Institutional Innovations for Inclusive Growth of Smallholders: A Review

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GROWING SMALLHOLDERS

The country is having more than 137 million operational holding under different size group. Smallholders, marginal and small farmers (less than 2.0 ha land holding), has increased from less than 70 per cent of total farm households during 1970–71 to 85 per cent in 2010–11. The operated area by smallholders has doubled from about 21 per cent of total operated area in 1970–71, to nearly 45 per cent in 2010–11 (Table 1). Consequent to rapid growth in the number of operational holdings with the limited land base is clearly reflected by the declining average operational holdings size in the country. The average size of holding has declined from 2.28 hectare in 1970–71 to 1.15 hectare in 2010–11. Thus, Indian agriculture is facing challenge of sustaining 4 per cent growth rate and increasing number of small holdings.

Table 1: Distribution of Farm Holdings in India

Land Class	1970–71	1980–81	1990–91	2000–01*	2010–11
	Percentage Distribution of Farm Holdings				
Marginal & Small	69.9	74.5	78.3	81.8	85.0
Semi-medium	15.0	14.0	13.1	11.7	10.0
Medium	11.2	9.1	7.1	5.5	4.2
Large	3.9	2.4	1.6	1.0	0.7
Total	100	100	100	100	100
	Percentage Distribution of Operated Area				
Marginal & Small	20.9	26.2	32.5	38.9	44.6
Semi-medium	18.5	21.2	23.2	24.0	23.6
Medium	29.7	29.6	27.0	24.0	21.2
Large	30.8	23.0	17.3	13.2	10.6
Total	100	100	100	100	100

Average Area Operated Per Holding (ha)					
Marginal & Small	0.68	0.65	0.64	0.63	0.61
Semi-medium	2.81	2.78	2.76	2.72	2.71
Medium	6.08	6.02	5.90	5.81	5.76
Large	18.10	17.41	17.33	17.12	17.38
Total	2.28	1.84	1.55	1.33	1.15

* excluding Jharkhand, Source: Agricultural Census, 2010-11, GOI.

SMALLHOLDERS CONCERNS: INCREASING DISCONNECT

These small holders are deprived of various benefits for problems like availability of limited financial resources, lower marketable surplus, lack of technical know-how and information, disguised employment, distress sale and poor access to market. Addressing these constraints faced by small holders is vital for their inclusion in the development process of Indian agriculture and rural India.

Table 2: Information Needs and Concerns of Smallholder Farmers

	Pre-harvest	Production	Post-Harvest
Knowledge	Inputs (prices & availability), Soil Testing,	Improved Production Technologies, Good Agricultural Practices, food safety concerns	On-farm/ scientific storage, grading and sorting, packing, transportation, Markets, prices and arrivals, food safety concerns
Information	Weather, prices, market demand	Weather, input prices, input suppliers	Commodity prices, storage, pledge finance
Access	Inputs Credit	Production resources, quality inputs	Market, Alternative buyers, Storage, Pledge finance,
Economies of scale	Disadvantaged in input procurement	Higher cost of production	Higher transaction cost

Studies in many parts of the country reported that, the major bottlenecks facing the small and marginal farmers were lack of access to credit, poor marketing channels for inputs, less developed markets for agricultural outputs, weak extension service, etc. (Basu, 1997; Acharya, 2001; Ahuja and Punjabi, 2001).Majority of the smallholders depends on local money lenders for even crop loans and gets trapped in the vicious circle. There is growing exclusion of smallholders from institutional credit as indicated by the fact that, the share of small loans (up to 25000) declined from 35.2 per cent in total agricultural advances in 2000 to 13.4 per cent in 2006, whereas the share of bigger loans (>1 crore) increased from 13% to 30% during the same period (Ramakumar and Chavan, 2007). The share of small borrower accounts fell to 38% of the total accounts in 2004-05 from 62% in 1991-92 (Satish, 2007).

Small and marginal farmers in India faces varied types of problems in production and marketing of crops/livestock such as lack of access to inputs technology and other resources; spurious input supply, inadequate and costly institutional credit, lack of irrigation water, lack of extension services for commercial crops, exploitation in marketing of their produce, high health expenditures, and lack of alternative sources of income (Dev, 2005). Weak bargaining power and holding capacity of smallholders results in distress sale and inturn they receive lower prices for their produce (Agrawal, 2000; Gandhi and Koshy, 2006), and face risk which make them vulnerable to poverty. Innovations in smallholder market linkage are needed in terms of partnerships, use of Information and Communication Technologies (ICTs), leveraging networks, value chain financing, smallholder policy and, even in contracts which can promote both efficiency and inclusiveness of the linkage (Mendoza and Thelon, 2008).

INSTITUTIONAL INTERVENTIONS FOR LINKING FARMERS TO MARKETS

There is a strong network of public and private agricultural extension mechanism coupled with well networked regulated markets in the country. The increasing smallholders and changing market scenario leading to complex situation in procuring quality inputs/ knowledge of production technology as well as in accessing the market are adding to transaction costs. Smallholders have low marketable surplus, and resort to distress sales locally just after the harvest due to requirement of money for social obligations. Farmers are unable to realize optimal value from their produce due to absence of scientific price discovery. Effective linkages between farmers and service providers and purchasers of agricultural produce are inevitable to strengthen support services for small farmers. Development of these linkages are governed by a number of factors like, external environment in which farmers and service providers operate as well as the nature of product and processing involved (Dev, 2012).

In the recent past, there is a paradigm shift in the agricultural marketing system of a country through reforms by amending APMR act (Model Act-2003), allowing Contract Farming, Direct Marketing and Group marketing. Market demand driven production planning ranks higher in importance than production itself. To achieve sustainability in incomes, especially for small and marginal farmers, it is indeed appropriate time to chalk-out effective marketing strategy by organizing them into groups or by adopting innovative marketing methods.

With the changing scenario, apart from traditional agricultural extension and marketing systems, there are many institutional, formal or informal; interventions to link smallholders with the market (input as well as output markets). The interventions includes; contract farming, direct linkage with Retailers/ Processors/ Exporters, farmer's markets, organisation and promotion of Self Help Groups/ Producer companies/ Federations, Producer cooperatives, rural retail malls, etc. (Joshi and Gulati, 2003; GOI, 2011;). The details of these initiatives are presented in Appendix-1.

CONTRACT FARMING

Has been considered as having considerable potential to help the small and marginal farmers overcome constraints in accessing inputs, knowledge, credit, extension and marketing. In the recent years, there has been some form of contractual arrangements in several agricultural crops, fruits and vegetables, medicinal plants, dairy, poultry and is predominant throughout India. Thus, contract farming is spread across crops, regions and agencies in India (Singh 2000, 2002, 2004 and 2005, 2011; Dev and Rao, 2005; Singh and Ashokan, 2005; Kumar, 2006; Sharma, 2007, and Birthal *et al.* 2008). Different models of contract farming are being practiced by different players ranging from bi-partite model to multi-partite model and intermediary model. Even a single contracting agency (Frito Lay) practices five different models in different states of India for the same crop (potatoes suitable for chips making Singh, 2011). The pricing arrangement is one of the important aspects of contract farming and there are different models of pricing practiced such as growers' fixed price, residual (profit/ loss) sharing by sponsor and grower, open market based price, spot market price, consignment based, two part split price, tournament price (fixed plus variable based on relative performance), base price plus quality based incentive price, or administered price (Singh, 2011; Miglani and Kalamkar, 2012). Though the amended APMC Actrecognizes contract farming system now and has some provisions to regulate it, a legal protection to contract growers as a group is a must to protect them from ill-effects of contracting. Government should play an important role to facilitate smooth functioning of contract farming

FARMERS MARKETS

With the goal of providing opportunity for the farmers to sell their produce directly to the consumers at reasonable rates fixed every day innovative interventions in the form of farmer's markets were introduced. Some examples are *Kisan Bazaars, Apni Mandi, Rythu Bazars*, and *Uzhavar Sandies*. These channels are mostly adopted in sales transactions of perishables like, fruits, vegetables and flowers. Farmers' markets have helped participating farmers to become aware of the products required by the markets and helped farmers to improve product quality and diversify their product portfolios, besides bringing about resource use maximization. However, farmers' markets have not had a major impact on farmin comes as sales through this marketing channel are generally small, both in terms of number of the farmers participating and volumes of produce (GOI, 2011). The most successful initiatives are Rythu Bazaars in Andhra Pradesh and Horticultural Producers' Coop. Marketing & Processing Society (HOPCOMS) in Karnataka. On the lines of these interventions, these farmers markets are to be developed and executed as a scheme wherein there should be a provision of grants to create required infrastructure.

Cooperatives or Producer Organizations

Initially cooperatives were started intending to enable farmers to get out of clutches of usurious money lenders. Gradually, the scope got extended beyond agricultural credit to cover numerous other activities including production, finance, marketing and processing in a wide range of sectors, as well as trading of several important farm products, consumer stores and housing (Vaidyanathan, 2013).Further, producer cooperatives or organizations viewed as an aggregator/ collector of low marketable surplus from the producer farmers, provide quality inputs and production technology and other support services to the farmers at low cost. One of the most successful producer organizations is the Indian dairy cooperative which in 2005 had a network of more than 100,000 village level dairy cooperatives with 12.3 million members (Birthal *et al.* 2008).

Cooperatives have been recognized as useful means for small farmers to overcome constraints of high transactions costs of operating on a small-scale. Successes with cooperatives have been particularly prominent with small-scale dairy. Cooperatives offer a good alternative for small farmers when there are wider market imperfections. Cooperatives can procure supplies at lower transaction cost through suitable backward linkages and aggregate them appropriately to harness the benefits of economies of scale (Singh, 2008). They can be helpful to small farmers in providing credit, inputs and extension services. Roy and Throat (2008) reported that in India marketing cooperatives for grapes reduced transaction costs and contributed to a better bargaining position of smallholders' vis-à-vis foreign traders. MAHAGRAPES, Amlsad Cooperatives, Vegetable Fruit Promotion Council of Keralam (VFPKC) are few examples of successful models under this category.

Producer Companies

Producer companies came into existence with the amendment of Section 581 of the Companies Act, 1956, in 2003 on the recommendations of an expert Alagh committee. This amendment gave primary producers the flexibility to organize themselves on the basis of a one man-one vote principle, which is the essence of a cooperative institution (Singh, 2008). The objective of the said company can be production, harvesting, procurement, grading, pooling, handling, marketing, selling, and export of primary produce of the members or import of goods or services for their benefit. Its membership can be 10 or more individual producers, or two or more producer institutions or a combination of both.

Producer companies have been organized in MP under the District Poverty Initiative Project (DPIP) in sectors of seed, grain, rice and tomato, chilli, poultry, potato, coriander, turmeric, ginger, milk, and bio-fertilizer production. There are more than 400such producer companies in India now (SFAC). The successful examples of producer companies are; Jagannath Crop Producers Company Ltd., Odisha, Chetna Organic Agriculture Produce Company (COAPCL), and Chetna Organic Farmers Association (COFA), Telangana, Pashusamvardhan Producers Company Ltd., Maharashtra, Dhari Krushak Vikash Producer Company Limited, Gujarat, VAMCOL, VANILCO, BIPCL and Rangsutra in Kerala, Vegetable Growers Association (VGAI), Narayangaon Pune etc., which are doing good business in farm and non-farm sectors. A large number of producer companies have been registered across 24 states on the initiative of Small Farmers Agri-Business Consortium (SFAC). NABARD and National Horticultural Board are also promoting incorporation of producer companies.

Rural Retail Malls/ Procurement Centers

Some of the corporate organizations are opening their centers in the rural areas to form a network of one stop shops for farmers providing everything from farm inputs to loans and technical know-how to the farmers. The initiative of ITC in the form of 'e-choupal' with the help of *sanchalak* has already become the largest initiative among all Internet based interventions in rural India. ITC's another path-breaking initiative–the 'Choupal Pradarshan Khet', brings the benefits of agricultural best practices to small and marginal farmers. A few examples of rural retail malls are: Tata's Tata Kisan Sansar, Mahindra's Shubh Lab, Hariyali Kisan Bazaars (DCM), Aadhars (Pantaloon-Godrej JV), Choupal Sagar (ITC), Naya Yug Bazaar, Indian Oil Corporation's Kisan SevaKendras, have already set up rural retail hubs.

Several innovative models have evolved across country in isolation and the collaborative efforts of the stakeholders have contributed to the success of these models. These models are found to be effective in aggregating the small holders also. In view of the reforms process initiated by Government of India, there exists greater scope for operationalization of these models with customized approach. An attempt in this section has been made to evaluate suitability of some of the innovative marketing models for small holders in linking them to market. These interventions, having proven successful in many developing countries, covers aspects like developing skills, and knowledge, competencies, information needs of learners for effective adoption of practices and helping people with problem solving and/ or coping strategies (Shalendra, *et al.* 2014).

PRODUCER COMPANIES

Though the concept of producer companies is noble, the companies organized under the Act face many problems which are stumbling blocks in their teething years. Firstly, the producer companies are not yet recognized by the union or state government for any incentive or support. Secondly, banks refuse to lend to these companies due to lack of state or government guarantees. They also face difficulties in getting APMC licenses due to traditional co-operatives already having licenses in some places. Finally, and most importantly, these companies are not allowed to mobilize capital from the market (Singh, 2008).

RURAL RETAIL MALLS/ PROCUREMENT CENTERS

Reasons for failure of farmer one-stop-shop initiative by input corporates includes: bazaars became high price point with fluctuating volumes; high cost of distribution in remote villages along with high supply chain cost; proliferation of billing parties and highly complex delivery chain; poor ability of company depot to service retail points resulting in high stock levels at some places and stock outs at others and increasing holding costs; high skill labor force requirement to manage retail points leading to increased costs; high rent of retail complex, etc. (Singh, 2013).

CONTRACT FARMING

The contract farming is expected improve the status of farmers and farming by providing assured market for produce along with improved production technology, quality inputs, credit and technical advice. Contract farming, with efficient management, can be effective instrument to develop market, link farmers to market and to transfer of technical skills with the objective of profitability for both the sponsors and farmers. Contract farming is widely practiced for cash crops, fruits and vegetables, poultry, pigs, dairy produce and even prawns and fish. The main characteristics of contract farming is its diversity not only with regard to the products contracted but also in relation to the many different ways in which it can be carried out (Eaton and Shepherd, 2001).

Dorward *et al.* (1998) list the conditions for successful interlocking contracts between smallholders and agribusiness, and in a certain sense they address all the problems related to contract farming raised at the beginning of this section. The conditions are the following:

- Increased competition among traders or firms to prevent monopolistic control (this, however, creates opportunities for side-selling, leading to problems of contract enforcement)
- A guaranteed outlet for the final product

Table 5: Advantages and Disadvantages of Inefficient Contract Farming to Farmers and Firms

	Advantages of Contract Farming	Disadvantages of Contract Farming
Farmers	• Reduction in uncertainties associated with input availability, quality and costs. • Economies of scale in input procurement through contracting agribusiness firms. • Cost effective access to farm mechanisation and transportation. • Technological assistance by the contracting firm, favouring the production of higher valued, often riskier crops and livestock. • Enhanced farm production and management skills through technical assistance by firm, and its spill-over effect on other crops and livestock activities. • Secured market outlet for the contracted production, reduction in the uncertainty and the transaction costs involved for marketing. • Reduction in price risk • With the reduction of product and market risks, income stability is favored. • Enhanced access to credit.	• Possible renege on contractual terms by firms on change in market conditions (price, quantity and quality of produce). • Farmers vulnerable to output and productivity manipulation by agribusiness firms with dependency on prescribed technology package. • Unfavorabledelivery schedules by firms to influence prices paid to farmers. • Non-transparent price determination mechanism of the contract by firms using complex formulas or quantity/ quality measurements. • Farmers may lose flexibility in enterprise choice. • Long term contracts might lead to gradually decreasing real prices received by farmers. • Loss of linkages with former transaction partners like intermediaries, lenders and input providers. • Increased risk associated with monoculture practices. • Risk of indebtedness grows. • Increased tendency of a gradual reliance on the contracting company for non-farm-related matters.
Firms	• Ensured regular supply of agricultural product. • Greater conformity to desirable product quality attributes and to safety standards. • Access to land is facilitated, contracting allows circumventing land limitations. •. Reduced input costs per unit. Economies of scale in procurement of inputs for farmers and sourcing products. • Access to agricultural credit and eventual financial incentives and subsidies. • Reduced labour costs compared to full vertical integration, where the firm must hire and manage its own labour force. • Expansion and contraction of production is facilitated. • For high value, labour intensive agricultural enterprises, managerial efficiency in farming may be favoured.	• Risk of contractual hold-ups, especially problematic where alternative markets for the crop or livestock grown under contracts are easily accessible and where contractual enforcement is weak. • Transaction costs of dealing with large numbers of farmers are high. • Risk of misuse or deviation of supplied inputs and of final products. • Internalization of support service costs. • Loss of flexibility to seek alternative supply sources. • Risk of undermining the corporate image.

Source: Compiled from Eaton and Shepherd (2001); Kirsten and Sartorius (2002), and Silva, 2005.

- An effective repayment mechanism through loan groups of farmers

- Access to market information by farmers to prevent exploitation and to strengthen bargaining power
- Volume of transactions that are large enough to reduce transaction costs (this can be achieved through farmer cooperatives or farmer groups)
- A well-established formal or informal network of traders to control rogue traders
- Little alternative sources of raw material to prevent the trader or agribusiness from buying from other farmers

LESSONS LEARNT

The organization of farmers in groups or other associative form is a strategy that can address two other success factors identified in this work. They are the need to countervail the unevenness in bargaining power and the need to reduce the transaction costs of dealing with multiple contracting parties. Overall both the state and national level farmer organizations in India are weak. They lack broad-based ownership in particular by the small-scale farmer and are often financially insecure. For the majority of small-scale farmers, representation is inadequate. Membership-owned structures able to both lobby and support economic organization are severely limited in number and geographic coverage, with the exception of the cooperative movement, most notably in the dairy sector and commodity based associations where the membership includes large-scale producers and agribusiness. Farmer organizations are in many instances politicized and institutional arrangements at the grassroots level, which should hearth voice of the small-scale farmer, are structurally bereft.

Inclusive new business models designed to assist fair and equitable smallholder inclusion in formal markets therefore need to create arrangements that put the 'partnership' back in 'partner network'. This will be most effective if trading arrangements are (a) **durable**: with long-term trading relationships; (b) **equitable**: specifically increasing market access for smallholders with equitable balance of risk, responsibilities, and benefits among the chain actors; (c) **efficient**: improving financial sustainability; (d) **effective**: assisting in guaranteeing purchaser access to consistent supplies of agricultural products that meet or exceed market standards; (e) **adaptable**: offering sufficiently flexible procurement standards that enable both buyers and sellers to respond to changing markets and social and environmental conditions; and (f) **credible**: recognised as offering real benefits rather than serving interests of PR, and free of double standards.

Approaches to promote equitable participation by large- and small-scale farmers include:

1. Facilitating entry and competition among buyers (for example, improving the rural infrastructure or establishing collection centers to reduce the transaction costs involved in sourcing from small scale farmers).
2. Organizing farmers into formal or informal groups to meet the volume requirements and strengthen farmers' bargaining power;
3. Enhancing farmers' capacity to adopt improved production and post-harvest techniques to meet the required higher quality standards.
4. Assisting farmers to obtain the capital to make on-farm improvements and other required investments (for example, in irrigation, greenhouse, grading, or cooling facilities) and acquire essential national and international certifications.
5. Training farmers and buyers about their rights and obligations under contract farming arrangement and in the design of contracts.
6. Developing institutions that assist farmers to settle contract disputes (such as commodity or market associations).

REFERENCES

[1] Bardhan, P.K. (1973), "Size, Productivity and Returns to Scale: An Analysis of Farm-level Data in India Agriculture", *Journal of Political Economy*, Vol. 81(6), pp. 1370–86.

[2] Bell, D.E., Sanghavi, N., Fuller, V. and Shelman, M. (2007), "Hariyali Kisaan Bazaar: A Rural Business Initiative", *Harvard Business School Case Study*, November 2007.

[3] Berry, R.A. (1972), "Farm Size Distribution, Income Distribution and the Efficiency of Agricultural Production: Colombia", *American Economic Review*, Vol. 62(1), pp. 403–08.

[4] Bhalla, S.S. and Roy, P. (1988), "Mis-Specification in Farm Productivity Analysis: The Role of Land Quality", *Oxford Economic Papers*, Vol. 40(1), pp. 55–73.

[5] Birthal, P.S. (2008), "Making Contract Farming Work in Smallholder Agriculture", *National Centre for Agricultural Economics and Policy Research*, New Delhi.

[6] Birthal, P.S., Joshi, P.K. and Gulati, Ashok (2005), "Vertical Coordination in High–value Food Commodities: Implications for Smallholders", MTID Discussion Paper 85, International Food Policy Research Institute, Washington DC.

[7] Chand, R., Prasanna, P.A. Lakshmi, Singh, Aruna (2011), "Farm Size and Productivity: Understanding the Strengths of Smallholders and Improving Their Livelihoods", *Economic and Political Weekly*, Vol. XLVI(26 & 27), pp. 5–11.

[8] Foster, Andrew D. and Rosenzweig, Mark R. (2010), "Is There Surplus Labour in Rural India?" Centre Discussion Paper No 991, Economic Growth Centre, Yale University.

[9] GOI, (2011), "Report of the Working Group on Agricultural Marketing Infrastructure, Secondary Agriculture and Policy Required for Internal and External Trade for the 12th Five Year Plan 2012–17", Agriculture Division, Planning Commission, GOI.

[10] Gupta, R. (2008), "New Models and Innovation in India: The Hariyali Experience", Presentation to the Conference *'Inclusive Business in Agrifood Markets: Evidence and Action'* Beijing, March 5-6, 2008.

[11] Hanumantha, Rao C.H. (1966), "Alternative Explanations of the Inverse Relationship between Farm Size and Output Per Acre in India", *Indian Economic Review*, Vol. 1(2).

[12] Hazell, Peter (2011), "Five Big Questions about Five Hundred Million Small Farms", Keynote Paper Presented at the IFAD Conference on *New Directions for Smallholder Agriculture*, 24-25 January 2011, International Fund for Agricultural Development, Via Paolo Di Dono, 44, Rome 00142, Italy.

[13] Khusro, A.M. (1968), "Returns to Scale in Indian Agriculture" in A.M. Khusro (ed.), Readings in Agricultural Development (New Delhi: Allied Publishers).

[14] Mahendra Dev, S. (2012), *Small Farmers in India: Challenges and Opportunities*, WP-2012-014, IGIDR, Mumbai.

[15] Mazumdar, Dipak (1965), "Size of Farm and Productivity: A Problem of Indian Peasant Agriculture", *Economica*, Vol. 32, May, pp. 161–73.

[16] Mendoza, R.U. and Thelen, N. (2008), "Innovations to Make Markets More Inclusive for the Poor", *Development Policy Review*, Vol. 26(4), pp. 427-458.

[17] Ramakumar, R. and Chavan, P. (2007), "Revival of Agricultural Credit in 2000s: An Explanation", *Economic and Political Weekly*, Vol. 42(52), pp. 57–63.

[18] Roy, D. and Thorat, A. (2008), "Success in High Value Horticultural Export Markets for the Small Farmers: The Case of Mahagrapes in India", World Development, Vol. 36(10), pp. 1874–1890.

[19] Saini, G.R. (1971), "Holding Size, Productivity and Some Related Aspects of Indian Agriculture", *Economic & Political Weekly, Review of Agriculture*, Vol. VI(26), pp. A79-A85.

[20] Satish, P. (2007), "Agricultural Credit in the Post Reforms Era: A Target of Systematic Policy Coactation", *Economic and Political Weekly*, Vol. 42(26), pp. 2567–2574.

[21] Sen, A.K. (1962), "An Aspect of Indian Agriculture", *The Economic Weekly*, Vol. 14(4-6), pp. 243–46.

[22] Shah, Deepak (2007), "Functional Deficiencies of Agribusiness Cooperatives in Maharashtra: Synthesis of an Unsuccessful Case", *Agricultural Economics Research Review*, 20 (Conf.), pp. 563–576.

[23] Shalendra, Gummagolmath, K.C. and Sharma, Purushottam (2014), "Souvenir", published by National Institute of Agricultural Marketing, Jaipur.

[24] Thana, Ganesh and RaghuGaia (2011), "Smallholder Farming in Asia and the Pacific: Challenges and Opportunities", paper presented at the IFAD conference on New Directions for Smallholder Agriculture, 24-25 January, 2011, International Fund for Agricultural Development, Via Paolo Di Dono, 44, Rome 00142, Italy.

APPENDIX 1. INNOVATIVE INSTITUTIONAL INTERV LINKING FARMERS TO MARKET IN INDIA

Problem	Contract Farming	Cooperative	Producers Company	One-stop shop
Knowledge & information	Introduction of new technology and skill transfer	Group approach helps in sharing knowledge and information	Providing advice to farmers on various technical issues	Providing advice to farmers on various technical issues
input supply	Provision of quality inputs and production services	Scale of operation helps in procurement of quality inputs	Facilitate purchase of inputs	Supply quality inputs at rural retail malls.
Credit	Access to credit	Provided by the cooperatives	Facilitate provisions of credits	
Price	Guaranteed and fixed pricing structures	Competitive price through arraignments of sale proceeds	Competitive prices through forward linkages	Competitive price through arraignments of sale proceeds
Long marketing channels	Buy back arrangements Direct link with buyer	Effective forward linkages	Aggregation and collection from doorstep	Aggregation and collection at mall
Poor market availability	Assured market	Group approach helps in enhancing access to market	Assured market by providing forward linkages	Provide market linkage
Infrastructure barrier	Backward linkage through collection centre/ purchase at doorstep	Managed by cooperative through pooled resources	Managed by company	Managed by company after aggregation point
Prompt Payment	Immediate	Standardised procedure	Immediate payment specially to small holders	Immediate payment after sale proceeds
Value addition	Processing	Processing	Processing	Market linkage
Model interventions	Successful in some of the crops like soybean, vegetables, medicinal and aromatic plants, gherkin, etc	HOPCOMS, NDDB, Mahagrapes, Amalsad, etc	Indian Organic Farmers Producer Company Limited, Kochi, Kerala, Eco Tasar Private Ltd, etc, and many more	Tata Kisan Sansar, Mahindra Shubh Labh, Hariyali Kisan Bazaars, Aadhars, Choupal Sagar

Source: updated from Shalendra *et al.* 2014.