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CONTRACT FARMING PRACTICE IN INDIAN PUNJAB: FARMERS' PERSPECTIVE

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Abstract

This paper examines the status quo of contract farming in Indian Punjab from the farmers' perspective. The analysis is based on the field survey of three districts of the state covering 300 contract farmers. It is observed that agribusiness normalization has taken hold of the CF practice and farmers are facing its brunt. Withdrawal of extension services, reneging on prices and procurement are the major issues afflicting CF. Lack of adjudication is making contract farming exploitative in approach and the study recommends vigilant and strong intervention of the government.

Keywords: Agribusiness, agribusiness normalization, diversification and contract farming.

1. Introduction

In the mid-1960s, when India confronted widespread famine and was dependent on foreign food aid, it was the Green Revolution that pulled the country from the clutches of food-crisis and made it a food surplus economy. Punjab played a significant role in Green Revolution and it were the tenacious farmers of the state who proved their mettle. Nevertheless, majority of the farming community get very less remuneration for their hard work. It is the faulty Indian agricultural marketing system that leaves farmers with a lesser share and maximum is eaten up by the intermediaries and private traders. This not only leads to cost escalations but also deteriorates the quality of the produce hitting the producers as well as consumers. The farmer gets only 35 per cent of the value whereas majority of the price hike is done by the intermediaries (Government of India, 2009). The need for wellfunctioning marketing structure has therefore been recognized by the government in the Twelfth Plan and it emphasizes the promotion of direct marketing, contract farming (henceforth, CF) (Government of India, 2013). CF is an arrangement of production and marketing wherein firms (mainly agro-processing) and farmers enter into advance contracts to buy back the produce of pre-determined quality and quantity at a pre-determined time and price from farmers in exchange for provision of certain services like inputs, technical assistance etc. (Glover & Kusterer, 1990).

The significance of CF in the context of Indian Punjab has been realized in the wake of concomitant agrarian crisis and its beginning in the state is marked by the entry of Pepsi in 1988, when the Indian industrial sector opened up to competition (Singh, 2002). CF as an outgrower scheme¹ to promote diversification was promulgated in the year 2002-03 under the supervision of Punjab Agro-Foodgrain Corporation Ltd. (henceforth, PAFC). The agrarian crisis of the state due to persisting wheat-paddy monoculture and given *Johl Committee* recommendations¹¹ led the adoption of CF programme by the government to bring a change

in the economy. But this programme has been abrogated by the government of the state ⁱⁱⁱ and presently CF is carried out by few companies directly with the farmers.

A contractual relation in agriculture has always been recognized by 'unequal distribution of powers' as also apparent in the work of Adam Smith's 'Wealth of Nations-Book I' in which he says, "what are the common wages of labour, depends everywhere upon the contract usually made between those two parties, whose interests are by no means the same. The workmen desire to get as much, the masters to give as little, as possible. The former are disposed to combine in order to raise, the latter in order to lower, the wages of labour". Rehber, (2007) pp. 104 also talks about the dominance of firms in a contractual relation, 'contracting is a negotiation to some extent between unequal, economically powerful buyers (processors, wholesalers etc.) and weaker farmers'. Lack of bargaining power and farmers' exploitation is a significant issue professed in literature (Bijman, 2008; Glover & Ghee, 1992; Rehber, 2007 & Singh, 2002). This study therefore attempts to examine the unequal relationship through the practice of CF in the state of Indian Punjab from farmers' perspective, their problems and perceptions about it. The objectives of the study are:

- To assess the practice of CF in Punjab from farmers' perspective by describing various terms of contract and its implementation.
- To examine various problems faced by farmers in pursuance of CF operations and capture farmers' perception about CF i.e. whether they find it beneficial or not? and assess their future approach for CF.

The study is based on the field research of 300 contract farmers from three districts of the state. The choice of these districts was induced by the proportional area under CF to GCA for all the districts based on the data extracted from Statistical Abstract of Punjab, (2010-11). The districts were divided high, medium and low share from which three districts- Ludhiana, Jalandhar and Fatehgarh Sahib were randomly selected. Information was obtained through pre-tested questionnaire schedule from farmers and companies dealing in CF in the state to understand the issues more comprehensively.

The paper is divided into four sections. Section two elucidates the terms and practices of CF. The problems and perspectives of farmers related to CF are discussed in the third section. Finally the last section concludes the paper.

2. Contract Farming in Practice: How the Farmers are Dealt?

The practice of CF differs across regions, crops, firms and farmers and it also varies according to situation-specific variables making it difficult to generalize the concept (Bijman, 2008; Kirsten & Sartorius, 2002; Singh, 2002). Likewise, Little and Watts, (1994), pp. 5 also remarked, "the heterogeneity of contract production-a diversity embracing crops, actors, production relations, and institutional links-strongly suggests that any effort to outline a 'general theory' of contracting would be foolhardy and ultimately unproductive". Therefore, this accentuates the need to look at the practice of CF in the state carried out by the agri-business firms. Albeit, the terms of contract cannot be spelt out in full detail because of complexity of the work process and unpredictability of key outcomes, the best possible information captured about the covenants of contract are specified in this section. However, the actual practice could be more complex than the simple definition of CF and the contract document may not reflect all the terms of contract (Hueth, et.al. 1999).

Before attempting to specify contract terms, detail of the companies involved in CF for the surveyed crops has been described (vide Table 1). The three companies- Technico Agri Sciences Ltd., Pepsi Foods Pvt. Ltd. and Mahindra Shubh Labh Services are the multinationals catering to the domestic and international markets whereas the Kartikey Indo Agritech Pvt. Ltd. is the domestic company dealing with the domestic market.

Table 1. Various Characteristics of Companies involved in CF of Potato and Basmati

ric	e				
SI No.	Characteristics	Technico Agri Sciences Ltd.	Pepsico Foods Pvt. Ltd.	Mahindra Shubh Labh Services	Kartikey Indo Agritech Pvt. Ltd.
1	Year of initiating CF	2002	1989	2003	2010
2	Type of commodity traded	Fresh food	Processed foods	Fresh foods	Fresh foods
3	Contracted crop	Seed Potato	Potato and Basmati Rice	Potato	Seed Potato
4	Total number of contract farmers in Punjab	1000	800	300	130
5	Type of farmers preferred	Medium to large	All	Medium	Medium
6	Market destination	Domestic and International (Turkey, Egypt, Saudi Arabia and Canada)	Domestic and International (Sri Lanka, Nepal and Bangladesh)	Domestic and International	Domestic- Karnataka, Gujarat, Uttar Pradesh, West Bengal
7	Permit to sell in open market	No	No	No	No
8	Mode of payment	Within 15-30 days of procurement through cheque	Within 15 days of procurement through bank transfer	Within 7 days of procurement through cheque or bank transfer	Within 30 days of procurement through cheque or RTGS (in case of emergency)
9	Selection criterion	Good soil conditions and farmers willingness to enter into CF	Soil testing is done to check the suitability for crop cultivation, willingness of farmer to enter into contract and should possess a land holding	In the area where potato grows well, good soil conditions and farmers willingness to enter into CF	Farmers should be cooperative, have good reputation, experienced in potato cultivation, must possess agricultural machinery.
10	Common violation by the farmers	Renege on contract by side selling of the produce.	Renege on contract by side selling of the produce.	If the crop is rejected on quality grounds, farmers sell the produce in the open market and do not pay the input prices.	If the market price goes high, farmers renege on contract by side selling of the produce.
11	Percentage of defaulters	Less than 2 per cent	None	Less than 2 per cent	Less than 2 per cent

Source: Field Survey, 2012.

All the new players in the field except Pepsico Foods Pvt. Ltd. which pioneered CF in the state. Pepsico Foods is involved in contractual arrangements of potato and Basmati rice whereas rest of the companies deal in seed potato.

Except Pepsico, all the firms prefer to work with medium to large farmers. Pre-requisites for the selection of farmers are good soil conditions, farmers' willingness to enter into a contract, possession of land-holding and agricultural machinery, good will and honesty of the farmers. Since no company permits to sell the contracted produce in the open market, farmers may renege on contract by side selling their produce if they find remunerative market prices. This fraudulent behaviour of the farmers is also observed in the studies of Glover and Kusterer, (1990) and Warning and Hoo, (2000). And as per one company, farmers refrain from making payment of inputs when the output is rejected on quality grounds. However, the default rate of farmers as told by the companies is almost negligible. Further, the contract terms may include the price determination mechanism, quality standards applied, type of contract (written/oral), cultivation practices, technical assistance, insurance, procedure of dispute resolution etc. (Bijman 2008; Kumar 2006; Singh, 2002). The terms of contract in practice in the study area are discussed in Table 2.

The terms of contract illustrates that written contract was signed by only 44.7 per cent of farmers and only 38.7 per cent were provided the copy of the document as against the claim of all the firms for written contract and copy being provided to the farmers. English as the language of the contract was confirmed by 96.5 per cent of the contract farmers and the companies. Fifty one per cent of the contract farmers said that they followed both the agricultural practices (own & firm's). However, this trend was confirmed only by Pepsico Foods Pvt. Ltd. Most important of all, extension services form an integral part of the contract as the firm generally provides these to the farmers as a quid pro quo of their services rendered (Minot 1986 and Glover and Kusterer, 1990). The firms informed that the extension services were provided but farmers' responses showed a different trend as only 22.3 per cent agreed with it. Farmers specified that the extension services were provided in the initial years but now this practice has been discontinued by almost all the firms. It is generally done to cut down the expenses on cost of production. This trend is known as agri-business normalization iv in literature. Other services like credit (81.3 per cent), insurance (80.7 per cent), compensation in case MPs go high (99 per cent), compensation for natural calamity (100 per cent) and provision for legal dispute (100 per cent) are also not provided. It implies that the production as well as price risks are borne by the contract farmers themselves that may daunt the participation of risk averse farmers in CF.

Focused Group Discussion with farmers revealed that the companies in the state provide seeds and pesticide kits, the charges for the same are taken partly in advance and partly deducted from the payment of the produce. In case of potato, companies supplied over-sized seeds which need to be cut before planting. This escalates the labour cost and also leads to wastage (if the seeds are not cut properly) and ultimately increases the total cost of production. Improper grading of the output causing rejection of output and incidences of bribes by the large farmers to the field officials for the procurement of the produce is also prevalent. These field officials are the natives of the village who may also be the cultivators. They grab the best services from the firms leaving rest to the farmers.

Table 2. Contract Terms of Various Companies

	tract Terms of			· .		
Contract	Pagro Foods	Fieldsfr	Technico	Pepsico	Mahindra	Farmers'
terms	Limited	esh Pvt.	Agritech	Foods	ShubhLabh	Response (%
		Ltd	Ltd	Pvt. Ltd.	Services Ltd.	of farmers)
1.Written	Yes	Yes	Yes	Yes	Yes	Written-
contract						44.70
						Oral-55.30
2.Language	Eng.	Eng ^{\$} . &	Eng.	Eng.	Eng.	Eng-96.50
	8	Pbi [*] .	8		(translated to	Pbi-1.70
					Pbi on	Both-1.80
					demand)	
3.Copy	Yes	Yes	Yes	Yes	Yes	Yes-28.70
provided						No-71.30
4.Agricultural	Prescribed by	Prescrib	Prescribe	Farmers'	Prescribed by	Own-15.70
practices	the company	ed by	d by the	own +	the company	Company's-
r		the	company	prescribe	,	33.30
		compan	company	d by the		Both-51.00
		y		company		2011 01.00
5.Extension	Yes	Yes	Yes	Yes	Yes	Yes-22.30
services	105	105	105	100	100	No-77.70
provided						
6.Credit	No	No	Yes	Yes	Yes (Through	Yes-18.70
facility	1	- 1.2	(Through	(Through	HDFC, ICICI,	No-81.30
1401110)			HDFC	SBI)	Kotak	110 01.50
			bank)	521)	Mahindra)	
7.Transport	Beyond the	Met by	Met by	Met by	Beyond the	Yes-48.70
cost	radius of	the	the	farmers	radius 25Kms	No-51.30
• • • • • • • • • • • • • • • • • • • •	15Km	farmer	company	14111015	met by the	110 01100
	company	1411101	company		company	
	bears the cost				company	
8.Compensati	Yes	No	No	No	No	Yes-1.00
on if MP is	- 55	- 10	- 10	- 10	=	No-99.00
higher						
9.Weather	No	No	No	Yes (By	Yes	Yes-19.30
insurance		- 10	- 10	ICICI)	- 30	No-80.70
10.Compensa	No	No	Yes	Yes	No	No-100.00
ti-on for		110	100		1.0	1.5 100.00
natural						
calamity				1		
11.Legal	No	No	Yes	Yes	Yes	No-100.00
provision for	110	110	103	103	103	110-100.00
dispute						
C E'-11	G	l	l	1		1

Source: Field Survey, 2012

Note: \$ represents English language and Pbi. is Punjabi which is the regional language of the state.

Problems of contracting are greatly complicated by these economic agents who make false or empty promises (Williamson, 1981). These field officers commit frauds with the farmers for their personal gains and these acts usually do not come to the notice of senior officials of the company. Thus, not only the farmers tend to be exploited but the firms also tend to lose as it brings down the reputation of the firm and farmers begin to quit CF. Such kind of loopholes are mainly emerging in the state due to absence of any legal framework. There is no legal binding on the firm to fulfill its commitments. However, if the farmers default, the firms may take legal action against them. This probably occurs as the firms are the bigger entity and

over power the farmers causing their exploitation. Most of the farmers are just literate and are unaware of the tactics of the business world. A pertinent example from the field,

I got bad potato seeds from the company and I informed them about the same. They came to see and told that these are not bad. On repeated request, they promised to change. When seeds were changed, the changed lot was also bad. When the crop was ready, it was rejected on quality grounds. I suffered loss and sold in market at throw away prices. Due to shortage of money I was unable to pay rest of the payment of seeds. The company has issued me a legal notice to me demanding Rs 45,000 about which I do not what to do? I do not have money".

Contract Farmer, age 60 years, Block Pakhowal, District Ludhiana

It is worth mentioning that the farmer was illiterate and completely ignorant about what was written in the notice and how to deal with it except for paying back the money. Many such incidents were observed in the study area. Further, the firms may renege on the prices committed which may also be changed at the time of procurement, if the market price falls. Specifically, in case of Basmati rice, the company made verbal commitments with the farmers for the procurement of the produce with no provision of inputs and prices were based on the average of market prices of three mandis (Amritsar, Phagwara & Bhogpur). However, farmers can voluntarily purchase seeds from the company and also have complete freedom to sell in the open market if the market prices are high. As the definition of CF by Rehber (2007)^V clearly indicates the existence of specification of at least one production or marketing conditions, such practice in Basmati rice makes the existence of a contractual arrangement skeptical. Ostensibly, it is a mere trading of the crop rather than a contractual procurement. Thus, it is seen that farmers do get exploited by the companies in several ways and CF is not a joyride for the farmers. The issue is further examined by the problems faced by contract farmers in the next section.

3. Problems and Perspectives of Farmers: Is it the CF per se Faulty?

It has been found in various studies that farmers may face several problems in CF like poor extension services, high charges of inputs, low price of produce, delayed payments, manipulation of grading standards etc. (Glover and Kusterer, 1990 and Grosh, 1994). Marketing issues are the major source of farmers' woe due to infrastructural constraints in agriculture (Government of India, 2013). These issues have been addressed in this section to analyze if the contract farmers of the state also undergo these problems. Marketing problems were prioritized using Henery Garret Ranking Technique^{vi}. Contract farmers ranked low prices (42.01) followed by default in procurement (14.51), excessive grading (10.46), late payment (10.26), poor quality of output (3.59), other problems (2.69) like no fixed commitments, late in procurement, no proper check of output, no fixed rates, no government support and distant market (2.38) as their marketing constraints. Ostensibly, low prices and default in procurement are the major marketing impediments.

Table 3. Henry Garret Rankings of Contract Farmers for the Marketing Problems

Marketing problems	Henry Garret Ranking mean	Ranks	
	score		
	Contract Farmers	Contract Farmers	
Default in	14.51	II	
procurement			
Low prices	42.01	I	
Poor quality output	3.59	V	
Distant market	2.38	VII	
Late payment	10.26	IV	
Excessive grading	10.46	III	
Other ^{@\$}	2.69	VI	

Source: Field Survey, 2012.

Note:@are no fixed commitments by firms, late in procurement, no proper check of output, no fixed rates and no government support(for contract farmers), \$are price fluctuations(for non-contract farmers

During field survey several reasons for default in procurement were notified by the contract farmers. Companies avoid the procurement of produce when the market prices are low and when their requirements are met. This practice confirms the argument of Bijman, (2008) which postulates that when the market price falls at the time of delivery of the produce, the firms either renegotiate the prices or reject the produce. A company rejects the output on quality grounds when the requirements of the firm are met and this may also occur because the employees of the companies are either not being well informed about the quality norms or are bribed by the big farmers. Incidences of bribes are also reported in the study of Glover and Kusterer, (1990) and the author argues that such practices are carried out by the employees for self-interest as the acceptance of the substandard produce is clearly not in the interest of the firm.

Table 4. Henry Garret Rankings of Contract Farmers for the Benefits of CF

Factors for benefits of CF	Henry Garret Ranking score	Ranks	
Assured market	56.19	I	
Assured price	26.98	II	
Profitable	26.18	III	
Diversification	3.00	VIII	
Extension services	11.23	V	
Economical	1.12	X	
Quality seeds	7.17	VII	
Technical know-how	9.24	VI	
Fixed income	11.39	IV	
Other*	2.20	IX	

Source: Field Survey, 2012.

Note: *are less fluctuation in prices, timely procurement, more yield, better reputation of farmers and water saving.

The hegemony of contractual relation is hence, quite apparent from the discussion above and it becomes imperative to capture the farmers' perception about CF. What farmers think about CF? Whether they like this direct channel of marketing? And what benefits are they deriving? These are some of the questions which are imperative to assess the future of CF in

the state. For this, employing the Henery Garret technique again, benefits derived from CF were ranked according to the farmers' priority for each stimulus (vide Table 4).

Despite of the marketing constraints discussed in previous section, farmers still find CF an assured market for their produce as apparent in the rankings. Assured market (56.19) gets the highest score followed by assured price (26.98) and profitability (26.18). The good services rendered by the companies in the past have created loyalty in the minds of farmers who still find CF an assured marketing channel instead of relying on volatile open markets. Further, farmers find extension services, fixed income, technical knowledge, quality seeds etc. as the benefits derived from CF. Farmers' preference for CF is also confirmed in Table 5 as 67 per cent of the contract farmers find CF beneficial. Further 62.3 per cent of contract farmers had good experience with CF. Also, 87 per cent of the contract farmers want to continue with it in future. However, farmers do not find any role of the government in the system.

Table 5. Perspectives of the Contract Farmers about CF

1. Do you find CF beneficial and should it be promoted?	Percentage of Farmers			
Yes	67.00			
No	15.70			
Can't say	17.30			
Total	100.00			
2.Experience of CF				
Poor	3.70			
Fair	20.00			
Good	62.30			
Very Good	12.30			
Excellent	1.70			
Total	100.00			
3. Will you continue with CF in future?				
Yes	87.00			
No	12.30			
Can't say	0.70			
Total	100.00			
4. Do you think government plays a pivotal role in promotion of CF?				
Strongly Disagree	14.30			
Disagree	85.70			
Undecided	0.00			
Agree	0.00			
Strongly Agree	0.00			
Total	100.00			

Source: Field Survey, 2012.

The whole analysis reveals that several pitfalls have begun to emerge in the system with the advent of agri-business normalization. Firms are turning faulty in its commitments in terms of prices and procurement. The extra incentives of CF like extension services and technical assistance are no longer provided. The government has shown no interest to promote CF and safeguard the interests of the farmers. The argument of (Glover & Ghee, 1992, p.4), 'CF generally involves some form of monopsony, in which a single firm deals with multitude of usually unorganized farmers; this can lead to imbalance in bargaining power and in the distribution of benefits among the actors involved' is pertinent in the

context of present study. This argument from literature clearly points towards hegemony of contracting causing exploitation of farmers, which has also been found in this study. Despite of all these constraints, farmers are still in the favor of CF and consider it beneficial for them. Majority of them based on their good experiences in the past want to continue with it. Thus, the CF *per se* in not faulty, it is the faulty implementation that is creating problems.

4. Conclusion

CF in Punjab is on its own with no government intervention for its effective implementation. Also, the earlier frail attempts of the government to bring in diversification through promulgation of CF scheme fizzled out. The opportunistic approach of the companies through withdrawal of extension services, lack of commitment on prices and procurement etc. may make the sustenance of CF in future difficult if corrective measures are not taken by the government. Despite of problems in CF, farmers are still attracted towards it which shows the magnitude of crisis in independent farming and accentuates the need to bring agricultural policies that secure the livelihood of farmers. CF without a strong legal framework is likely to become exploitative due to hegemony of the contractual relation and this may daunt the future participation of the farmers. Learning lessons from its experience, government should revive the scheme with an objective approach and liaise with the farmers and companies to bring effective changes in the economy. However, the state government realizing the significance of CF for the economy to circumvent agrarian crisis has passed Punjab Contract Farming Act^{vii} earlier this year and is all set to bring changes in the economy. The act has strongly emphasized role of adjudication by making registration mandatory by the company at Contract Farming Commission (CFC) which will be constituted for implementation of the Act. The Act penalizes the company for delay in payment to farmers and but is silent on significant issues like default in procurement, rejection on quality grounds, price mechanisms which are major source of farmers' exploitation. Diverting agrarian economy from a sturdy network of wheat-paddy that brought immense prosperity is a not an easy job for the government and definitely needs structural reforms with strong emphasis on improvement in marketing infrastructure and price mechanisms. Farmers will switch from traditional crops to new crops and make innovations if the incentives facing them change (Schultz, 1964). Therefore, nothing can be predicted at the moment as the new course of action is still in its infant stage but it can be hoped that this pivot attempt of the government brings back the heydays of green revolution.

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Acknowledgement

I wish to thank my supervisor Prof. S.P. Singh for his support and encouragement for the study. I am also indebted to Mr. Gurpreet Singh for his valuable suggestions.

Endnotes

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ⁱ Generally denotes a government scheme, with a public enterprise purchasing crops from farmers, either on its own or in a joint venture with a private firm. The term is most frequently used in Africa and Asia. These schemes often facilitate resettlement schemes and in some cases, the primary objective is resettlement and the outgrower scheme is simply a way to organize the relocated population (Glover and Kusterer, 1990).

ii In lieu of agrarian crisis that triggered after 1980s, a committee headed by Dr. S. S. Johl, popularly known as the *Johl Committee*, in 1986 came up with the suggestions that 20 per cent of the area under wheat and paddy must be shifted to fruits, vegetables and fodder cultivation (Government of Punjab, 2004). With the incessant crisis, another recommendation was given in 2002 by the *Johl Committee*, that one million hectare area under wheat and rice needs to be shifted to other crops like oilseeds and pulses, which have

less water requirements and are ecology and soil friendly and farmers who diversify should be compensated by giving Rs. 12,500 per hectare (Sharma 2007).

Punjab, the first state in the country to initiate CF at government level, has practically wound it up after a decade, with areas cultivated under this policy falling sharply over the past few years and the government apparently showing little interest in continuing. A senior official in the Punjab Agro Foodgrain Corporation (PAFC) Ltd, who was given the task of implementing the scheme by the Punjab government, said the programme could have been successful only with supply of quality seeds of the identified crops and continuous motivation for farmers. He said the Punjab government had shown little interest. Sandeep Talwar, senior manager in the PAFC's CF division, said the scheme introduced in 2002-03 is now closed.

Source: http://www.indianexpress.com/news/punjab-farms-close-10year-contract/1008861/1

iv Agribusiness normalization refers to a process where in agribusiness firms offer promotional policies such as high prices, low quality standards, and generous input and credit support to contract growers in their start up stage. Subsequently these services are withdrawn by the firms to cut down the costs once the supply is assured causing discontent among the farmers (Singh, 2002).

v A contractual arrangement whether verbal or written, between a farmer and a firm that specifies one or more production and marketing conditions of an agricultural product, which is non-transferable (Rehber, 2007).

vi The method of rank order is one of the most important psychometric methods very widely used in psychological experiments. The basic principle of this method is that a stimulus can be placed at only one place, whether it is a first place, second place or the last place. In the method of rank order, all the stimuli are presented to the respondent simultaneously and these are judged by them accordingly. Thus, the ranking of the stimuli may vary from person to person. Some may place stimuli at the first rank, some at the second or third or at the last place. Hence, the rank values of the stimuli cannot be determined by ordinary method. Farmers were asked to rank various stimuli for marketing problems. These were used to find out mean Garret score by using Garrett's ranking technique in the following manner: Percentage position = $\frac{100(R_{ij}-0.5)}{N_i}$

Where, Rij = Rank given for the ith item by the jth individual, and Nj = Number of items ranked by the jth individual. The percentage position of each rank was converted into scores using Garrett table. For each constraint, scores of individual respondents were added together and were divided by total number of respondents for whom scores were added. Thus, mean score for each constraint was ranked by arranging them in the descending order (Rajamanickam 2002).

vii Unlike other states, that amended the Agriculture Produce Market Committee (APMC) Act to aid CF, Punjab preferred to introduce a new Act- Punjab Contract Farming Act passed by the Punjab State Assembly in April, 2013.

The salient features of the act are registration of the buyers with the registering authority after paying a fee and providing support for production like inputs, land use, technical advice so that in case of failure or loss he can be held responsible. Loan and advance by buyers can be recovered from sale of agri-produce and cannot be realised by sale, mortgage, or lease of farmer's land. Punjab Contract Farming Commission for proper implementation of Ac will be constituted. State government can give directions to the commission for proposer

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 $implementation\ of\ the\ Act.\ (Source: \underline{http://www.downtoearth.org.in/content/punjabs-contract-\underline{farming-act-protects-traders-interests}).$