

**Concept Note: National Seminar on  
Policy and Technological Options for doubling of Farmers' Income  
22-23 March 2018, CRRID, Chandigarh**

Farmers in India are feeling marginalized even in States which were leaders in green revolution. The cropping pattern of paddy-wheat is under strain due to stagnation in their yields. Demands of loan waivers have become frequent and pan-India. Farmers' suicides are almost daily news. In pursuit of higher income, farmers are slowly shifting area to Fruits and Vegetables since 1990s but horticulture crops are more susceptible to climate changes. Moreover, their short harvesting and retention periods due to perishable nature, results in frequent gluts in the market and crash in prices. Along with prices, farmers also face risk due to high variations in yields of Pulses and oilseeds where it is like a zero-sum game in the absence of mechanism for their purchase at minimum support price (MSP). To illustrate if production is less farmers have little surplus to sell and if production is good, prices fall below the MSP. Such situations rein in the increase in income of the farmers.

Some of the farmers' problems are attributed to policies of the Government. First, Government has come out with a concept of the National Agriculture Market (NAM) to lessen the regional difference in prices of agricultural commodities. e-NAM is a pan-India electronic trading platform and it is reported that 470 Mandi's across 14 States are live on e-NAM as on 31st October 2017 but its implementation is still at fledgling stage. Its implications on farmers are also not known so far. Second, the low prices in recent years are also related with timing and quantity import of pulses, oilseeds, wheat and even fruits & flowers. Third, farmers are being treated as one lot over last three decades with no differences in incentives to small and other farmers despite differences in size of land holdings. Fourth, to combat the farmers' agitations, Madhya Pradesh Government has come with a Bhawanter Bhugtan Yojana for some crops like soyabean, peanut, sesame, ramtil, corn, tur, urad and moong in August 2017. Haryana has also announced a similar Bhawantar Bharpai Yojana for potato, Onion, Tomato and Ghobhi on 31 December 2017. Operational guidelines and problems are not much known but one of conditions is the prior registration by the farmers on a portal of State Governments. Some scholars are opining that the Bhawantar policy may pave way for area planning. After registered area under a crop reaches to a certain limit as per earlier trend, government may restrict further registration under that crop and even limit the maximum area for a farmer (it practiced in some other countries). It may a better alternative to MSP as government is not involved in physical procurement and management. There is a need to study the implication of these policies on farmers' income by the planners and academicians.

Among the technology options, protected cultivation for vegetables, flowers, herbs, etc; is being adopted across all the States. Protected cultivation (PC) is a mode of farming wherein the environment surrounding the plant is controlled partially or fully during its growth. It helps to protect crops from some vagaries of nature, extend their production period and hence increase their yield. The

capital investment for PC consists of a metallic structure and microfilm as a cover material. The composite investment is known as greenhouse/poly house and its various structures are technically named as naturally ventilated poly houses (NVPH), walk- in-tunnels (WIT) and net-houses. There are NVPH with pad & fan too for more climatic control. Under PC, the resource use is also optimized by adopting the latest technologies for irrigation and application of inputs. Besides, mode of PC enables growing of exotic and new varieties of vegetables during off seasons. Above all, PC with manifold increase in yield can make viable the small holdings which accounts for about 85% in India. Overall, this PC option may be one of the important technological options for doubling of farmers' income with less water, fertilizers and chemicals.

High initial fixed cost and risk due to change in mode of input use are the characteristics of PC. After being convinced of the benefits from PC, Government of India has been supporting this mode with capital subsidy of 50 % since 2005-06, under the National Horticultural Mission (NHM). Some of the States are giving additional subsidy too. Even subsidy for production expenses of the first crop is available. In India, about 26589 ha of area including mulching has been reported under PC. Karnataka and Maharashtra have been pioneering States in PC but at present; the high value greenhouses structure are the maximum in Tamil Nadu at 25 % of all India, followed by Maharashtra 22 %, Karnataka 19 %, Haryana 13 %, Gujarat 4 % and about 3 % in Rajasthan & Punjab each.

Some all India level studies (Productivity Council of Andhra Pradesh-2014, SFAC-2015 and Parmod Kumar-2013) have mainly documented the progress under PC but the impact has not been studied in details. Theoretically, the yield in poly-house farming is reported 5 to 10 times of open cultivation but the actual realized yield and prices may vary significantly. Banks have mixed experiences as many of their poly houses loans have become non-performing assets (CRRID Study for SBI, 2011 & 2017-ongoing). A cursory review of the process of PC implementation reveals that a number of its issues are still unexplained. To illustrate, what are the reasons for slow progress of PC despite 50% subsidy? Whether physical implementation under NHM since 2005-06 is synchronizing with the financial support? Whether, the realized yield and prices as per expected levels? Whether farmers are satisfied with quality of implementing agencies and their post-sale services? What is the actual life of the various structures for PC? Whether the schemes has percolated to all categories of farmers or limited to resourceful only

Whether farmers are well trained in production technology and maintenance before the investment? What are the experiences of farmers in getting the bank finance, planting materials/ seedlings & other inputs and marketing the product? Therefore, studies are required to evaluate impact including yield & prices realized, marketing channels used, sustenance of structures for PC and future potential with bank credit.

Harvesting of rainwater is another technological option. It was found very pertinent in hilly areas. Rainwater harvesting in the hills of Himachal Pradesh has picked with the PC and there may number of other such areas in the country. Hydro phoenix farming is also picking up where wastage of water is the least. Scholars may share the performance of such technologies in the seminar.

Therefore, papers are invited in the National Seminar on the following **sub-themes**.

1. *Critical review of various policies related to area planning, e-NAM, Bhawanter Bughtan/Bhaarpai, export & import of agricultural commodities.*
2. *Who are the farmers' committing suicides and rational of loan waiver demand for all. Special incentives, if any for small & marginal farming in policies of agricultural development.*
3. *Review of Implementation process of protected cultivation (PC) in terms of adequacy of capital cost, training, transparency & releasing of subsidy, extension support, availment of bank credit, etc.*
4. *Net income from crops grown under PC vis a-vis similar crops in open conditions. Mode of transport, marketing, linkage with supply chain and problems encountered at various stages by the entrepreneurs.*
5. *Similar papers on rainwater harvesting, hydro phoenix farming, etc to bring out the features of success & failures of their implementation.*
6. *Any other policy and technological options for increasing farmers' income.*

Papers based upon one or more of the above themes from different States will be preferred.

#### **Important Dates**

- *Submission of Abstract upto 500 words by 25 February 2018.*
- *Submission of final paper by 15 March 2018.*
- *Seminar Dates: 22- 23 March, 2018.*
- *Venue :Centre for Research in Rural and Industrial Development CRRID), Plot 2A, Sector 19A, Madhya Marg, Chandigarh*

#### **Coordinator**

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*Note: Authors of selected papers will be given TA upto 2<sup>nd</sup> AC and free logistics (One author only).*