

## **Doubling of Farmers' Income by 2022 : Scope and Strategy**

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### **Introduction**

Doubling farmers' real income by 2022 is a goal established by the Hon'ble Prime Minister of India who is challenging the status quo of all involved stakeholders. Productivity and production increases in agriculture alone will not ensure doubling farmers' income. Meeting market demands requires a shift in mindset from "Farm to fork/plate" to "Fork to Farm". Secondly, market- intelligence must be made available to producers using innovative partnerships and communication technologies. Lastly, the changing climate has increased vulnerability of 137 million small farm holders. New innovations to collectively benefit small farm holders through a holistic value chain by adopting science-led, climate resilient and market responsive development has to be our "New Mantra" to benefit farmers.

### **Need to Double Farmers' Income**

Past strategy for development of the agriculture sector in India has focused primarily on raising agricultural output and improving food security. The net result has been a 45 percent increase in per person food production, which has made India not only food self-sufficient at aggregate level, but also a net food exporting country. The strategy did not explicitly recognize the need to raise farmers' income and did not mention any direct measure to promote farmers welfare. Low level of absolute income as well as large and deteriorating disparity between income of a farmer and non-agricultural worker constitute an important reason for the emergence of agrarian distress in the country during 1990s, which turned quite

serious in some years. The country also witnessed a sharp increase in the number of farmers suicides during 1995 to 2004 - losses from farming, shocks in farm income and low farm income are identified as the important factors for this. The low and highly fluctuating farm income is causing detrimental effect on the interest in farming and farm investments and is also forcing more and more cultivators, particularly younger age group, to leave farming. This can cause serious adverse effect on the future of agriculture in the country.

### **The concept and Timeframe**

Clarity on the following points is important to assess the possibility of doubling the income of the farmers. The substantive points are:

1. What is the period and targeted year for doubling the farm income.
2. What is to be doubled, is it output, value added or income earned by farmers from agricultural activities.
3. Whether nominal income is to be doubled or real income is to be doubled.
4. Whether the targeted income includes only income derived from agricultural activities or would it also include income of farmers from other sources.

### **Sources of Growth in Farmers' Income**

Doubling real income of farmers till 2022-23 over the base year of 2015-16, requires annual growth of 10.41 percent in farmer's income. This implies that the on-going and previously achieved rate of growth in farm income has to be sharply accelerated. Therefore, strong measures will be needed to harness all possible sources of growth in farmers' income within as well as outside agriculture sector.

### **The Major Sources of Growth Operating within Agriculture Sector are**

1. Improvement in productivity.
2. Resource use efficiency or saving in cost of production.
3. Increase in cropping intensity.
4. Diversification towards high value crops.

### **The Sources Outside Agriculture Include**

1. Shifting cultivators from farm to non-farm occupations.
2. Improvement in terms of trade for farmers or real prices received by farmers.

### **Strategy for Improving Farmers' Income**

The sources of growth in output and income can be put in four categories:

1. Development initiatives including infrastructure.
2. Technology.
3. Policies.
4. Institutional mechanisms.

### **Roadmap and Action Plan**

The quantitative framework for doubling farmer's income has identified seven sources of growth. These are:

1. Increase in productivity of crops.
2. Increase in production of livestock.
3. Improvement in efficiency of input use (cost saving).
4. Increase in crop intensity.
5. Diversification towards high value crops.
6. Improved price realization by farmers.
7. Shift of cultivators to non-farm jobs.

### **Strategies for Doubling Income**

Income is the most relevant measure to assess the farmers' welfare and agriculture transformation. Even today, the highest returns on investment on per unit basis are from agriculture. What is lacking is the scale unlike corporate investment. Certainly, returns from cultivation alone will not help to achieve the set target of DFI. It has to be supplemented, in fact to a larger extent by livestock and other non-farm activities supported with policy intervention at all levels.

### **Science & Technology**

1. Adoption of improved varieties/breeds/strains for additional income.
2. e-Grid of all weather stations for providing location specific weather information.
3. Nutrients sale based on Soil health card programme.
4. Adoption of micro irrigation system to improve the water use efficiency.

### **Extension**

1. Bridging the gaps between achievable (FLD) and potential yields.
2. More number of effective cluster demonstrations to bridge the information gap.
3. Village adoption to transfer the technologies developed by the research organizations.
4. Upscaling and out scaling of technologies through field days, exhibition and other activities.

### **Policies**

1. Rationalizing the subsidy on energy use.
2. Enrolling a greater number of marginal and small holders under crop insurance scheme.
3. Integrating all central and state subsidies in agriculture.
4. Formation of Crop Planning Department at national and state level.
5. Additional investment on agricultural R&D to pave path for innovation.
6. Setting up more organic food certification agencies.
7. Policy for setting up of FPO for block level seed production.
8. Integrated land-use policy particularly for water.
9. Breaking of crop monotony and focus on diversification.

### **Institutions**

1. Setting up of Agribusiness Centres at district level.
2. Transparency and simplified procedures in electronic trading.
3. Developing comprehensive framework for community / corporate farming.

4. More emphasis on e-learning in regional languages.
5. Value chain development for primary commodities.

### **Conclusion**

The low level of farmers' income and year to year fluctuations in it are a major source of agrarian distress. This distress is spreading and getting severe over time impacting almost half of the population of the country that is dependent on farming for livelihood. Persistent low level of farmer's income can also cause serious adverse effect on the future of agriculture in the country. To secure future of agriculture and to improve livelihood of half of India's population, adequate attention needs to be given to improve the welfare of farmers and raise agricultural income. Achieving this goal will reduce persistent disparity between farm and non-farm income, alleviate agrarian distress, promote inclusive growth and infuse dynamism in the agriculture sector. Respectable income in farm sector will also attract youth towards farming profession and ease the pressure on non-farm jobs, which are not growing as per the expectations. Doubling farmer's income by 2022 is quite challenging but it is needed and is attainable. Three-pronged strategy focused on (i) development initiatives, (ii) technology and (iii) policy reforms in agriculture is needed to double farmer's income.

1. The rates of increase in sources underlying growth in output need to be accelerated by 33 per cent to meet the goal.
2. The country need to increase use of quality seed, fertilizer and power supply to agriculture by 12.8, 4.4 and 7.6 percent every year.
3. Area under irrigation has to be expanded by 1.78 million hectare and area under double cropping should be increased by 1.85 million hectare every year.
4. Besides, area under fruits and vegetables is required to increase by 5 per cent each year.
5. In the case of livestock, improvement in herd quality, better feed, increase in artificial insemination, reduction in calving interval and lowering age at first calving are the potential sources of growth.

Research institutes should come with technological breakthroughs for shifting production frontiers and raising efficiency in use of inputs. Evidence is growing about scope of agronomic practices like precision farming to raise production and income of farmers

substantially. Similarly, modern machinery such as laser land leveller, precision seeder and planter, and practices like SRI (System of Rice Intensification), direct seeded rice, zero tillage, raised bed plantation and ridge plantation allow technically highly efficient farming. However, these technologies developed by the public sector have very poor marketability. They require strong extension for the adoption by farmers. R&D institutions should also include in their package's grassroots level innovations and traditional practices which are resilient, Sustainable and income enhancing.

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