Percentage
B.A. and above	22	31.42	0-25	2	2.85
Higher Secondary	10	14.28	26-35	11	15.71
Matriculation	16	20	36-45	26	37.14
Fifth to Eighth	10	14.28	46-55	18	25.71
No Formal Education	12	17.14	56-65	13	18.57

Analysis shows that most of the farmers who opted for contract farming are relatively young and of middle age. The average age of these farmers work out to be forty-six years. Oldest among them 64 years old and youngest one is 23 years old. Further, study revealed that most of the farmers, who were above 55 years of age, took to contract farming on the insistence or advice of young members of the family or by following the young farmers of the neighborhood. Furthermore, it was found that decision of the family to opt for contract farming was also influenced by prospects of better returns. Government advertisement on television / radio / newspapers highlighting contract farming as a way-out from the present agrarian crisis also played a role while making this choice.

Most of the sampled farmers revealed that they were happy about the economic benefits, which accrue to them under this arrangement. Although it also leads to increase in the cost of production, these farmers were also aware that they could earn more at times by selling their product in the open market. But selling in open market is highly risk prone as most of the time market price is not high enough to cover the cost of production. Contracting of course gives them an assured income irrespective of the market fluctuations. While assurance of income is good enough a reason for deriving these farmers in to contract but problems, these farmers face, are also aplenty and their list runs longer than the benefits. According to majority of the sample farmers glut or shortage in the market still has a profound effect on the behavior of the contracting agency.

According to the farmers contracting agency procures whole of the output when the market price of the crop is high and there is boom in the open market. But when market is down and prevailing price in the market is less than the contracted one the contracting agency resort to price cuts on one pretext or other. One of the important tools in the hands of contracting firm to reject the part or whole of the crop is the quality norms. These norms are solely decided by the contracting firm and are always used to the disadvantage of contracting farmers. Thus, when there is glut in open market, farmers no doubt get a higher price than the market, but this price is only marginally higher whereas rejection of crop on quality norm is far higher. On the other hand, when there is shortage of supply and farmers could have earned more by selling in the open market they just get the contracted price only. Farmers alleged that in such a situation (*i.e.* shortage) if farmers try to sell their produce in the open market by violating contract, firm not only forces them from not doing so but also go the extent of harvesting their crops for which the contract has been signed. Thus, there is always a risk of clash between farmers and the firm. This study found that these benefits are not assured and stable, hereby failing the very purpose for which contract is made.

The tendency of contracting firm to refuse the purchase of produce at quality pretext during glut affects the non-contracting farmers also. As contracted farmers also start selling their rejected crop in the open market, price of the crop crashes thus playing havoc with the non contracting farmers who do not have other option but to sell in the open market. Another major problem is that of deciding about the quality of the produce. At the time contract is made it is agreed upon that crop will not be rotten and ripened than a prescribed limit. But whenever there is good production and market is booming contracting agency raises their quality standard in the absence of any prefixed criteria for judging the quality and in the absence of any impartial agency it is the farmer who pays a heavy price for it. Even good quality product is labeled as the bad one. Interestingly firm does not refuse to procure the product but only resort to heavy cuts at the pretext of quality. This is nothing but a clever way to under price the product (also concentration point). The quality cuts are normally 15 to 20 percent and in boom period they can go up to forty percent. Thus, the farmers who enter the contract in the hope that they will get an assured price for their produce find themselves robbed by the company, which is not different from the local commission agents (*Ahrtiyas*) in the open market. Interestingly penalty rates are higher when there is more supply than demand in the market.

Undue delay in payments made by company for procuring the contracted crop is another problem faced by the farmers. Mostly, it takes from 6 to 12 months to get payment for crop supplied by the farmers. As payments are made through cheques and not in cash there are frequent complaints of dishonoring and bouncing of cheques. Almost all the sample farmers were of the opinion that company follows double standards when it makes farmers to pay in advance for the inputs provided by it, whereas it refuses to pay in advance even for the variable costs incurred by the farmers for sowing, harrowing and plucking and transporting their produce. Most of the farmers suggested that company should give some advance for meeting the variable cost at the time of sowing of the crop. It will ease out the monetary burden of the farmers otherwise they will have to depend on local moneylenders for meeting their financial needs.

Another complaint of the contracting farmers is that contracting firm does not nurture these farmers as their permanent clients. After having contract for a season and two it moves to other areas and lures new farmers into their net, without honoring its previous financial and other commitments. In many cases firm has still to make payments to the farmers for their produce sold to firm under the contract. Thus, company looks for new growers where its reputation of exploitation is not known. Even this company has contracted farmers at far away places for a crop like tomato, which is highly sensitive to transportation damage and climatic conditions. Most farmers feel that though contract gives them good profit but they are exploited by contracting firm which resort to price cuts by inducing quality clauses and by delaying the payments. Farmers opt for contract farming because of assured returns and market, but contracting firm by indulging in quality cuts and delayed payments makes their positions worse than what would have by selling in open market. These practices of contracting firm are against the spirit behind contract farming.

IV. ALTERNATIVE MODEL OF CONTRACT FARMING

Although, contract farming is projected by the government as an alternative for diversifying the present highly skewed cropping pattern and one of the ways which: can help the Punjab agriculture to come out of the present agrarian crisis of stagnating farm incomes, production and productivity. But contract farming in the present form cannot solve the problem. There are more chances of accentuating the problems of already strangulated peasantry rather than mitigating them. The reason is very simple because in the present system of contract farming it is a contract between two unequals — the company in majority cases MNCs on the one hand and economically weak, exploited and unorganized farmers on the other. Thus in such a situation companies exploit the farmers by manipulating the clauses of the contract to their advantage. The farmers are left to fend for themselves. This is the reason that farmers of the state are not willing to abandon their time tested wheat- paddy crops. Even the government agencies, which are supposed to act as impartial mediators in case of disputes and are supposed to look after the interests of the weaker party - the farmers, go out of their way to help the contracting companies because of extraneous considerations. These companies with all types of resources at their command can also corrupt the official machinery, which willingly help them in exploiting the already exploited, economically weak and unorganized farming community. Farmers neither have financial resources nor have time to waste in litigation. Absence of legal status of any such contract and long drawn legal procedure also stop farmer from taking legal recourse. Any move by the contract growers to organize themselves is scuttled by the contracting agency. In the present case study, farmers also formed a union, which was to negotiate with the contracting firm on behalf of farmers. According to the sample farmers contracting firm was successful in breaking the union by giving incentives to the certain people. To change the present power equation, the model of contract farming being followed presently in the state will have to be changed. The government participation is a must because "the market economy left to itself gives wrong answers in underdeveloped countries." The terms of contract can be made more equal either by an effective supervision of the terms by social organization, NGO or by active participation by the government. Since the NGO phenomenon is altogether missing in Punjab so this work has to be done by government through 'participatory monitoring'. In present scenario where state government is backing out of basic services like health and education not much can be expected from the government. But certainly there are some functions, which must be performed by the state. Rather than jumping to the diversification bandwagon state (must put the basic things right, *i.e.* it must create a congenial atmosphere for the successful working of contract farming. It must come up with a monitoring framework where interests of both the contracting parties are properly protected. For this a three-pronged strategy can be adopted.

Firstly, government must formulate new laws to serve the present needs of the firms as well as farmers. It must come up with do's and don'ts for the farmers as well as the contracting firms.

Secondly, formation of supervisory cum enforcement tribunals at the district or block level with sufficient powers to look after the issues like quality control and delay of payments. These tribunals may have representatives of farmers and agribusiness firms apart from experts and personals from the agricultural departments. This tribunal should not only ratify the contract at the time of signing of the contract but also determine the quality of the product and other problems like delay in payments and dishonoring the contract.

Thirdly, the government can promote farmer's participation, in the form of growers associations. This experiment has given very good results in case of tea plantations in Kenya where NGOs and social organizations not only monitored the signing of contracts but were also able to influence these schemes for the betterment of farmers (Watts *et al.*, 1988). Addressing these problems will certainly mitigate the problems of contract growers and will lead to smooth functioning of the contract. Government through its agencies/ departments should educate the farmers about the clauses that must be adhered to while signing a contract. This will not only give a legal status to the contract but will also give contracting firm and farmers a power to make defaulting party accountable.

For making these schemes more efficient whole of the state be divided into different crop specific zones. In each zone farmers should be allowed to grow only those particular crops for which zone is earmarked. All the farmers of the zone producing the same crop should be required to be member of crop producing agency. Thus, on the basis of the crops being produced and zones there should be bodies of the farmers producing that crop. These bodies may be brought up as farmers co-operatives with technical and financial help by the government. These agencies should be given official sanction and be treated as government recognized body. These agencies should be made to enter into contract with the sponsoring company on behalf of the farmers. These agencies should negotiate the price of the crop, quality standard and other terms of the agreement This way the contracting parties will be dealing at equal levels and the sponsoring company will not be in a position to exploit the farmers. These agencies should also educate their member farmers regarding processing, marketing and the advantages of quality control. They should also regulate the technical assistance to the fanners. These agencies will work in a proper manner only if farmers are aware of their rights and are properly educated. Lack of the education in the rural areas may act as a hindrance in the proper functioning of these agencies. In Canada, thousand of potato growers under contract with single buyer negotiate prices and contract terms through the office of the potato producers' agency. It is compulsory that all potato farmers join the agency.

Sponsoring companies should also be made to contribute for the use of infrastructure of the state. As with contract farming, more and more of the produce will be sold outside the purview of State Marketing Board, the sponsoring company be made to contribute some percentage of the total outlay to rural development fund so that development of rural infrastructure does not suffer. Sponsoring companies should buy the products of the farmers from farm gate. At present farmers are forced to bring their-produce to company gates where they have to wait for a long period, even for days -in case of sugarcane, as a result the perishable crops like tomato are damaged during transportation and the crop is rejected on the basis of quality. This usually happens when there is glut in the market during peak season.

Another aspect of the contract farming is that sponsoring companies sell the seeds at a very high rate to the farmers and in process earn profits. Recent example is of Hyola oil seed. Farmers were given seeds at the rate of Rs. 500 per kg. Thus, the concerned company could self the seeds at Rs. 50,000/qt and also charged Rs. 150 per acre as fee for technical advice, which they never provided and bought the output at a low price thus forcing the farmers to abandon the contract. Similar situation was witnessed in case of 'basmati'. Company contracted for the 'basmati' in large area but did not purchase the agreed quantity citing quality standards thus resulting glut and price crash in the market, even harming the interests of the non-contract farmers.

V. CONCLUSIONS

Contract farming provides many opportunities as well as challenges to the farmer. This is the most transient and speculative form of contract farming and it runs a high risk of default from both sides. Contract farming give farmer consistency in his income though his income may be more or less than the income of non-contracting farmers. Thus, basically contract farming lends stability to the farmers income and minimizes the inter and intra year variations. On the basis of present survey, it can be concluded that adoption of contract farming is more prevalent among medium size farmers. Big farmers due to high capacity to undertake risks find open market more lucrative than the contract farming. Its adoption is also more prevalent among more educated farmers. No doubt, contract farming as practised by the Nijjer Agro Industries give farmer an assured income but there is feeling of exploitation among the farmers due to varying quality norms adopted by the company. The farmers also act dishonestly some times which leads to failure of contracts or dropping of such farmers by the firm. The firm also faces many problems while dealing with farmers, which range from crop failure, lack of credit, dishonest practices by the farmer and quality control. Lack of government support to farmers as well as firm further aggravates these problems. The benefits of contract farming can further be extended if government can regulate these contracts properly. Contracting agency can also help by being more considerate toward the genuine and reasonable demands of the farmers like advances for meeting the variable costs etc. Punjab farmers have experimented with many crops but still find the present wheat-paddy rotation relatively lucrative. But this highly skewed cropping pattern has problem of different kind from sustainability viewpoint. Crop diversification is a must to increase farm incomes and to address an environmental problem, which has cropped up in post green revolution period. But such a diversification cannot be achieved unless a cropping pattern is developed which give farmers at least same returns if not better returns than the wheat paddy rotation. Though the problems faced by contracting farmers are numerous still the promotion of contract farming for fruits and vegetable crops is recommended. In order to encourage new cropping pattern, participation of private players is welcome. However, while using contract farming a vehicle for the diversification, state cannot leave unorganized peasantry at the mercy of MNCs/big corporate houses because corporate giants can certainly exploit the unequal power relations while signing or implementing a contract. Local entrepreneurs like Nijjer or farmer’s cooperatives should be encouraged and given incentives to start food processing ventures in rural areas. Efforts should be made to have at least one such unit at a block level that caters to few villages around. Success of Nijjer Agro has proved that local entrepreneurs will compete with MNCs without any problem. The government must play a pro-active role for the implementation and monitoring of the contract. The experience of contract farming worldwide tells us that it has succeeded in those countries where there was an active participation of the government and social organizations. In the game of contract farming, if the government cannot be a player, it must control the game as a tough referee.

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