



Contract Farming Ventures in India: A Few Successful Cases

The Government of India's National Agriculture Policy envisages that "Private sector participation will be promoted through contract farming and land leasing arrangements to allow accelerated technology transfer, capital inflow and assured market for crop production, especially of oilseeds, cotton and horticultural crops".

Farming is an age-old means of livelihood for millions of Indians. However, there have been few systems/models in which farmers are assured of a market for their produce, leave alone a remunerative price. Farmers have on occasion had to throw their produce away for want of buyers.

This is one side of the coin. On the other is the agri-based and food industry, which requires timely and adequate inputs of good quality agricultural produce. This underlying paradox of the Indian agricultural scenario has given birth to the concept of Contract Farming, which promises to provide a proper linkage between the 'farm and market.'

Recognising the need for and merits of such a linkage with the farming/producing community, several corporates involved in agro-commodity trading, processing, exports, etc. have attempted to establish convenient systems/models that ensure timely and consistent supply of raw material of the desired quality and low cost. This article discusses a few successful cases of contract farming and a brief note on the bottlenecks and criticisms levelled against this emerging alternative farm business model.

Contract farming is defined as a system for the production and supply of agricultural/horticultural produce under forward contracts between producers/suppliers and buyers. The essence of such an arrangement is the commitment of the producer/seller to provide an agricultural commodity of a certain type, at a time and a price, and in the quantity required by a known and committed buyer.

Contract farming usually involves the following basic elements - pre-agreed price, quality, quantity or acreage (minimum/maximum) and time.

According to the contract, the farmer is required to plant the contractor's crop on his land, and to harvest and deliver to the contractor a quantum of produce, based upon anticipated yield and contracted acreage. This could be at a pre-agreed price. Towards these ends, the contractor supplies the farmer with selected inputs, including the required technical advice.

Thus, the contractor supplies all the inputs required for cultivation, while the farmer supplies land and labour. However, the terms and nature of the contract differ according to variations in the nature of crops to be grown, agencies, farmers, and technologies and the context in which they are practised.

For example, contract farming in wheat is being practised in Madhya Pradesh by Hindustan Lever Ltd (HLL), Rallis and ICICI. Under the system, Rallis supplies agri-inputs and know-how, and ICICI finances (farm credit) the farmers. HLL, the processing company, which requires the farm produce as raw material for its food processing industry, provides the buyback arrangement for the farm output. In this arrangement, farmers benefit through the assured market for their produce in addition to timely, adequate and quality input supply including free technical know-how; HLL benefits through supply-chain efficiency; while Rallis and ICICI benefit through assured clientele for their products and services. The consortium is also planning to rope in other specialist partners including insurance, equipment and storage companies.

1. The Classic Case of Pepsi Foods Ltd.

Launching its agro-business in India with special focus on exports of value-added processed foods, Pepsi Foods Ltd. ('PepsiCo' hereafter) entered India in 1989 by installing a Rs 22 crore state-of-the-art tomato processing plant at Zahura in Hoshiarpur district

of Punjab. The company intended to produce aseptically packed pastes and purees for the international market. However, before long, the company recognised that investment in agro-processing plants would not be viable unless the yields and quality of agricultural produce to be processed were up to international standards. At that point of time, tomato had never been cultivated in Punjab for its solid content, with a focus on high yields and other desirable processing characteristics such as colour, viscosity and water binding properties. Furthermore, little effort had been made to create a database on the performance of various varieties and hybrids, or to introduce modern farming practices. There were no logistically efficient procurement models for fruits and vegetables that could be built on by the company. These apart, there were simply not enough quantities of tomato available even if the grown varieties/hybrids were procured from the open market. The total Punjab tomato crop was 28000 tons, available over a 25-28 day period, while PepsiCo required at least 40000 tons of tomato to operate its factory, which had a gigantic capacity of 39 tons fresh fruit per hour. The company required this intake over a minimum 55-day time frame, and in 1989, the season in Punjab did not last beyond 28 days. Sceptics had expressed doubts over the feasibility of the Zahura tomato processing plant, and had said that it would remain a museum piece! There were formidable challenges before the company and nothing short of a horticultural revolution was required to solve the problem. There was no choice but to alter the tomato production and logistics situation in Punjab. This led to the birth of PepsiCo's backward linkage with farmers of Punjab.

PepsiCo follows the contract farming method described earlier, where the grower plants the company's crops on his land, and the company provides selected inputs like seeds/saplings, agricultural practices, and regular inspection of the crop and advisory services on crop management

The PepsiCo model of contract farming, measured in terms of new options for farmers, productivity increases, and the introduction of modern technology, has been an unparalleled success. The company focused on developing region- and desired produce-specific research, and extensive extension services. It was thus successful in bringing about a drastic change in the Punjab farmers' production system towards its objective of ensuring supply of right produce at the right time in required quantities to its processing plant.

Another important factor in PepsiCo's success is the strategic partnership of the company with local bodies like the Punjab

Agricultural University (PAU) and Punjab Agro Industries Corporation Ltd. (PAIC). Right from the beginning, PepsiCo knew that changing the mindset and winning the confidence of farmers would not be an easy task for outsiders. The company's unique partnership with PAU and PAIC fuelled its growth in Punjab.

Encouraged by the sweeping success of contract farming in tomato in several districts of Punjab, PepsiCo has been successfully emulating the model in food grains (Basmati rice), spices (chillies) and oilseeds (groundnut) as well, apart from other vegetable crops like potato.

The company, which had been involved in the export of Basmati rice since 1990, was the first processor in India to invest and strengthen backward linkages for Basmati rice. After extensive multi-locational field trials at its 27-acre R&D farm at Jallowal near Jalandhar, PepsiCo ventured into contract farming in Basmati rice on a commercial scale four years ago. The company invested over Rs 5 crore in a modern processing plant at Sonapat in Punjab. It is involved right from the stage of selecting varieties of Basmati (based on customer preference), seed multiplication and development of a package of practices for farmers. PepsiCo's scientists, who ensure successful transfer of technology from the trial to the commercial field levels, closely monitor the performance of the crop.

At the time of harvest, the company procures the entire pre-agreed quantum of the harvested produce at the farm gates, at the pre-agreed price. The raw material so procured is transferred to PepsiCo's ISO 9002 and Hazard Analysis Critical Control Point (HACCP) certified Rice Mill located at Sonapat for processing, packing and export, ensuring that the product remains completely traceable from field to consumers.

During 2002-03 crop year, farmers from Jalandhar, Amritsar, Hoshiarpur and Sangrur districts of Punjab, and parts of Western Uttar Pradesh were contracted for Basmati rice cultivation. The season's acreage for the crop stood at 800 hectares. In 2001-02, contracted farmers reaped yields of 2.5 tons/hectare. By the end of 2004, the company plans to increase the acreage under Basmati rice to 4000 hectares to meet the complete requirement of its manufacturing plant.

Similarly, PepsiCo planned a foray into contract farming in groundnut with the farmers of Punjab with the objective of producing export-quality, value-added groundnut such as roasted and salted peanuts, flavoured and coated peanuts, and peanut butter.

Using plastic mulch groundnut (PMG) technology sourced from China has enabled PepsiCo to take up two crops in a year - one in the *kharif* and the other in the *rabi* season. The company has demonstrated yields of 3.0 and 4.0 tons per hectare on field trials for *kharif* and *rabi* crops respectively, much above the national average of 1.0 ton/ha.

“Till date, there have been no serious defaults; as long as you are offering technology that offers predictable results that are in line with the expectations of the farmers, defaults remain minimal” says Mr. Abhiram Seth, Executive Director (Exports and External Affairs) of PepsiCo, sharing his experience.

The company proposes to extend its contract farming in groundnut to farmers in Rajasthan and Uttar Pradesh, who have shown great interest.

A sound R&D program backed by committed extension personnel to transfer the resulting technologies has been the intrinsic strength of PepsiCo. Its focused research on increasing yield levels, to the advantage of farmers (which in turn brings down the cost of raw material to the company) has resulted in their increased trust and loyalty towards the company. Post-PepsiCo entry has seen the tripling of yield levels in chilli (from 6.0 tons/ha to 20 tons/ha) and tomato (14-16 tons/ha to 52 tons/ha).

As part of its expansion plans, the company has been conducting initial trials at Neelamangala in Karnataka to evaluate varieties/hybrids of chilli for their yield, colour, total solids, pungency and other traits/parameters. “We plan to go commercial with chilli farmers of Karnataka next year,” says Mr. Seth.

On the company’s plans, he said, “Our immediate focus would be to consolidate and strengthen the existing activities”.

With this kind of a backward linkage with farmers of Punjab and Haryana, PepsiCo developed a perfect contract farming model involving an enduring relationship with local agencies including the State Government.

Key elements of PepsiCo’s success

- Core R&D team
- Unique partnership with local agencies including a public sector enterprise
- Execution of technology transfer through well-trained extension personnel

- Supply of all kinds of agricultural implements free of cost to contracted farmers
- Supply of timely and quality farm inputs on credit
- Prompt dispatch/delivery/procurement of the mature produce from every individual contracted farmer through the system of ‘Quota Slips’
- Effective adoption/use of modern communication technology like pagers for communication with field executives
- Regular and timely payment to contracted farmers through computerised receipts and transparent system
- Maintenance of perfect logistics system and global marketing standards.

2. Appachi’s Integrated Cotton Cultivation: Innovative Model

Appachi Cotton Company (ACC), the ginning and trading house from Pollachi (Coimbatore district of Tamil Nadu, India) hit the headlines in May 2002 for the street play it employed to encourage farmers in the Nachipalayam village in Kinathukadavu block of Coimbatore to sow cotton seeds in their fields. The singer in the street play assured cotton farmers that, unlike in the past, they would not be disappointed if they cultivated cotton on their fields, as they would be backed by a model called the Integrated Cotton Cultivation (ICC), which would guarantee a market-supportive mechanism for selling their produce.

ACC caters to top-bracket, quality-conscious clients from the textile industry in India and abroad, and their client specific operation has won them laurels. ACC is the only private ginner in the country to have successfully entered backward and forward integration between the ‘grower’ (farmer) and the ‘consumer’ (textile units).

Well in advance of the 2002 *kharif* sowing season, ACC undertook the Herculean task of integrating about 600 farmers belonging to various districts of Tamil Nadu on a holistic plank. This was done at a time when failure of monsoon for the third consecutive year was imminent. This led to the farmers’ perceiving the ICC programme as a boon, as their traditional sources of finance and support had refused further funds due to non-recovery of earlier loans.

The Appachi formula ensured that its farmer members never went

short of money and materials during the crucial 100 days of the crop cycle. The contract assured the farmers easy availability of quality seeds, farm finance at an interest rate of 12% per annum, door delivery of unadulterated fertilisers and pesticides at discounted rates, expert advice and field supervision every alternate week, and a unique selling option through a MoU with the coordinating agency (ACC).

The core principle of the formula lies in the formation of farmers' Self-Help Groups (SHGs). Each farmer belonging to a SHG is sanctioned Rs 8000/acre as crop loan @ 12 % p.a. interest. Disbursement of this amount is strictly need-based. Allocation and disbursement is at the behest of the coordinating agency. Hence all requests are scrutinised, evaluated, authenticated, and only then recommended to the lending bank. All the participating farmers are asked to issue PDCs (Post Dated Cheques) for the loan they avail. Hence, the moral responsibility of fulfilling the bank's obligation squarely lies on the participating farmer.

The Appachi formula differs significantly from other existing contract farming models on its 'pricing' front in that no prior price fixing is done in this model. As cotton is a commodity prone to price fluctuations due to domestic and international market forces, ACC did not wish to create a climate of uncertainty due to pre-fixed prices with the contracting farmers.

"Our unique and transparent MoU allows the farmer to sell his commodity at the market prices prevailing during the time of negotiation. The coordinating agency has the first right to negotiate, but in the event of disagreement about price during negotiation, the farmer groups can call for a tender/auction to sell the accumulated cotton" says Mr. Chinnaswamy.

The MoU clearly stipulates conditions to be followed in case of open tender/auction, and allows the coordinating agency to participate in the proceedings.

The formula has built some checks and balances into the system for early identification of troublemaking farmers or wilful defaulters and their elimination at an early stage to protect the interest of the Group, the bank and the coordinating agency. This is the first time ever that a cotton farmer in India has been forwardly integrated to the consumer textile industry.

"Various methods including street plays, village level meetings, display and print materials, door-to-door campaigns, and press meets were used to attract farmers' attention and gain their confidence. A major portion of our energies were dedicated to bringing together all the linkage players such as the banks, insurance company, farm service providers, and consuming textile units and ensuring that they stayed committed to the programme. The successful implementation of this programme with active participation of 12 farmer groups belonging to various backgrounds and the linkage players itself amplifies the clarity and the transparency the formula holds," says Mr. Mani Chinnaswamy, Managing Partner of ACC.

During the 2002 *kharif* season, about 950 acres of land in various blocks of Coimbatore (Pollachi and Kinathukadavu), Theni (Bodi and Andipatti) and Nammakal (Thiruchangode) districts of Tamil Nadu were contracted, involving 900 farmers. During the season, the contracted farmers witnessed a remarkable reduction (by 25%) in cost of cultivation. "The programme is poised to make a greater impact on cotton agronomy than the existing method of cotton cultivation in the country" exults Mr. Mani.

By integrating backward and forward with the producing and the consuming communities, ACC has attempted to address all the existing maladies of the cotton supply chain. According to the leading ginner, who spearheaded the unique supply chain model, such a system is 'the need of the hour' today not for the 'growth' of textile industry in India but for its 'very survival' given the imminent hardships and emerging challenges arising out of the perils of WTO (World Trade Organisation) and MFA (Multi Fibre Agreement).

Commenting on the future expansion plans of the company, Mr. Mani said "The current membership size of these groups is expected to double/triple by the next sowing season".

Key principles of the ACC model

- One village, one group (SHG)
- One village, one variety/hybrid of cottonseed
- Crop loan at 12% per annum on Group's guarantee
- Door delivery of quality inputs at discounted rates
- Cotton crop insurance
- Synchronised sowing
- Integrated crop management through competent Farm Service Centres
- Contamination control measures from farm to factory

- Assured buyback of final produce from farmers' doorsteps
- The sponsor (ACC) plays the role of a perfect coordinator/facilitator between the producer and the consumer.

The Appachi Formula of contract farming has been so successful that the Tamil Nadu Government is now keenly interested in replicating this formula in various cotton-growing districts of the State. After successive high-powered meetings with concerned State Ministers and officials, the formula has got a new fillip. The State machinery is actively participating in propagation of this model in Theni and Namakkal Districts. With the active participation of farmers, the State Government and other stakeholders, the programme is sure to revolutionise the cotton economy and set a successful precedent for many players to emulate the same in their respective enterprises.

3. Ugar Sugar's experience with barley

The story of the Belgaum (Karnataka)-based Ugar Sugar Works Ltd., which established a successful backward linkage with farmers of Northern Karnataka for supply of barley for its malt unit, is quite interesting and insightful. Farmers surrounding Ugar Sugar in Belgaum, who had been cultivating sugar under intensive irrigation found themselves with the problem of salinity in soils. Ugar Sugar took this opportunity to begin creating awareness among the farming community about alternative crops suitable for saline soils. Of these, barley was known to give economic yields of good quality in saline soils. The company assured the farmers of a market for their produce if they agreed to grow barley, as well as the required technical and input support.

All this happened way back in 1997, when the company required 5000 tons of barley annually for its malt unit. At that point of time, barley was cultivated on a commercial scale only in the northern parts of India, which meant huge transportation costs for the company to source from there. Furthermore, such lots carried a mixture of feed and malt grade barley, which meant no surety of consistent quality raw material. The company had no land of its own to start barley production near its malt plant. This led to the birth of Ugar Sugar's unique contract farming system for barley production.

After intensive research and field testing of over 800 varieties of barley, the company supplied UBE425 variety of barley to its 470 contracted farmers, who mostly owned between 2-5 acres land, were within the radius of 40 kilometre from the company's malt plant, and had resources enough to irrigate the crop at least twice during the crop cycle. The acreage under the contract grew from

356 acres in 1997-98 to 1350 in 2000-01 (It dipped to 819 acres in 2001-02). This acreage was able to satisfy only 8-10% of the total annual requirement of barley for the malt plant.

"The contract farming system helped us get barley with high starch, less protein (<12%) and homogeneity, at the right time, in required quantities, and the most competitive prices" says Mr. P.V. Shirgaokar, Executive Director of Ugar Sugar Works Ltd.

Ugar's barley contract farming model : Key elements

- The company supplies genetically pure seed on credit to the contracted farmers without interest.
- The price of barley seeds supplied for sowing and the final produce that is procured by the company is the same i.e. cost of the seed is same as that of the pre-agreed price of barley. Hence, the quantity of seed supplied for sowing is recovered from the time of procurement of the produce.
- A technical person from the company visits the farmers' fields at least four times in a crop cycle, giving free technical assistance.
- The company supplies seed at the sowing points in farmers' fields, and the final produce is procured from the fields at the company's transportation cost.
- Under the contract, it is obligatory on part of both the contracting farmer and the company to sell and buy respectively the entire contracted quantity at the pre-agreed price. "As there is no market for barley in the surrounding areas, there is no other alternative for the farmer except to sell the produce to Ugar Sugar. There have been no defaults till date. Even if a contracting farmer tries to sell the produce in the local market, he would lose about Rs 350/quintal" clarifies Mr. Shirgaokar.

The price of barley fixed by Ugar Sugar varied from year to year depending on the market for barley and malt. It was increased from Rs 600/quintal in 1997-98 to Rs 700 in 1999-2000, with a further rise of another Rs 50/quintal during the 2001-02 crop season.

However, owing to a dip in the international malt prices, Ugar Sugar did not contract for barley production during the recently concluded 2002-03 crop season. This experience of Ugar Sugar clearly speaks of the 'price' dimension (market dynamics) that needs to be addressed in a long-term relationship like contract farming.

However, the company remains undeterred by the losses of about Rs 42 lakh it suffered (owing to price difference of Rs 315/quintal of barley between the domestic market where the company was forced to clear its huge quantities of unprocessed barley, and the landing cost per quintal of barley at the domestic market yards).

The Executive Director says- “Contract farming is one of the best models for ensuring timely and desired quality of barley. If malt prices start climbing, then Ugar Sugar will definitely think of restarting its barley processing by sourcing the raw material through backward linkage. Belgaum, Bijapur and Bagalkot are the potential districts for barley contract farming in Karnataka”.

Elaborating on the company’s future plans on the lines of its venture in barley, Mr. Shirgaokar said “We are also interested in implementing the contract farming system for high density plants such as Casuarina and Eucalyptus to source fuel for our 44 MW cogeneration plant. Biodiesel plants such as Pongamia also have a great future in the contract farming system.”

The Executive Director feels that the absence of legal framework for contract farming is not a serious impediment to the success of the system. In his view, creation of awareness among the producing community about the advantages of the system, attractive and prompt payment, and assured market support even at times of market-induced price crisis are the guiding principles of success for the system.

The cases discussed here are a few among several such successful ventures by corporates involved in food processing, agro-commodity and food products exports. The demonstrated successes of gherkin exporters of Southern India, which is over 90% based on contract farming, and that of Marico’s safflower procurement through a successful backward linkage model, are worth remembering here.

Bottlenecks and Criticisms

In all the existing (currently working) models of contract farming, farmers’ participation remains limited to production in the field - seeds, inputs, technology packages and technical guidance through regular supervision are usually provided by the contracting company. Critics in the industry are of the opinion that the results

are very promising in early years. Farmers benefit from improved technology and higher productivity, quality and production. The contract price does not appear to matter much in the early years. Once the farmers are confident of being able to deploy new technology, problems start cropping up. If the market price is more advantageous than the contract price, farmers renege on the contract.

“The present legal systems makes it impossible to enforce the performance under contract” says **Mr. Sharad Joshi**, Former Chairman of the Task Force on Agriculture, GoI and Founder of Shetkari Sanghatana, a peasants’ organisation in Maharashtra. Contract farming models can sustain in the long run only if the initiative/empowerment comes from the farmers rather than the user (corporate). Another moot point is that in the existing models, farmers are largely ‘price takers’, while the contracting firm ‘makes’ the price.

Other criticisms levelled against contract farming in India include less generation of employment, labour-saving farm practices, low level of commitment of corporates over rural development, lack of transparency and communication etc. Enforceability of the agreement, and standardisation and operationalisation of contract farming agreements are the major bottlenecks plaguing contract-farming ventures in India.

To sum up...

To establish an agrarian economy that ensures food and nutrition security to a population of over a billion, raw material for its expanding industrial base, surpluses for exports, and a fair and equitable rewarding system for the farming community, ‘commitment driven’ contract farming is no doubt a viable alternative farming model, which provides assured and reliable input service to farmers and desired farm produce to the contracting firms. Several Indian and multinational companies have already begun such initiatives in India and have demonstrated repeated success. The successful cases should encourage the rest of the producing and the consuming enterprises to emulate them for mutual benefits in specific and Indian agriculture in general.

SPICE is Published by :

The Director General,

**National Institute of Agricultural
Extension Management (MANAGE)**

Rajendranagar, Hyderabad - 500 030, India.

Tel : + 91 (0) 40 24016702 - 706,

Fax : + 91 (0) 40 24015388

Website: www.manage.gov.in

Editor-in-Chief

Shri. A.K. Goel

Series Editor

Dr. Vikram Singh