Preface

Doubling Farmers' Income through DBSKKV Interventions

Hon'ble Prime Minister of India, while addressing the people in Uttar Pradesh on 28th February, 2015 raised the idea of Doubling Farmers' Income (DFI) by the year 2022. Many experts welcomed the idea in spite of the fact that it anticipated agricultural and the annual growth at an unimaginable 14.8% per year for the next 7 years or so. The major issues are: a) Targeted year for DFI; b) Which needs to be doubled? c) Annual nominal income to be doubled or real income? d) What are the sources of income of the farmers?

It has well been understood that this income of the farmers which needs to be doubled is with the base year as 2015-16. And it has also been envisaged as a gift to the Indian farmers on the 75th anniversary of independence. How are you going to achieve this target? How scientists, professors and other experts and guests in agriculture and allied fields will do it?

Agriculture development in India has been viewed by and large in the background of increasing the output of crops and trees. In the recent past, the sector has been facing regular suffering and disaster posing a severe threat to peasants in practice in agriculture as a main source of livelihood. The intention of the Govt. of India is to double the income including farm and non-farm activities. The major sources of growth operating within agriculture sector include improvement in productivity, resource use efficiency, increasing cropping intensity and diversification towards high value crops.

Konkan region is distinguished from rest of Maharashtra by virtue of its distinct agro-climatic conditions, soil types and topography. Its location between Sahyadri ranges and the Arabian Sea, crops and cropping pattern, land holdings and socio-economic conditions of the farmers are unique. Besides agriculture, fisheries sector is very big and equally important, spread over 720 km on western sea coast.

Rice is the main food grain crop of both the south and north zones during Kharif season. Ragi (Nagli) is also grown under upland conditions during Kharif season. Pulse crops such as dolichos bean, pigeon pea, horse gram, and chickpea are grown on the residual moisture during Rabi season. The present cropping intensity Konkan is 107.70 per cent. This cropping intensity need

to be elevated to 130.00 per cent. After rice in Kharif, various pulses, oil seed crops such as groundnut, various vegetables can be profitably cultivated during winter and summer season in the region. There is ample scope to increase the gross cropped area – presently very paltry – with simple irrigation and moisture conservation intrventions.

Mango in Konkan region is established on 1.82 lakh ha with a productivity of 3.16 t ha⁻¹. The Alphonso variety of mango grown here is world famous. It is not only excellent for table purpose but is also preferred by the processing industries. Cashew is also a major economical plantation crop in the region which is established on 1.82 lakh ha with production of 1.75 lakh tonnes and productivity of 1.3 t ha-1. Among the other fruit crops kokum, jackfruit, jamun, and sapota are important which are cultivated in the Konkan region mostly in rainfed condition. Excellent value- added products such as syrup, juice, and pulp powder are prepared from these fruits which also possess excellent domestic and export market. Coconut, arecanut, spices, tuber crops are also important irrigated horticultural crops in the region. These crops have proved to be profitable in the present era of climatic aberrations. Most of the farmers cultivating these crops are small and marginal.

The forest area in Konkan region is 5.86 lakh ha and most of the forest is owned by private farmers. The cultivation of Bamboo species *Dendrocalamus stocksii* (manga bamboo) in Sindhudurg district of Maharashtra is found to be highly economical. Apart from Bamboo, number of medicinal and aromatic crops such as Sonchafa (*Michelia champaka*), sandal wood (*Santalum album*), and Undi (*Calophyllum inophyllum*) have potential to improve farm income.

Konkan possesses 720 km long seashore. There is a substantial scope for marine, brackish water and inland fisheries. The marine area of Konkan is 1.12 lakh km² with production of 4.34 lakh MT. The brackish water area in Konkan region is 2,216 ha. The fisheries sector contributed for ₹ 3,673 crores from export during the year 2015-16. The shrimp farming in brackish water area is highly economical. The farmers in Konkan region construct polythene lined farm pond for storing the water and utilizing the same for irrigation and horticultural crops. Such ponds provide incredible scope for fish culture. Apart from fisheries, green mussels and mud

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crab culture, fish production in rainfed farm ponds, and hatcheries are beneficial to improve farm income. The ornamental fish sector is expanding rapidly in Konkan. There is an enormous demand for ornamental fishes in the mega cities.

The continuous warm and humid climatic conditions in Konkan region restricts commercialization in dairy sector with the existing hybrids. However, ample green biomass is available in Konkan throughout year. The situation provides good scope for goat farming. The improved local breed Konkan Kanyal produces two kids per parturition. The breed is also good for meat purpose.

Agriculture, horticulture, fisheries and animal husbandry along with the natural resources are the growth engines for Konkan agriculture. The integrated approach in the form of farming systems is inevitable. For instance, intercropping of spices in coconut provides opportunity to earn more than $\stackrel{?}{\underset{}}{\sim} 2.5$ lakhs per hectare.

Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth (DBSKKV), Dapoli since its inception emphasised on the development of region-specific technologies in agriculture and allied sectors for farmers of Konkan. These technologies have succeeded in providing not

only the sustainable livelihood but also for doubling the farmers' income in reality. In this special section of Advanced Agricultural Research and Technology Journal (AARJ) such success stories are presented with sound scientific background. These success stories may serve as models in Konkan as well as in other parts of the country.

DBSKKV, perhaps for the first time among Agricultural Universities, has taken initiatives for 'doubling farm income' (dfi) to showcase the achievability of the national DFI targets. These initiatives are underway at various research stations located in different parts of Konkan. It will help to reflect these modules in the entire Konkan region as guidelines for doubling farm income (dfi) of the farmers and shall serve as model prerequisite for DFI.

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