

## Contract farming for organic crop production in India

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*There is an increasing demand throughout world for organic food and fibre. In India, efforts are being made for organic crop production through contract farming. Experiences showed that farmers are benefited from technical guidance, supply of quality farm inputs and assured purchasing at remunerative price. This venture, executed by a tripartite agreement, would bring about favourable changes in the present conventional agriculture to make it sustainable and commercial. Likewise, consumers would get certified organic products at reasonable price.*

Indian agriculture is progressing in all spheres to keep up with the ever-increasing population. In the Tenth Five-Year Plan (2002–07), the government envisaged at least 4% growth rate per annum, so that food security is assured and employment opportunities in agriculture are created. The National Agricultural Policy also aimed to strengthen the national economic growth through efficient marketing to accelerate foreign exports by establishing Agri-Export Zones for various crops in major crop-growing areas, where technical know-how and facilities for export will be provided. Therefore, there is a shift from sustainable to commercial agriculture. Farmers can increase their income from crop production. Similarly, in several developed countries, demand for organic food and fibre, and by-products is increasing day-by-day. This change is mainly due to overuse or misuse of chemicals, particularly synthetic insecticides, fungicides, herbicides, fertilizers, plant growth regulators, etc. that resulted in undesirable side effects not only in the agro-ecosystems, but also on human health and life systems of

beneficial fauna and microorganisms. These recent trends in consumerism have opened a new vista for agricultural production on large scale by adopting contract farming, which can transform small farmers into viable commercial producers by monitoring quality, quantity and cost of crop production, and can link production with consumption. This change can help develop markets and bring about changes in the present conventional agriculture which is expected in India in near future. This note therefore discusses the present situation and future strategies of community cultivation.

### Need for contract farming in organic agriculture

The organic agriculture includes growing of crops by a set of guidelines that prohibit the use of synthetic products/chemicals such as fertilizers, pesticides, plant growth promoters and livestock additives. Therefore, soil fertility and pest management is achieved through cropping patterns (rotations, inter/mix-crops, pest and dis-

ease-resistant genotypes), manure (green manuring, organic manures, compost), biofertilizers, cultural practices (weeding, planting, conventional tillage) and biopesticides, including plant-derived products. At present, this system seems to be an ideal and valid solution to produce food and fibre without chemicals and to protect the environment. Further, consumers are becoming conscious and critical about the quality of food and by-products that affect their health though the toxicity depends, to some extent, on the type of food consumed.

India being one of the signatories for the World Trade Organization, liberalization, privatization and globalization has opened new grounds for agricultural marketing. The National Programme for Organic Production of the Commerce Ministry, and the State Governments are actively promoting investment in support of promising ventures in organic agriculture.

Chellappa<sup>1</sup> mentioned 4–15% growth for organic products in the domestic market also. Facilities for export and certification of farm produce and by-products are being provided in the agri-export zones (Table 1) by the Agricultural Processed Food Products Export Development Agency (APEDA), National Bank for Agriculture and Rural Development (NABARD), National Boards for commodities like spices, tea, cashew nut, coffee, etc., International Federation for Organic Agriculture Movement, and Regional or State Marketing Federations. Additionally, commercial banks have initiated such banking for facilitating loans. In fact, Uttarakhand, Madhya Pradesh and Kerala have been declared as 'organic states', and the State Bank of India has announced Rs 101 crore for contract farming in Maharashtra and Goa<sup>2</sup>.

Contract farming is an agreement between farmers and processors and/or marketing firms for the scientific production and supply of a specified agricultural

**Table 1.** Agri-export zones recently established in India

State	Products
Andhra Pradesh	Mango pulp, fresh vegetables, grapes
Assam	Fresh and processed ginger
Bihar	Litchi
Himachal Pradesh	Apple
Jammu and Kashmir	Apple, walnut
Jharkhand	Vegetables
Karnataka	Gherkins, flowers
Kerala	Horticultural products
Madhya Pradesh	Potato, onion, garlic, seed spices
Maharashtra	Mango, grape, onion, flowers, orange
Orissa	Ginger, turmeric
Sikkim	Flowers (orchids), cherry, pepper, ginger
Uttar Pradesh	Mango, potato, vegetables
Uttarakhand	Litchi, flowers, medicinal and aromatic plants
West Bengal	Litchi, pineapple, potato, mango, vegetables

product at a frequently and mutually predetermined price<sup>3</sup>. Technical guidance on cultivation practices, harvesting, storage, etc. and quality inputs at wholesale rate are assured by the tripartite contract. The main objective is to increase crop production, improve quality farm produce and possibly minimize cultivation cost. The farmer is therefore compelled to provide the produce in a specific quantity and quality determined by the processor. Although legal protection is possible to both parties, the success depends upon physical, social and cultural conditions because all terms and conditions prescribed in the agreement are to be fully respected by concerned parties, so that the project gives an impetus to scientific planning and implementation of integrated crop cultivation.

Considering the present socio-economic status of Indian farmers, contract farming seems to be an ideal option because this system would have certain advantages over the present crop production and marketing systems, such as:

1. Profit in produce sale is possible by capitalizing the scientific research in post-harvest technologies.

2. Indian agriculture per se is becoming commercial due to global demand for a variety of foods and fibre, and food products.

3. Any crop can be cultivated on a large area to obtain produce of uniform quality by adopting appropriate technology. Crop production is also possible on small land-holdings through cooperative/corporate farming to enhance productivity and avoid admixture or inferior quality produce.

4. Technology transfer becomes easier due to large-scale adoption.

5. Risk involved due to fluctuation in market price is minimized. This point is

relevant to the present strategy of farm economics as the Minimum Support Price is generally declared at the end of crop season and it often remains ambiguous.

6. Commercial and nationalized banks are coming forward to finance contract farming through soft loans and are revising prime lending rates.

7. Additional income from intercrops is certain due to crop diversification. Consolidation of small and marginal lands can make farming economically viable, resulting in higher (>30%) net returns than traditional/conventional farming systems.

### Experiences

Contract farming is implemented in three ways: (i) procurement contract, wherein sale and purchase conditions are specified, (ii) partial contract, where the purchaser provides some inputs and purchases the farm produce at predetermined prices and (iii) total contract, where the purchaser supplies and manages all inputs, but the farmer has to lease land and supply labour. These contracts can be executed with individual farmers, a group of farmers or their cooperatives. In India, contract farming is being implemented successfully for food crops in Punjab, Haryana, Maharashtra, Tamil Nadu, Rajasthan and Karnataka by private companies.

In the fibre sector, cotton farming has been executed by Super Spring Mills in Tamil Nadu and Appachi Mills in Kerala and Karnataka Textile Mills Association and Gokak Forbes in Karnataka, with the help of seed suppliers, insurance companies, banks, and produce purchasing organizations<sup>4,5</sup>. The salient feature of these contracts is that farmers are free to

sell cotton in the open market, if the price offered by the companies is not attractive enough.

The involvement of the local self-help groups had created interest in the farming communities having small land-holdings. This participatory approach has resulted in upgrading the livelihood of farmers, particularly through bank loans (Table 2).

### Perspectives

In the case of organic food produced by a large number of farmers, marketing has to be arranged at village or taluk level. At present, the Indian food market is valued at Rs 650,000 crore, but only 1.6% of the farm products is exported in comparison to USA (12%), the Netherlands, Canada (6%), Spain, UK, Italy, Brazil, Australia (3%), and Argentina, Denmark, Thailand (2%). New crop zones that have been created during the last few years (e.g. Punjab for basmati rice) may boost such exports, because export has advantages over local/retail marketing for the following reasons.

- (i) Since the average growth for organic farming is about 20–25% and higher prices (15–50%) are possible in the international trade<sup>6</sup>, export of organic food produced by contract farming will certainly increase in near future, as India is recognized as an international agricultural hub.

- (ii) The Government supports contract farming for all crops grown under organic agriculture and biotechnological opportunities are foreseen because of maintenance of soil health, avoidance of environmental pollution, no risk of chemical residues in food and fodder, opportunities for rural employment, etc. These parameters lead to sustainable agriculture.

- (iii) This system will augment the farmer's income; help in the conservation of natural resources, and will have positive effects on the socio-economic aspects of the farming communities (e.g. generation of rural employment, improved household nutrition, assured local food security, reduced independence on external farm inputs, etc.).

- (iv) The purchasing companies help farmers identify proper land for contract farming with organic cultivation, plan crop production, arrange timely supply of quality inputs, provide technical guidance throughout crop growth and har-

**Table 2.** Progress of self-help groups and bank loans

Year	No. of self-help groups	Loan availed (Rs in million)
1992–93	255	3
1993–94	620	7
1994–95	2,122	24
1995–96	4,757	61
1996–97	8,598	118
1997–98	14,317	238
1998–99	32,995	571
1999–2000	114,775	1,930
2000–01	263,825	4,809
2001–02	461,478	10,263

Source: NABARD, New Delhi.

vesting, assure purchasing and provide opportunities to add value to the farm produce. Thus, marketing risks and uncertainty are eliminated.

### Challenges

(i) Organic farming on contract basis requires a long-term approach as it is based on the trust of farmers, for which grass-root intervention is critical for its success.

(ii) If it is not profitable to both parties, the written agreement becomes a useless effort. Thus, responsibilities of both parties should be fulfilled. The agreements differ according to the commodity produced by contracting farmers. Generally, farmers may not take cognizance at the time of signing of the clauses that might be exploitative in short or long term; such agreements can jeopardize investments and interest. For example, the company changes norms of quality during the crop season and farmers get lower price than the predetermined rate. The purchaser has a right to outright reject the produce. Due to deterioration in quality and insufficient quantity, purchasing may be delayed or avoided. Further, farmers have no option for crop varieties, pesticides and fertilizers, and purchasing from particular company/distributor is often made compulsory.

(iii) Although 44% of the country's GDP comes from retailing, retail marketing of organic food is limited compared to other countries, e.g. 85% in USA, 40% in Thailand, 35% in Brazil, 20% in China and only 2% in India<sup>6</sup>.

(iv) Convincing farmers about the economic benefits of contract farming through field demonstrations should be taken up urgently. This may consist of educating farmers about new farming techniques, marketing skills for organic food and fibre, seeking cooperation from business communities and firms, informing consumers about the ill-effects of chemicals, etc. Sufficient number of the trained staff for

such extension work in villages is a prerequisite for the success of contract farming.

(v) Certification cost for organic produce is comparatively high and needs to be reduced drastically.

(vi) Facilities for storing and verification of quality of agricultural commodities at village level are lacking.

(vii) Participation of processing firms/purchasers is limited, as they are not aware of the long-term benefits and they also need large areas, which is difficult in regions where small and fragmented land-holdings are common.

(viii) Banks are ready to finance contract farming in organic agriculture to only those farmers who are not defaulters.

(ix) Under unfavourable climatic conditions, the quality of farm produce cannot be maintained or the whole crop may fail. Crop insurance initiated by the Government needs to be implemented on a large scale. Also, future liabilities of each party in the event of unforeseen circumstances are not included in such contracts and the committee for redressal of disputes has not been set up at regional or state level.

### Conclusion

The Government of Maharashtra had decided in June 2005 to modify the 1963 APMC Act (Distribution) in which contract farming has been included and rename it as 'Model Act'<sup>7</sup>. Early implementation of this Act would encourage farmers, because despite the present constraints, success with strong linkages between farmers and processors/marketing agencies has been achieved. Such partnership is essential so that the objective is fulfilled for a sustainable business relationship and marketing performance. Under unfavourable climatic conditions, farmers should be ready to bear some risks for farm production, if appropriate contracts are prepared and respected. The compa-

nies should divert some funds towards creating basic facilities for agricultural and community development, so that farmers are encouraged to take up secondary activities such as agroforestry, silviculture, horticulture, sericulture, etc. Farmers as a group of cooperatives are free to take opinion of experts for both scientific as well as commercial aspects of farming and should join together for producing quality produce under sustainable agriculture through double-cropping pattern, selection of crops by critical study of the rainfall pattern, marketing avenues, and timely availability of proper farm inputs at proper time. Actions of Government agencies on contract and organic farming are limited to certain areas and a few crops. Therefore, subsidies on organic manures, biopesticides, biocontrol agents, biofertilizers, etc. should be allowed at least to those farmers who are inclined to practice such methods. Unless the Government takes initiatives, farmers would not come forward to adopt such methods in their fields. Government agencies should therefore review and formulate strategies with rigid and appropriate steps to promote these ventures in future, while considering supportive prices and establishing remunerative marketing links for encouraging organic cultivation for export and to enhance local food security.

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