

RESEARCH ARTICLE

CONTRACT FARMING: A REMEDY OF POOR FARMERS IN INDIA

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..... Manuscript Info Abstract Manuscript History Cost of cultivation of small farmers is increasing due to higher price of Received: 20 April 2023 input of farming but they are getting profitable price. It is common Final Accepted: 24 May 2023 phenomenon that price of crops decrease during the pick season of Published: June 2023 farming. So farmers face tremendous problems in marketing of their articles. The problems will be more tragic in case of vegetables since Kev words:farmers cannot enjoy the facility of cold storage. As a remedy of this Contract Farming, Rural Economy, Land great problem the concept of contract farming has raised in 2003-2004 Holding in India. The process of contract farming in India involves scientific and optimum use of land and farm resources for maximum output of agriculture produce. Small farmers practicing primitive agricultural methods for cultivation and harvesting of crops. But with the liberalization of Indian economy, there has been a sudden spurt in contract farming in India. Practice of this farming may bring revolution to the poor farmers by successful implementation of it.

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Introduction:-

Since last few decades major changes has taken place in our agrarian structure in India. Land holding in India is sliding downwards, with progressively greater concentration in the marginal and small holding groups. For the country as whole, small (including marginal) farmers constitute 83.5 per cent of total holdings, with major concentration in Uttar Pradesh, Bihar and Andhra Pradesh and West Bengal. Small and poor farmers of India are facing the numbers of problems with this little land holding. They could not be able to implement big tools of farming in their scattered land. Similarly they are not able to use high yielding seed verities, fertilizer, irrigation facilities due to lack of financial assistance. As a result cost of cultivation has increased but they cannot sale their product at profitable price. We know marketing is big problem of Indian farmers. It is common phenomenon that price of crops decrease during the pick season of farming. So farmers face tremendous problems in marketing of their articles. The problems will be more tragic in case of vegetables since farmers cannot enjoy the facility of cold storage. So they are bound to sell their crops by the price of normal profit and sometime they sell their product at the losing price. As a remedy of this great problem the concept of contract farming has raised in 2003-2004 in India. We shall discuss here this line of thought with some current evidence.

The process of Contract Farming brings energy and way of lucrative cultivation in Indian farm sector. The process of contract farming involves cultivating and harvesting for and on behalf of big business establishments or Government agencies and forwarding the produce at a pre-determined price. In return, the contracted farmers are offered high price against their farm produce. The role of contract farming in Indian rural economy is becoming more and more important, since organized farming practice has become the need of the hour in the world of rapid industrialization. The rapid industrialization process in India has created shortage of farmland, which in turn has

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necessitated organized farming practice in India. The process of contract farming in India involves scientific and optimum use of land and farm resources for maximum output of agriculture produce. Small farmers practicing primitive agricultural methods for cultivation and harvesting of crops. But, with the liberalization of Indian economy, there has been a sudden spurt in contract farming in India. Moreover, today more and more established business houses are taking interest in the business of contract farming in India. This has happened as a result of rapid growth of retail industry in India. The growth of retail industry in India has propelled the growth of farm retail in India, which caters fresh vegetables and fruits from the farms to the Indian mass. The process of contract farming in India involves, engaging rural Indian farmers for the cultivation of agricultural produce under strict government policies. The role of Contract Farming in Indian Rural Economy involves government and private participation along with the rural workers. Further, it engages a good number of farmers and other rural workers to discharge other agriculture related activities.

Number of economists has obeyed that contract farming brings an era of rural farm revolution. It makes efficient farming environment in India. Benziger 1996 and Singh, 2002 told that "contract farming has been used in many situations as a policy step by the state to bring about crop diversification for improving farm incomes and employment". Contract farming is also seen as a way to reduce costs of cultivation as it can provide access to better inputs and more efficient production methods. It can be defined as a system for the production and supply of agricultural and horticultural produce by farmers/primary producers under advance contracts, the essence of such arrangements being a commitment to provide an agricultural commodity of a type (quality/variety), at a specified time, price, and in specified quantity to a known buyer. In fact, contract farming can be described as a halfway house between independent farm production and corporate/captive farming and can be a case of a step towards complete vertical integration or disintegration depending on the given context. Glover, 1987 told "due to the efficiency (co-ordination and quality control in a vertical system) and equity (smallholder inclusion) benefits of this hybrid system, it has been promoted aggressively in the developing world by various agencies". Singh, 2002 suggested that "it basically involves four things - pre-agreed price, quality, quantity or acreage (minimum/maximum) and time". Bijman, 2008 told "contract farming is generally undertaken when there is market failure expressed in perish ability of produce, quality of produce and technicalities of producing a new/different product". The contracts could be of three types; (i) procurement contracts under which only sale and purchase conditions are specified; (ii) partial contracts wherein only some of the inputs are supplied by the contracting firm and produce is bought at pre-agreed prices; and (iii) total contracts under which the contracting firm supplies and manages all the inputs on the farm and the farmer becomes just a supplier of land and labour. The relevance and importance of each type varies from product to product and over time and these types are not mutually exclusive.

This paper tries to find out the possible benefits of contract farming in India. As well as we try to give a clear picture of implementation of this new farming. Conducting paper is constructed by collecting data from different journals, internet, books edited by different authors etc.

Meaning, Economics and Extent of Contract Farming in India

Contract farming is a form of vertical integration within agricultural commodity chains, such that the firm has greater control over the production process, as well as the quantity, quality, characteristics and the timing of what is produced. The conventional approach to vertical integration has been for firms to invest directly in production through large-scale estates or plantations (especially for traditional tropical commodities such as tea, bananas and sugarcane). Contract farming, in its various forms, allows a degree of control over the production process and the product without the firm directly entering into production.

Available studies indicate that contract farming, as an institutional arrangement, has offered higher profits and lower costs to the contract farmers compared with non-contract farmers. In addition to the assured markets and stable prices afforded farmers, the backward linkages help control transaction and marketing costs, yielding higher returns to contract farmers. Although in the case of milk, prices offered by the cooperatives can be less than prevailing open market prices, member farmers earn higher profits because the cooperatives provide low-cost inputs that lower the cost of production. Of the three sectors examined—fruits and vegetables, dairy, and poultry – contract poultry farmers appear to save significantly on production and transaction costs, as most of these costs are borne by the contracting firms. An IFPRI study (Birthal et.al. 2005) of MDFVL, Nestle, and Venkateshwara Hatcheries showed that contracting helped farmers reduce costs of cultivation and earn higher profits compared with non-contract farmers. The results of this study shows that net profits for contract farmers were more than double those of non-contract farmers in the case of dairy, 78 percent higher for vegetable (spinach) growing farmers, and 13

percenthigher for poultry farmers. Costs of production for contract farmers were lower by approximately 21 percent for milk and 21 percent for vegetables compared with non-contract farmers. The share of transaction and marketing costs in total costs was markedly lower for contract growers. Among non-contract producers, transaction and marketing costs accounted for 20 percent of costs for milk producers and 21 percent of costs for vegetable producers. In contrast, transaction and marketing accounted for just 2 percent of total costs for contract milk and vegetable producers. In the case of poultry, the cost of inputs such as chicks, medicines, and feed that are provided by the integrators account for about 75 percent of total production costs. Also, with the contract firms bearing a mortality risk of 5 percent and acquiring all output, the poultry integrators bear the bulk of both production and marketing risk. Other studies on dairy cooperatives show that contract farmers earned 33 percent more net profit per ton of milk sold compared with non-Milk fed farmers.

Similarly, a study of Mahagrapes showed that profits earned per acre per annum by contract growers were nearly 38 percent higher than that for non-contract growers (Roy and Thorat 2008). Since Mahagrapes serves global markets, prices received are almost three times higher than in the local markets. Also, farmer members benefited from better quality inputs and extension services at cheaper rates. A similar case study of contract grape growers in Andhra Pradesh, also supplying the export market, showed that contract growers received 55 percent higher net returns than supplying to the domestic markets (Rao et.al.2007). Although costs of production were 33 percent higher for contract farmers in this case, higher costs were more than offset by higher output prices. All gherkin production in Andhra Pradesh is under contract farming. According to survey results, the growers earned a net profit of Rs.35, 000 per hectare during 2004/05, and that returns over variable costs were 30 percent higher than for other vegetable crops (Rao et.al. 2007). Existing research on contract farming shows that contract farmers are better off because they are able to save a considerable proportion of the costs of cultivation and earn higher profits. The following table shows initiative taken by private sector of contract farming in India.

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Crop	Company/Corporate	Area(ha)
Ashwagandha	Himalaya Health Care Ltd.	700
Dhavana	Mysore S N C Oil	400-500
	Company	
Marigold Caprica Chili	AVT Natural Products	4000
	Ltd.	
Coleus	Natural Remedies Private	150
	Ltd.	
Gherkins	20 Pvt Companies* (Major	8000(inc of Tamil Nadu
	Companies Global Green	and AP
	Company Pvt Ltd, Unicorn	
	· · · · · · · · · · · · · · · · · · ·	
	- ignore (* 200, etc)	
Soybean	Tinna Oils and Chemicals	134800
Several Fruits, Vegetables,	Ion Exchange Enviro	
Cereals, Spices & Pulses	Farms Ltd (IEEFL)	
· •		
Safflower Oilseeds	Marico Industries	
Wheat, Maize & Soybean	Cargil India Ltd	
Wheat	Hindusthan Lever Ltd	Madhya Pradesh
	(HLL)	-
	Crop Ashwagandha Dhavana Marigold Caprica Chili Coleus Gherkins Gherkins Soybean Several Fruits, Vegetables, Cereals, Spices & Pulses Safflower Oilseeds Wheat, Maize & Soybean	AshwagandhaHimalaya Health Care Ltd.DhavanaMysoreSNCOilCompanyAVTNaturalProductsLtd.Marigold Caprica ChiliAVTNaturalProductsLtd.ColeusNatural RemediesPrivateLtd.Gherkins20 Pvt Companies* (MajorCompany Pvt Ltd, UnicornGherkins20 Pvt Companies Global GreenCompany Pvt Ltd, UnicornAgrotech Ltd, Green AgroParkPvtLtd, KenAgritechPvt Ltd, UnicornAgritechPvt Ltd, etc)YetSoybeanTinna Oils and ChemicalsSeveral Fruits, Vegetables, Cereals, Spices & PulsesIonExchangeSafflower OilseedsMarico IndustriesWheat, Maize & SoybeanCargil India LtdWheatHindusthanLever

Several Fruits, Vegetables,	Ion Exchange Enviro	
Cereals, Spices & Pulses	Farms Ltd (IEEFL)	
Soybean	ITC_IBD	Madhya Pradesh
Tomato & Chilly	Nijjer Agro Foods Ltd	Punjab
Barley	United Breweries Ltd	Punjab
Basmati, Maize	Satnam Overseas, Sukhjit	Punjab
	Starch (Mahindra	
	Shubhlabh Services Ltd)	
Basmati	Satnam Overseas, DD Intl	Punjab
	Incorp, Amira Foods India	
	Ltd (Escorts Ltd & Grain	
	Tech)	
Basmati, Groundnut &	PepsiCo India Ltd	Punjab
Potato, tomato, chilli		
Milk*	Nestle India Ltd	Punjab
	65000000	
Cotton	Super Spinning Mills	Tamil Nadu
Maize	Bhuvi Care Pvt Ltd	Tamil Nadu
Paddy	Bhuvi Care Pvt Ltd	Tamil Nadu
Cotton	Appachi Cotton Company	Tamil Nadu
	Cereals, Spices & Pulses Soybean Tomato & Chilly Barley Basmati, Maize Basmati Basmati Basmati, Groundnut & Potato, tomato, chilli Milk* Cotton Aaize Paddy	Cereals, Spices & PulsesFarms Ltd (IEEFL)SoybeanITC_IBDTomato & ChillyNijjer Agro Foods LtdBarleyUnited Breweries LtdBasmati, MaizeSatnam Overseas, SukhjitBasmati, MaizeSatnam Overseas, SukhjitBasmatiSatnam Overseas, SukhjitStarch(Mahindra Shubhlabh Services Ltd)BasmatiSatnam Overseas, DD Intl Incorp, Amira Foods India Ltd (Escorts Ltd & Grain Tech)Basmati, Groundnut & Potato, tomato, chilliPepsiCo India Ltd 6500000Milk*Nestle India Ltd 65000000CottonSuper Spinning MillsMaizeBhuvi Care Pvt LtdPaddyBhuvi Care Pvt Ltd

* Involving about 90000 farmers in about 1600 villages

Source: NIAM (2003), Times Agriculture Journal (2003), (FICCI-IFPRI-ICRISAT: 2003¹) and Centad, Sukhpal Singh: 2005)

In the above table we are highlighting state wise extent of contract farming in India. It is worth mentioning that the magnitude of contract farming does not implement equally over the states. The concentration of this farming has centralized only in few sates namely-Maharashtra, Punjab, Tamilnadu, Karnataka, and Madhya Pradesh. Very recently contract farming has moved its direction in other states also. For example we can say potato contract farming has initiated in Bardhaman, Birdhum district in West Bengal. Similarly contract farming in broiler production has made big farming structure in West Bengal.

Pros and Cons of Contract Farming

Contract farming is a partnership between agribusiness/marketing firms and farmers, and has both advantages and disadvantages to both the parties. For agribusiness firms, contract farming is an important means to have an assured access to desired products or a quantitative and qualitative control over material supplies without actually engaging itself in farming. These firms may provide inputs, technology and services to farmers as a part of contract. If a firm want to produce its raw material requirements itself, using own or rented land and hired labor, the costs towards wages, social benefits, training and supervision could be very high. Through contract farming, the firm can shift and/or share some of these responsibilities with farmers, and secure supplies at a lower cost. Contract farming thus enables agribusiness firms to optimally utilize their installed capacity, infrastructure and manpower, and respond to food safety and quality concerns of the consumers. For farmers, contract farming serves as an assured market for their produce at their doorsteps, reducing marketing and transaction costs and also price risk. Availability of an assured market also acts as an incentive to farmers to use quality inputs, adopt improved technologies and scale up their production systems. In circumstances when farmers face problems in accessing inputs, technology, information and services, firms provide these as a part of contract and hence reduce uncertainty in their availability, quality and prices for the farmers. In short the advantages of contract farming are follows:

- 1. Certainty on crop price;
- 2. Provision of inputs and production services;
- 3. Availability of farm credit;
- 4. Accessibility of appropriate technology;
- 5. Skill transfer;
- 6. Access to reliable markets etc.

Although contract farming provides number of assistance for farmers, it is not free from criticizes. Many economists have suggested that along with successful farming environment, contract farming is responsible for following disadvantages of farming:

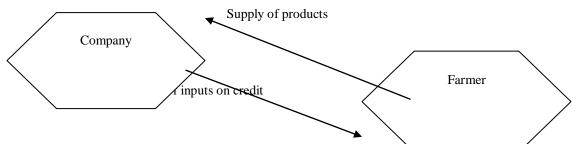
- 1. Increased risk of farming;
- 2. Unsuitable technology and crop incompatibility;
- 3. Manipulation of quotas and quality specifications;
- 4. Corruption;
- 5. Domination by monopolies;
- 6. Indebtedness and over reliance on advances etc.

Feature and Effectiveness of Contract Farming in India

There are several factors - economic and non-economic, internal and external to the contracts – that influence relationship between farmers and firms, and hence the performance and the sustainability of contract farming. Contract farming exhibits in various forms, depending on the type of commodity, buyers and sellers, and the socio-economic environment surrounding farmers. Hence, the factors underlying performance of contract farming could be different under different production and socioeconomic environments. Contract farming may be constructed in different form. We are discussing here few of them to understand the figure of this farming. First of all we can categories contract farming into corporate oriented contract farming and state oriented contract farming. We are discussing two types of corporate contract farming and single type of state contract farming as follows:

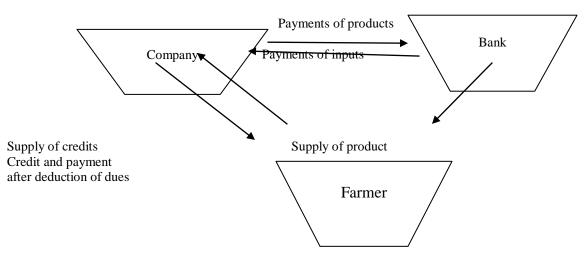
Bi-partite contract farming model:

Bi-partite contract farming model is consist of company and farm sector. According to this model companies are providing inputs of farming to the farmers. So poor farmers take the responsibilities of farming without burden of farming credit and they send their produced commodities to the companies. So the presence of intermediaries who was making huge price difference between cultivator and final consumers has diminished.



Tri-partite Contract Farming Model:

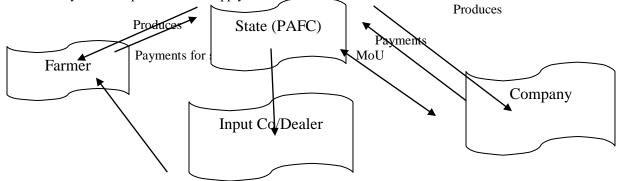
In that model bank is interlinked along with company and farmer. Banks provides credit and payment to the farmers. Companies also provide credit of farmers and farmers are providing products to the companies. On the other hand company makes payments of products for the banks and similarly banks makes payments of inputs for the companies.



State-led Contract Farming:

This model of farming shows the engagement of state in farming system along with company, farmer and input dealers. State provides inputs directly to the dealers rather than to the farmers. As a results farmers are getting inputs from the dealers for cultivation. Farmers provide products to the state and state make payments of procurement and payments of products. Then state sends the products to the companies and companies send the payments to the state. Here MoU works as intermediaries of companies and state.

Procurement & Payments for producesSeed supply & extension work



Small landholding Indian farmers always facing two types of problem in farming- (a) uncertainty of production due to different types natural calamities and attract of insect on their crops (b) over production of crops. Both are matter of concern to the poor farmers. Although government has initiated crop insurance scheme and regulated price system, these are not much effective practically. Recently the idea of contract farming raised big sound in favour of gainful farming in India. Here we are giving a small study to understand the economics of contract farming.

There is a striking difference in the profits of contract and non-contract farmers particularly in the case of milk and spinach. Contract farmers realize more profits as compared to non-contract farmers; the difference is more than double in milk, and 78 percent in spinach. Other studies too indicate higher profits for contract farmers. Birthal, Jha and others (2006) have reported contract dairy farmers receiving 70 percent more profits over non-contract farmers. In potato, Kumar (2006) finds 143 percent higher profit for contract farmers over non-contract farmers.

Milk			Spinach		Broiler				
Item	Con-	Non-	%	Con-	Non-	%	Con-	Non-	%
	tract	contract	difference	tract	contract	difference	tract	contract	difference
Yield*	11.9	11.4	4.4	8.6	8.3	4.0	1.78	1.79	-0.6
Production	5586	5782	-2.5	1485	1630	-8.9	-	-	-
cost									
Marketing	100	1442	-93.1	35	437	-92.0	38	90	-57.8
and									
transaction									
costs									
Total cost	5686	7170	-20.7	1520	2067	-26.5	-	-	-
Price	9337	8991	3.8	3311	3074	7.7	-	-	-
Net	3651	1821	100.5	1791	1007	77.9	2255	2003	12.6
revenue									

Table 1:- Impact of contract versus non-contract production. (Rs/Ton)

* milk: 4 % fat corrected in kg per in-milk animal; spinach: tonnes/ha; broilers: body weight in kg/bird. **Source**: Birthal et al. (2005)

In the above table we have shown the impact of contract and non-contract farming in respect of milk, spinach and broiler production. The result shows that yield rate is higher in case of contract farming than non contract farming in production of milk and spinach. But yield of broiler production is little bit unfavorable by contract farming. On the

other hand production cost, transaction cost is smaller in contract farming. Similarly farmers are getting more price and revenue in contract farming. So we can say contract farming has brought profitable farming environment.

Limitation of Contract Farming

Theoretically, farmers stand to gain from contractual agreements that provide lower transaction costs, assured markets, and better allocation of risks. On the other hand, contracting firms have the advantage of more assured supplies, and reasonable control over quality and other specifications. However, in practice, there are practical problems that emerge in agricultural contracting that can result in losses to both farmers and firms. Contracting agreements are often verbal or informal in nature, and even written contracts often do not provide the legal protection in India that may be observed other countries. Lack of enforceability of contractual provisions can result in breach of contracts by either party. In India, there have been instances of farmers refusing to sell to contracting firms when market prices exceed the contract price, and of firms refusing to purchase contracted quantities or pay contracted prices due to market conditions. Neither the contracting firm nor the farmers are keen to contest these issues in a court. Most often, it is mutual understanding and faith that drives contractual relationships and it takes a long time to win mutual trust and confidence. Contract farming arrangements are often criticized for being biased in favor of firms or large farmers, while exploiting the poor bargaining power of small farmers. In such situations, a viable approach seems to be to form clusters of small farmers that can create a scale effect and also enhance the bargaining position of the farmers. Success in developing contracting models or other forms of farm-firm linkages that are effective for small holders will be a key challenge to small holder participation in the transformation of Indian agriculture. However, not much attention has been given to measures of risk mitigation against production and price failures, which are important for sustainability and scalability of contracting ventures. Mutual trust and confidence in the farm-firm relationship is a major driver of contract farming arrangements, and there are now a number of examples in India where contracting is expanding and risk is apparently being adequately shared. In short the success of contract farming is mitigating due to following reasons-

- Ignoring to accept the lower grading crops along with higher grading crops
- Risk of over matured crops due to delay in harvesting
- Risk of cultivating new crop and hence problem in adoption of new production technology
- * Risk of Refusing to purchase the specified quota in the case of decline in export
- Exploitation by the firms by offering relatively lower price as compared to export price
- Misunderstanding between growers and representative of firms on adoption of production practices
- Chagrining higher prices for inputs
- Delay in payment of sale proceeds
- Poor quality of seeds and other inputs etc.

Conclusions:-

There is no doubt that contract farming makes tangible potential benefits. Farmers and firms both are getting benefits through this farming concern. It provides greater confidentiality in pricing levels and reputational benefits. Numbers of private concerns alone or along with government takes different initiatives to fulfill the aim of this farming. It is worth mentioning that contract farming offers numerous opportunities for farms like it can allow access to a reliable market; it can provide guaranteed and stable pricing structures; it can provide access to credit, inputs, production and marketing services (seed, fertilizer, training, extension, transport, and even land preparation). In short, contract farming can open doors to new markets for a farm's produce, stimulate technology and skill transfer (particularly for higher-risk crops, which resource-poor farmers might typically avoid), and it can support farmers in meeting vital sanitary and phyto-sanitary standards. Contract farming can also provide many additional benefits and opportunities: it can increase on-farm diversification; technical assistance and knowledge transfer can spill over onto adjacent fields and into nearby villages; by-products from contract farming can be used for other farming activities; it can simplify marketing decisions, thus improving efficiency; it can stimulate the broader commercialization of smallholder farming. But the extent of contract farming is not equal over the nation. Only in some states this farming perform well neglecting the others states. Practice of this farming may bring revolution to the poor farmers by successful implementation of it. This farming also generates few drawbacks which may solve by active initiatives of respective state government.

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