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## RESEARCH ARTICLE

## Linking Small and marginal farmers with the growth of India

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### Abstract

India is a land of small and marginal farmers of peasants cultivating their ancestral lands mainly by family labor. The size of cultivable land holding in India is continuously declining with every successive generation. Continuous decline of land holding is a major challenge before small farmers, their ability to access food markets and benefits of countries growth. Increase in per capita income, urbanization and globalization are changing the consumption pattern of India towards high value commodity like fruits and vegetables (Minten et.al.2009). Horticulture could be one of the options for marginal and small farmers to survive instead of raising traditional crops like wheat and rice. The major problem of the Indian agricultural is its highly inefficient supply chain. Fruits and vegetables are perishable in nature and lack of coordinated supply-chain result in post harvest loses to the farmers. The diversification in production and collectivization of small produces may help small and marginal farmers to sustain.

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## INTRODUCTION

India with diverse soil and climate comprising several agro-ecological regions provides many opportunities to grow a verity of horticulture crops. As India is getting more integrated with the world economy, urbanization results transformation of food consumption in Indian. Consumers are increasingly substituting traditional with food products that are more prevalent in western diets. The influence of globalization is clearly visible with increased consumption of proteins, sugars, fats, fruits, vegetables and lifestyle foods. This change in consumer tastes and demand has critical implications for the entire Indian food supply system (Pingali & Khwaja, 2004).

“By 2020, India will require to produce over 340 million tons of food grains to feed its growing population. An increase in production would necessitate surmounting many impending factors. Land requirement for afforestation and environment preservation activities would force a situation where the present 170 million hectares arable land would not be fully available for agriculture. It might shrink to 100 million hectares by 2020. In addition there will be shortage of water. The number of farmers available for agriculture will reduce to less than 50 percent.” —Former President A P J Abdul Kalam.

### India and small farmers

Agriculture forms the backbone of the Indian economy as it employs about two third of the total work force despite the fact that share of agriculture in India's GDP has declined from 48.7% in 1950 to around 17% in 2010 (M. Pandey et. Al 2010).

Further, the size of operational holdings in India is continuously declining with every successive generation. The continuous decline in size of land holdings has raised serious questions on the survivability of these small holders, their ability to access food markets and benefit from the opportunities presented by the growth revolution.

### **Horticulture a possible solution for small holders**

Horticulture, which is people-intensive, is being put forward as an option for marginal farmers by various government agencies and private sector companies. Farm incomes rise by as much as 30-40 per cent by growing fruits and vegetables as against traditional crops of wheat and rice. This diversification seems logically sustainable because a shift is being seen in the food basket of Indian consumers toward more varied and nutritious diet of fruit, vegetables, milk, and meat. The diversification largely depends upon the opportunities and responsiveness of farmers to technological breakthrough, consumer demand, government policy, trade arrangements and development of irrigation, roads, and other infrastructure (Kumar and Mittal, 2003).

### **Regulatory framework in India**

India's current food-distribution system is a legacy of the 1940s and 50s, when chronic food shortages led the government to crack down on hoarding of produce by unscrupulous cartels. There is a strong disincentive for crop diversification because the government of the day introduced the concept of Minimum support Price for rice wheat and sugar cane (Mittal, 2006).

### **Horticulture supply chain the biggest bottle neck**

The small holders through make a sizeable contribution to high value food production (fruits and vegetables), their access to market is constrained by scale. Their marketable surplus is small while local markets for high value commodities are thin and scale in distant urban markets raises transportation and marketing cost (Gandhi and Namboodiri).

The single most important problem facing the Indian agricultural industry is its highly inefficient supply chain. The small and marginal farmers, which constitute the bulk of Indian farming, are engaged in diversified subsistence farming and lack market intelligence, extension services and access to credit and insurance facilities. Generally, these small farmers are price-takers and their contact with "markets" is often limited to dealing with a produce collector or to sales at the local/ village market and district market. At present, the traditional Indian agricultural value chain is typically crowded by many players and the layers of intermediaries that operate all along the chain result in weak farm-firm linkages. These weak linkages and poor coordination result in post-harvest losses, low value addition and thus low incomes of the farmers. The producers' share in wholesale price continues to be small (about 35 percent) with the major share going to market intermediaries as marketing cost, because of inefficient supply chains. Therefore, supply chain management may be a powerful tool in linking farmers to the markets for sustainable income generation (M pandey et. Al 2010).

India is among the world's largest producers of fruits and vegetables, it is also among the most inefficient. An estimated 25-40 per cent of farm produce worth \$12 billion (Rs 50,400 crores) rots every year even before it reaches consumers, thereby squeezing both ends of the chain-namely, the farmer and the retail consumer (Dagar, 2007). Fruits and vegetable processing in India is a mere 1.7% of production as compared to 60-70% in USA (Blatt, 2008). The major concern is that the front-end of the Indian agri-food system is changing differently than the back-end. While the retailers, processors, logistic suppliers and others are seemingly scaling up very fast, the back-end is consistently fragmenting. It seems there is a movement towards a "consolidating top" and "fragmenting bottom" with farmers suffering the most.

### **Organized retail**

Organized food retail is a mere 2% of its food retailing but it is growing rapidly. Organized food retailing is giving consumers a wider choice of eatables, more convenience, a better shopping environment and often lower prices. Also changes in consumption patterns are driving fast changes in production baskets especially in case of large and progressive farmers.

### **Conclusion and recommendation**

Because of the rapid change in consumption pattern and urbanization, decline of operation land holdings are major threat for small and marginal farmers to sustain their livelihoods. The diversification of crops from cereals to value based fruits and vegetables may allow the small and marginal farmers to sustain in competition through linking them with organized retailers for reaching out to the urban consumers. Organizing the farmers into grower's groups/commodity groups/ cooperatives/ Self Help groups/ producer companies may ensure the participation of diversely located small and marginal farmers and their linkage with the markets through collectivization of their produces. A marketing system backed by strong infrastructure is at the core of perishable, fresh produce marketing for all categories of farmers.

**Table-1 Distribution of operational land holding in India**

Category of land holding	Number of operational	Area operated	Average size of the
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	holding ('000)	('000 hectares)	operational holding hectares)
Marginal (Less than 1 hectares)	92356	35410	0.38
Small (1.0 to 2.0 hectares)	24705	35136	1.42
Semi-medium (2.0 to 4.0 hectares)	13840	37547	2.71
Medium (0.4 to 10 hectares)	5856	33709	5.76
Large (10 hectares and above)	1000	17379	17.37
total	137757	159180	1.16

Source: Agriculture census 2010-11

**Table-2 Decline in land holding size in India**

Year	Size of operational land holding (hectares)
1980-81	1.84
1985-86	1.69
1990-91	1.55
1995-96	1.41
2000-2001	1.33
2005-06	1.23
2010-11	1.16

Source: Agriculture census 2010-11

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