

## Strategies for Doubling Income of Farmers

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To achieve doubling farmer's income might require novel strategies and some change in the policy stance. One could be identification and targeting of the poor or low-income farmers. Unless it is known who within agricultural sector have low income and/or are disadvantaged in term of access to technology, markets, credit, information and infrastructure, it would be difficult to accomplish the target of doubling farmer's income in such a short period. About 70% of the farmers in India have annual per caput income less than Rs. 15,000. Only 10% of them earn more than Rs. 30,000. Land size and income are identified important correlate. Since more than three-fourths of the low income farmers (<Rs. 15,000) are marginal farmers who cultivate landholdings less than or equal to one hectare. Only 7% of the marginal farmers fall in the high-income class (>Rs. 30,000) might be due to a more diversified income portfolio in terms of the number of income sources accessed and the intensity of engagement. Approximately 80% of the low income marginal farmers are concentrated in eastern (58%) and Western (21%) regions due to several factors, such as under-investment in agricultural research, poor electricity, markets and roads infrastructure, under-development of institutions like credit, extension, insurance etc.

India agriculture is passing through difficult times due to two consecutive drought situations in several parts of the country, thereby resulting into wide spread distress among farmers. The rural areas in these parts are facing food and livelihood crisis, more specifically the shortage of fodder and drinking water. Government need to proactively address the situation and make more long term farmers centric policies related to irrigation, farm diversification, farm profitability and community support programs so as to socially and economically empower farmers.

A three-pronged strategy for faster agricultural growth to double farmer's income pursues (1) improved productivity and production efficiency. (2) Agricultural diversification

including secondary and speciality agriculture, and (3) policy support and linking farmers to market.

There is however, almost unanimity that the net income of farmers can surely be doubled well within the short period. A total of 40 recommendations for increasing income of farmers, have been divided into 5 parts as under:

1. increasing income by improving productivity
2. water and Agri.- input policies
3. integrated farming system
4. better market price realization
5. special policy measures

#### **Increasing income by improving productivity**

- 1. Biotechnology is set to play critical role in crop and livestock production** by enhancing yields nutritional profit, stress tolerance and crop protection. The policies support accordingly to be provided for the development of seed and biotech industry in the country. As per studies BT cotton alone has contributed more than Rs. 80,000 crores of additional output value to farmers. Similar potential many other crops may have for Indian agriculture and towards enhancing farmers' profitability.
- 2. Improving agricultural productivity in rainfed regions of India**, which constitutes more than 50% of the country's arable land. Besides watershed management, construction check dam and farm ponds should be taken up in a mission mode for providing life, saving irrigation for the crops. The area expansion and subsidy to the states must be linked with the adoption of precision agriculture model.
- 3. Bridging yield gaps** among the states is important in improving national productivity i.e. the gap in price yields almost 3 times between Punjab and Chhattisgarh. there is need for developing a strategy document for assessing the present trends of crop productivity vis-a-vis the potential yield of major crop system, so that specific action plans can be taken up for bridging the yield gaps, which in turn will contribute to enhanced productivity of farming system.

#### **Water and Inputs**

- 1. Fertilizer subsidy and rationalizing** the NPK pricing for maintaining NPK ratio in the soil and better application technologies to improve efficiency and reduce fertilizer subsidy by Rs. 25,000- 30,000 annually. Policy on promoting crop specific fertilizer and fertigation, besides setting standards and regulating Biofertilizer under soil health mission is needed. Since the year 2010 NP/NPK fertilizers have been reformed and put under Nutrient Based Subsidy (NBS) whereas urea continues under direct control. Consequently, the gap in MRP of urea and NP/NPK fertilizers has been widening. Therefore, unless corrections are made in the fertilizer policies, the benefit of soil health card will not be realized and desired increase in yields in major crops will continue to delude the nation.
- 2. Crop losses** in India are huge. Pesticides play an important role not only in crop productivity, cost reduction and quality improvement but also in protecting crop from pest and diseases. The cost benefit ratio in using pesticides is heavily in favour of farmers. The government however needs to check flood of false pesticides in market by fly-night operators by regulating registration, strengthening quality enforcement and tackling corruption through provisions of joint testing of samples.
- 3. Farm mechanization** in India has been a story of tractorization. Time has come to promoting efficient equipments and tools and small engine driven tractors to address small farm requirements adequately. Through a mix of specialized CHCs (custom hiring centers) and with state Agros, co-operatives and input dealers, developing and custom hiring facility in farm mechanization should be given high focus.
- 4. There is a need for integrated water use policy.** India should critically examine several ongoing initiatives and develop its country wide system for judicious and integrated use and management of water. A national commission on efficient water use in agriculture should be established to assess the various issues, regulatory concerns, water laws and legislations, research, technology development and community involvement. This will especially help resource poor farmers in the rainfed ecosystems, who practice less-intensive agriculture.
- 5. Farmers however need to be educated on water usage system** to drift them away from flood irrigation systems, which affects productivity and wastes water. The most important part is the crops planning, which needs to be done keeping water resources

of region and the water intake by various crops in mind. For example high water consuming crops like paddy and sugarcane should be grown in high rainfall areas.

### **Integrated Farming system**

- 1. Promotion of integrated farming system** approach involving synergic blending of crops, horticulture, dairy, fisheries, poultry, etc., seems viable option to provide regular income and at site employment to small land holder, decreasing cultivation cost through multiple use of resources and providing much needed resilience for predicted climate change scenario.
- 2. Dairy husbandry** is a boon for small farmers, as a family with three cows or buffaloes can earn an annual income of Rs. 50,000 to 60,000, while conserving our precious native breeds. With stall-fed, high yielding animals, the dung availability will increase by 3 to 4 times, giving a boost to biogas and agricultural production. With introduction of good goat husbandry practices by appointing local youth to facilitate the activities as field Guides.

### **Better market price realization**

- 1. Direct marketing and contract farming** should be made easy for the farmers. Also to encourage the States for contract farming under which the buyer can provide the farmer access to modern technology, quality inputs, other supports and a guaranteed price.
- 2. Norms of licensing** to enable seamless participation of buyers from across the county, movements, of goods without restriction, harmonization of tax laws (including a uniform GST), standardization of grades and recognition of electronic trades. Exchanges would also have to widen the participation by facilitating farmers to take positions through cooperative or other aggregators.
- 3. Endorsement of policies that enforces the standardization of agricultural produce** such signify that the product meets all the standardization and grading requirement for packing, sealing etc., and only traders who are willing to follow the regulation are given "Certificate of Authorization".

4. **Agri infrastructure, storage system and market yards** need to be strengthened. More multipurpose market yard complexes, comprised of godowns, cold storage, farmers service centre etc, need to be set up for farmers to directly participate. Farmers need to be educated on the available scheme of the Government. Enabling policy provisions can be done for large scale play of corporate in agricultural marketing and storage operations.
5. **Reducing post harvest losses** by strengthening grain storage infrastructure, cool chain systems for perishables, post harvest processing and value addition, transport, marketing, commerce and trade.

### Special Measures

1. **Structural reforms in agriculture pertaining to land leasing and market restrictions** need to be addressed. The market regulation on movement and procurements by private players is hampering market growth and prices realization by farmers, similarly due to land leasing policies of state Governments the concept of contract farming is not successful, the experiments of contract farming are based on "win all", bringing value to all partners in operations, this needs to be encouraged on a large scale.
2. **Through nationwide crops competitiveness study:** States profiling of crops and animal resources should be done, indexing them against national and global benchmarks on cost, quality and productivity parameters, and their short, medium and long terms national crop planning needs to be done. If India has to succeed in global market on a long term basis, this task is unavoidable.
3. **Agriculture to be brought to the concurrent list:** Bringing the entire gamut of post-production activities in agriculture, such as Post Harvest Management, marketing, processing, infrastructure, agribusiness etc., under the concurrent list of the constitution for better central planning, as the business of food and agriculture is globalizing and role of central Government is increasing in making laws and policies, especially in post-harvest, trade and agribusinesses, where Multi-National Companies and corporate sector is involved in big way.
4. **Review of current scenario of farm credit and subsidy disbursement system.** All financial benefits, mainly the subsidies in different forms, should be provided and

transferred directly to farmers account through e-governance through which tracking of farmers' application, status and approval of all schemes is available online. Gradually phase out all subsidies including fertilizer and only transfer money to farmers, calculating aggregate measure of supports. This improves efficiency of govt. investments.

5. **Implementing ambitious Agribusiness Hubs Model**, operating on a national platform and establishing multi-functional Agribusiness hubs in all the Gram Panchayats of the country. This will revolutionize the farm economy and create jobs. The project will create additional annual farm value, providing increased market opportunities and initiating various multifarious socio economic activities, aimed at improving farm incomes.
6. **ICP based agricultural extension** brings incredible opportunities and has the potential of enabling the empowerment of farming communities. Information technology can support better crop, fertilizer and pesticide use planning as well as disease monitoring and prevention, both in crop and animal husbandry, bedside improving farmers' operational and financial management and to effectively connect them with the markets for better price realization.
7. **Diversification of agriculture in the First Green Revolution Areas** such as Punjab, Haryana and western U.P. seems need of the hour. To promote diversification on ecological principles, will require making monitoring equivalence (profit margin) between the replaced crop/commodity and enterprise with the once planned to be introduced. Farmer is mainly concerned with the profit he gets from a particular crop or commodity. Crops like maize, soybean, pulses, oilseeds, fruits and vegetables have the potential to replace rice and wheat in this area upward push in MSP (maximum selling price) in favour of proposed diversification crops will be a practical option to achieve this objective.
8. **Integrating all central and state subsidies**, instead of reducing costs of inputs, need to be targeted to empower farmers through infrastructure development in rural areas to promote Agri business, food processing, water management, soil health and enhancement, seed production and processing, custom hiring , plant protection, dairy,



poultry, fisheries and enterprises, etc., this will boost up agriculture sustainability and farm profitability.

9. **Strengthening organic food program for India** to make 10% of the global 60 billion USD market for each. Major parts of India such as NER., H.P., J&K, Uttarakhand, M. P., Chhattisgarh, Jharkhand, which are organic by default, must be made organic by process for the producers to get advantage of market value.
10. **Establishing Special Agriculture Zones (SAZ)** by selecting expert oriented and industrial use crops, promoting crop stewardship programs, Good Agricultural Practices and Certification, formation of global commodity boards, on the pattern of California Walnuts, Washington Apples etc., can help double in 5 years the current level of Agri exports, which will benefit farmers significantly. We need to globally position Indian food and Agri produce such as North Eastern region as Organic Zone, spices of Kerala, Cardamom of Sikkim, orange of Nagpur, Mangoes of Ratnagiri and Malihabad, Tea of Darjeeling and Assam, Kashmiri Apples, Bihar Litchies, Soybean of Indore and Nilgiris and so on for promoting Geographic Appellation. The nation has to streamline the different crop belts like rice, wheat, apple, mango, banana, tomato, ginger, turmeric, orange-lime-lemon, orchid, flowers, etc. Likewise livestock, fisheries, diary and sericulture shall be created across the country with the objective to improve production and export.
11. **Promoting scientific agriculture micro-irrigation** on a very large scale along with nutrient application can be highly efficient and priority should be given to empower farmers with micro irrigation. Advance concept of precision Agriculture need to be promote on a large scale.

### Conclusion

- In conclusion, doubling farmers' income in a short period could be possible if the stake holders follow a comprehensive multi-prolonged and targeted approach encompassing income opportunities and their enabling conditions including Investments in agricultural research and development of institutions and human resources.
- To achieve doubling farmers income might require novel strategies and some change in the policy stance.

- Income of farmer would come mainly from seven sources like increase in productivity of crops, increase in production of livestock, improvement in efficiency of input use that saves cost, increase in cropping intensity at farmers' field.
- Diversification towards high value commodities, better remunerative price realized by farmers and shifting way surplus labour from agriculture to non-farm activities, technology generation and dissemination besides policies and reforms in agriculture sector.

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