



# Marketing Driven Agriculture based Entrepreneurship for the Livelihood Security of Rural Community

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## INTRODUCTION

About 60 per cent of India's population lives in its villages and majority of them are relying on agriculture for its livelihood. Agriculture continues to support numerous downstream linkages with industry by becoming a supplier of major raw material for the staple food, textiles, and commercial products such as sugar, rubber, and byproducts of fruits, vegetables, milk products, medicines, and aromatics. The only problem which affects the livelihood security of the rural people is the mismanagement in supply chain management systems, logistics, economic conditions, infrastructure, and capacity bearing of risk ability and difficulty to meet the domestic expenditure. These problems lead to the instant disposal of the raw material which leads to disintegration of their family budget and planning.

It is worth to mention here that for the last four decades the cultivated area of the country has remained static at 140± 2 million hectares while the population pressure has developed so extensively and still increasing creating difficulty to maintain the food security of the country.

India has the 2.4 per cent (3.287 million km<sup>2</sup>) of the geographic areas, 4.2 per cent of the fresh water and 16 per cent (138 crores, 2020, World Bank) of the population of the world residing in this country. With such meager resources, it is very pertinent to ensure their use more rationally and over a longer period of time for ensuring the food security of the country. The Economic Survey of India 2020-21 report stated that in Fiscal Year 2020 (FY20),

the total food grain production in the country was recorded at 296.65 MT—up by 11.44 MT compared with 285.21 MT in FY2019. The government has set a target to buy 42.74 MT from the central pool in FY2021; this is 10 per cent more than the quantity purchased in FY20. For FY22, the government has set a record target for farmers to raise food grain production by 2 per cent with 307.31 MT of food grains. In FY21, production was recorded at 303.34 MT against a target of 301 MT.

The production of horticulture crops in India reached a record 331.05 MMT in 2020–21 (as per 3rd advance estimate), an increase of 10.5 MMT over FY20. India has the largest livestock population of around 535.78 million, which translates to around 31 per cent of the world population. Milk production in the country is expected to increase to 208 MT in FY21 from 198 MT in FY20, registering a growth of 10 per cent year over year. Area under horticulture is projected to rise by 2.7 per cent in FY21. Sugar production in India reached 26.46 MT between October 2019 and May 2020 sugar season according to Indian Sugar Mills Association (ISMA). India is among the 15 leading exporters of agricultural products in the world. Agricultural export from India reached US\$ 38.54 billion in FY19 and US\$ 35.09 billion in FY20. (<https://www.ibef.org/industry/agriculture-india>)

## Challenges for the food security

During the last six decades, the agriculture research emphasized mainly on the components and commodity based research involving crop varieties, animal breeding, production and protection

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**Table 1. Water availability scenario in India.**

Year	Population (Million)	Per Capita Availability (m <sup>3</sup> /year)
1951	361	5177
1955	395	4732
1991	846	2209
2001	1027	1816
2011	1210	1545
2025*	1394	1341
2050*	1640	1140

Source: Census of India.

technologies adopted by the farmer which lead to enhance the raw material production at extensive scale but at the same time the rural people have to pay the price with respect to decline in water table, soil health degradation, decrease in biodiversity, high cost of inputs and adoption of monotonous rice wheat cropping system. It has led to decrease factor productivity, resource use efficiency, and ultimately less farm productivity and profitability. It further coupled with national problem like environmental pollution, climate change and appearance of residue of toxic chemicals in the food chain. The per capita water availability has also dwindled from 6100 cubic meter to 1900 cubic meter since independence till to date. So, we are at the blink of the water scarcity situation, the most predominant challenge for the human beings.

The deficiency of micro nutrients is also becoming a challenge in the food chain. The contamination of chemicals in the milk is also being noticed. The excessive use of pesticide on cotton and other crops is also showing carcinogenic effect on the human beings. Excessive wet tillage, puddling reduces infiltration of water at the risk of destruction of soil structure leading to the non-availability of nutrients is also becoming a problem. It is further coupled with high nitrate content on account of leaching in ground water which effects the living beings on account of high nitrate content in the water and food chain as against the permissible limit of 45 mg/l of water (Bajwa, 1993). The micro nutrients (80-90%) found in crop residue are not

being recycled and mostly crop residue is lost as burning. This further aggravates the air pollution problem.

### Way Forward

To address the above said challenges a holistic approach needs to be adopted by the rural people. Every household has milch animals or draught animals or backyard poultry and area for growing vegetables, fruits, cereals, pulses and oil seeds is also required. These all components are required to fulfill the nutritional security need of the people. Multiple use of water is also showing ray of hope to take produce more grains per drop of water. Likewise, in village sewage water can be purified through hydrilla biomass before it is released to the village pond and it can be considered congenial for the fish culture. Similarly, the community land in the villages can be used for social forestry and rainwater harvesting and recycling. These strategies are proving as a boon for taking care of the natural resources and ensuring the raw material required for the production of byproducts in the food chain.

### Marketing driven strategies

There is a need for marketing driven strategies by following the integrated farming system (IFS) approach. IFS is the combination of different enterprises such as crop husbandry, dairy, poultry, piggery, fishery, rabbitary, mushroom, agro-forestry, agri-horticulture and horticultural crops which interact with the environment without

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**Table 2. Type of Agricultural Marketing Forms available in the country.**

Sr. No.	Forms of Agricultural Marketing	State
1.	<i>Apni Mandi</i>	Punjab
2.	<i>Hadaspur</i> Vegetable Market	Pune
3.	<i>Krushak Bazar</i>	Orissa
4.	<i>Rythu Bazar</i>	Andhra Pradesh
5.	<i>Uzhavarsanthai</i>	Tamil Nadu

dislocating the ecological balance on one hand and to meet the national goal on the other hand. The establishment of any enterprise depends upon the initial capital investment knowledge, skill, infrastructure, space requirement and its adaptation to the existing environment and above all, marketing of the product and value addition. There are enterprises which require less space *viz.*, rabbitary, piggery, mushroom, apiculture, poultry etc. Thereby marketing strategy will decide the fate of any enterprise. The byproduct disposal shall be directly to the customer or through the third party. Undoubtedly, third party involvement loosens the credibility of the producer and thus leading to reduce the profit margin. The recent approach followed by the farmer is through the *apni mandi* approach, *kisan hut* concept and marts establishment with the help of district administration and NABARD which help to address the third party problem. In addition, farmer association, farmer club and commodity specific self-help group are also involved in the production and marketing of the raw material and finished material both at reasonable price. Marketing driven organizations tends to focus on eternal competency that foster greater responsiveness to their customer and their target market.

The primary focus is to dispose of all the economic yield and byproduct produce with the aim to make best use of them as a raw material or to produce finished product from them. It is pertinent here to impress upon the few examples which are associated with the producer, consumer, and processor. The paddy straw which is mostly destroyed by burning by the farmers should be used for cardboard making in the industry and to

generate electricity. Similarly, the paddy husk is used for energy generation in the dying industry and in the brick kilns. The sugarcane grown for sugar purpose can be used for molasses, ethanol and cattle field production industry. Hardly there is any crop whose byproduct is not used for the industry. Even the essence of citrus is used for making orange sweet. All the high value crops like black pepper, cardamom, cashew nut, beetle nut, vanilla is exclusively used for getting more return per unit area either by selling them directly or in association with the industry.

The rabbitary enterprise which requires very less space produce high value white meat and many textile products for making gloves and baby garments where hide and fur of this animal is used. Such enterprise definitely ensures the livelihood security of the rural people. So far as nutritional security is concerned it can be achieved through pig meat (enterprise) the cheapest source of protein and fat for the poor people. In tribal areas of Bihar, the *Makhana* (Fox nut, *Euryale ferox*) cultivation is being practiced in the low lying area where water accumulates during the rainy season. *Makhana* is a type of seed commonly used throughout Asia. It's rich in antioxidants and micronutrients and may help slow signs of aging and support heart health, blood sugar management, and weight loss. It's also versatile and easy to enjoy in many different recipes, including snacks, main dishes, and desserts. It helps earn foreign exchange tremendously. It also provides the employment opportunities. The byproducts are used for many constructive purposes such as manure and lot of industry relies on its quality produce during processing. Hardly there

**Table 3. Different crops and their by products available.**

Name of the crop	By-product
Maize	Maize stover
Rice	Rice stover/bran
Millet	Millet stover / bran
Sorghum	Sorghum stover/ bran
Wheat	Wheat stover/bran
Barley	Barley stover/bran
Barley	Brewer's grains
Groundnut	Groundnut hulls
Soybean	Soybean, stover, cake
Sunflower	Sunflower hulls, husks, cake
Coffee	Coffee hulls
Oranges	Orange wastes
Lemons	Lemon waste
Pineapples	Pineapple waste
Sugar cane	Molasses
Sugar cane	Sugar cane tops
Oats	Oats stover
Cotton	Cotton seed cake

is any house where it is not used in one form of the other. A single plant can yield 80-100 *makhana* seeds. In India, *makhana* cultivation is primarily practiced in West Bengal, Bihar, Manipur, Tripura, Assam, Madhya Pradesh, Rajasthan, and Uttar Pradesh. However, Bihar is the world's greatest producer of *Makhana*, accounting for 90 per cent of global production.

The Kiwi (*Actinidia deliciosa*) fruit grown in high reaches of Himalayas helps the country to earn foreign exchange and it is also a rich source of nutrition in the hilly and plain areas. In the marriage ceremonies it is considered as an attractive fruit by the visitors. Its cultivation is the best choice of the crop intensification and diversification.

#### Marketing Driven Strategy involving Youth

There are many schemes such as agri-clinics and agribusiness centers. The main objectives are to supplement efforts of public extension by necessarily providing service to the rural

Total area under makhana cultivation in India	App. 15000 Ha.
Total yield	1,20,000 MT of makhana seeds
Yield after processing	40,000 MT of makhana 5 pop.
Estimated value of the production at farmers end	Rs 250 Crore
Revenue at traders' level.	Rs 550 Crore

Source: [https://agriexchange.apeda.gov.in/Weekly\\_eReport/Makhana\\_Report.pdf](https://agriexchange.apeda.gov.in/Weekly_eReport/Makhana_Report.pdf)

masses/ farmers on payment basis or free of cost as per business model of agripreneurs to support agricultural development and to create gainful self-employment opportunities for unemployed graduates, diploma holders, agriculture graduates and biological science graduates.

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**Table 4. Production of Kiwi in different states of India (2015-16)**

Sr. No.	State	Production (000 t)	Share (%)
1	Arunachal Pradesh	6.05	56.83
2	Nagaland	2.44	22.92
3	Mizoram	1.02	9.58
4	Sikkim	0.79	7.42
5	Himachal Pradesh	0.34	3.19
6	Jammu and Kashmir	0.01	0.09
	Total	10.65	

Source: National Horticulture Board (NHB)

**Table 5. Year wise production of Kiwi in India.**

Sr. No.	Year	Production (t)
1.	2013	7,167
2.	2014	8,241
3.	2015	8,500
4.	2016	11,000
5.	2017	12,000
6.	2018	12,000
7.	2019	12,000

Source : [www.ceicdata.com](http://www.ceicdata.com) , Department of Agriculture & Cooperation,

The growing of numerous technologies have been helped such as paired row planting of sugarcane in trenches and growing of need based vegetables for the local people on the beds such as garlic, onion, spinach, coriander, peas, radish, in addition to the staple food. The garlic and onion powder are also a good proposition to increase the value of the produce. It is worth to mention here that all crops grown in this fashion shall give optimum yield and have synergistic effect and restorative effect on account of their different growth habit and growing period. An economic valuation of alternate land used system under arid situation over 18 years showed 1.41 to 1.87 cost benefit ration over 1.24 under arable farming. This proves worth of grasses-trees-animal systems over arable farming under arid ecosystem (Narayan and Bhatt, 2005). The results of a case study conducted in the transgenic plains Punjab revealed that rice wheat cropping system gave

a net return of Rs. 66,465/-ha which was improved when it was supplemented with dairy, dairy+fishery and dairy+fishery+piggery by 13.1, 20.8 and 30.2 per cent, respectively clearly advocating the superiority of integration of enterprise (Gill *et al*, 2009).

### CONCLUSION

On the basis of research investigation, it was revealed that there are numerous opportunities to enhance the production efficiency, land use efficiencies and profitability along with the conservation of natural resources and ultimately livelihood security among the rural communities. The entrepreneurs discussed in the text amply demonstrates that the resources are recycled and only the attention is to create awareness among the rural communities to exploit them by putting them in the food chain for increasing the consumer

**Table 6. Progress of agri-clinics and agri-business centre scheme (2002 - 2022).**

Sr. No.	State	No. of candidates trained	No. of Agri ventures established
1.	Andhra Pradesh	1,511	449
2.	Arunachal Pradesh	48	3
3.	Assam	813	251
4.	Bihar	4,287	1,507
5.	Chandigarh	4	2
6.	Chattisgarh	965	379
7.	Delhi	42	6
8.	Goa	13	7
9.	Gujarat	2,170	851
10.	Haryana	733	239
11.	Himachal Pradesh	429	111
12.	Jharkhand	782	198
13.	Karnataka	4,303	1701
14.	Madhya Pradesh	4,661	2121
15.	Maharashtra	20,695	10,396
16.	Manipur	505	134
17.	Orissa	643	116
18.	Punjab	668	223
19.	Rajasthan	4,267	1,645
20.	Telangana	2056	601
21.	Uttar Pradesh	17699	8,312
22.	Uttaranchal	534	173
23.	West Bengal	1214	298

Source: <http://www.agriclinics.net/>

acceptability and to make them environment friendly. The marketing driven strategy is the need of the hour to fetch maximum profit margin per unit area, per unit time. In addition, it may create employment opportunity for the rural people.

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