

## Strategic Interventions on Horticultural Sector for Doubling Farmers Income in Assam by 2022-23

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### Introduction

India's population is expected to reach 1.7 billion by 2050, making it as the most populated country in the world. Likewise, Assam population was 34.49 million in 2017 and expected to achieve 34.18 million by 2021 and 35.60 million by the year 2026 [1]. To feed the ever increasing population, food production must increase by 70%. This challenge is very critical because Indian agriculture is facing several challenges due to ill effects of climate change, sustaining investment, high fluctuation in prices and production, undeveloped markets, erratic market behavior, conversion of agricultural land for non-farm purposes and increased cost of production [2]. The present situation analysis of the Indian agriculture sector revealed that the farmers are facing serious deficit of income which has become an important issue and as a result dissuading the rural youth to take up agriculture as livelihood mission.

Aiming to boost Horticulture along with Indian agriculture, the government of India set a goal to double the farmers' income by 2022 as Horticulture is a very important sector in Integrated Farming System in Assam. The rise of farmers' income can be increased when risk is reduced, productivity goes up, cost of production comes down, post-harvest loss is minimized, and commodities produced get a remunerative price [3]. Doubling farmers' income became a slogan for every agricultural institution and is formulated by bridging productivity gaps, employing latest production technologies, processing technologies and marketing. The goal set to double farmers' income by 2022-23 is central to promote farmers welfare, reduce agrarian distress and bring parity between income of farmers and those working in non-agricultural professions.

It is apparent that income earned by a farmer from agriculture is crucial to address agrarian distress [4] and promote farmers welfare. Doubling real income of farmers till 2022-23 over the base year of 2015-16, requires annual growth of 10.41 per cent 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.

### Why Double Farmers' Income?

Doubling farmers' income has emerged as the focal point for all the agricultural policy decision of the government due to the following reasons:

1. Income of farmers is less than poverty line
2. Farmers' income is low as compared to those working in non-farm sector
3. Increase in numbers of farmers; suicide
4. Low and highly fluctuating farm income.

### Genesis of doubling farmers' income

While delivering over the issues concerning farmers' income by our honorable Prime Minister Sri Narendra Modi, in Kisan Rally in Bareilly, Uttar Pradesh, on 28<sup>th</sup> February 2016 set a goal on doubling the farmers income by 2022 - the year when we would be celebrating the 'Platinum Jubilee Celebrations' of our country's Independence. The same was again reiterated by the Finance Minister in the Lok Sabha during the Budget Speech on February 29, 2016 [5,6].

### Sources of Growth in Farmers' Income

According to Niti Aayog, the major sources of growth operating within agricultural sector are:

1. Improvement in agricultural 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 Hon'ble Prime Minister of India, Narendra Modiji suggested a multi-dimensional seven point strategy which includes:

- a. Emphasis on irrigation along with end to end solution on creation of resources for 'More crop per drop'.
- b. Provision of quality seeds and nutrients according to the soil quality of each farm.
- c. Large investments in warehouses and cold chains to prevent Post-harvest losses.
- d. Promotion of value addition through food processing.
- e. Implementation of National Agricultural Markets and e-platforms (e-NAM) to eliminate shortcomings of all the 585 centres.
- f. To mitigate the risk, introduction of crop insurance scheme at a lower cost.
- g. Promotion of allied activities such as Dairy-Animal Husbandry, Poultry, Bee-keeping, Horticulture, and Fisheries.

### Role of KVKs in Doubling Farmers' Income

- a. Emphasis on area expansion and improvement of horticulture sector
- b. Demonstration and development of Integrated Farming System
- c. Promotion of double cropping in the region
- d. Validating ITKs in agriculture and allied sector
- e. Placing the region in the organic food production map of the world
- f. Managing the Post-harvest handling of the produce
- g. Promoting group production and marketing.

### Implementation of the strategies by the KVKs in Horticultural crops

In respect to Horticultural crops, the existing practices adopted by the farmers are in sufficient to increase income of the farmers' resulting a huge gap in the cost of cultivation, production and productivity. To double the income of the farmers' in Assam, KVKs followed the strategies given by the ATARI, Kahikuchi, Guwahati and brought up new interventions according to the action plan for fulfilling the gaps in Horticultural crops.

Some of the KVKs that used the new interventions to double the income of the farmers in 2017-18 are;

1. (H.Y.V) Nadia variety and Megha turmeric used by the DFI village under KVK, Darrang. The productivity of Nadia increased from 11000 kg/ha to 17500 kg/ha and mehga turmeric from 23000kg/ha to 32000 kg/ha.
2. Apple Ber, Bhoot Jalakia, Banana and Assam Lemon cultivated by the DFI village under KVK, Dhubri and the increase in income from the four intervention was Rs. 532713/ha.
3. Rabi vegetables, King chilli and Banana grown by the DFI village under KVK, Jorhat. The productivity of the three components increased from 29714 kg/ha to 30280 kg/ha.
4. KVK, Kamrup demonstrated Multi species/Multi storied cropping system of Assam lemon, Black pepper, tuberose, Thailand ber and pumpkin in the DFI village and the increased income was Rs.15000/ha from the interventions.
5. Banana cultivation was widely undertaken by the farmers of the DFI village under KVK, Lakhimpur. The yield of banana increased from 100q/ha to 210q/ha.

### Conclusion

Like Green Revolution, the mission for "Doubling Farmers' Income" is knocking the door to set up the milestone in the history of Indian Agriculture. Under the guidance and supervision of ICAR-ATARI Guwahati, KVKs have been playing a pivotal role in implementing the strategies in the villages to enhance the income of the farmers. In 2017-18, there was increase in the income of the farmers from the new interventions. Likewise, it will also double the farmers income in 2018-19 and so on. This can be successful only when there is the development in models of farming system for different types of socio-economic and bio physical settings combining all their technologies in a package with focus on farm income.

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