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Different prospects to make agriculture more remunerative in India

Mahima Charan Jitendra and C. Naveen Kumar

Department of Farm Machinery and Power Engineering, College of Technology and Agricultural Engineering (M.P.U.A.T.), Udaipur (Rajasthan) India
(Email : mahimacharan331@gmail.com)

Introduction : As a source of livelihood, agriculture (including forestry and fishing) remains the largest sector of Indian Economy. While its output share fell from 28.3% in 1993-94 to 14.4% in 2011- 12, employment share declined from 64.8% to 48.9% over the same period. Therefore, almost half of the workforce in India still remains dependent on agriculture. Given the low share of this workforce in the GDP, on average, it earns much lower income poorer than its counterpart in industry and services. Therefore, progress in agriculture has a bearing on the fate of the largest proportion of the low-income population in India.

Characteristics and Problems of Indian Agriculture: As stated at the outset, Indian economy hinges on agriculture. The socio-economic status of the people, the national polity and the gamut of life of the people is directly controlled by agriculture. The Indian agriculture, however, has its own characteristics.

The socio-economic status of the people, the national polity and the gamu to flife of the people is directly control led by agriculture. The Indian agriculture, however, has it sown characteristics. Some of the important characteristics and problems of Indian agriculture have been described below.

– Heavy pressure of population
– Lack of definite agricultural land use policy
– Predominance of food grains
– Low status of agriculture in the society
– Limited intensive agriculture
– Land tenancy
– Primitive technology
– Poverty and indebtedness of the farmers
– Indian agriculture is labour intensive
– Inadequacy of extension service
– Rain-fed agriculture
– Inadequate agricultural research and education, training, and extension

Some of the few points have been discussed below: As discussed the key areas that need intervention in order to ensure long term productivity, profitability and sustainability are a series of essential steps are required to raise agricultural productivity.To increase productivity, progress is required along three dimensions: (i) Quality and judicious use of inputs such as water, seeds, fertilizer and pesticides; (ii) judicious and safe exploitation of modern technology including genetically modified (GM) seeds; and (iii) shift into high value commodities such as fruits, vegetables, flowers, fisheries, animal husbandry and poultry. In the longer run, productivity enhancement requires research toward discovery of robust seed varieties and other inputs, appropriate crops and input usage for a given soil type and effective extension practices. Agricultural research and development (R and D) in India has made impressive contribution in the past. But the system is under significant stress today with lack of clarity on focus and inefficient use of financial resources. Links among sister institutions have weakened and accountability declined over time. There is need for a rethink of the R and D system.

Similarly, an appropriate combination of capital with other production factors, such as labour and land, can generate higher yields, output and incomes. First, the effect depends on the position of the holding in the marginal revenue curve: considering the case of a holding with very limited amount of capital and/or outdated or obsolete assets, a frequent situation among small farms in developing countries, the benefits of using more and better capital will almost certainly outweigh the costs and result in higher incomes. Second, the amount invested must be consistent with the capacity of the holding to cover the costs associated with the maintenance of the equipment or infrastructure and, more importantly, with its capacity to honour loan repayments and costs. The higher the amount invested, the higher the annual depreciation costs and the lower the net operating income of the farm (or returns over cash and non-cash costs).

Precision agriculture (PA) may provide a way to do it: Critics of mechanization also contend that by timely

sowing of crops and applying proper and recommended water and fertilizer to it, a farmer caneasily improve the productivity of crops and his income. However application of inputs at proper time requires timely availability of labour, water and fertilizer-all of which are be comings carcer and scarcer. Besides majority of farms are rainfed and with the change of weather patterns, availability of rain wateris very unpredictable. Hence the non-availability of inputs and labour on time is the biggest stumbling block to increase productivity of farms and remuneration. Precision Agriculture can help in this matter. To our mind the ultimate role of a farmer should be to identify better crops, use that seed to propagate it further and hence in effect be come a breeder of sorts. Progressive farmers already do that and with more time available to them because of PA theymay be able to help Indian agriculture to produce better and higher yield ingvarieties. Also theme chanization will make the farming glamorous and may at tract more people to takeup farming in a big way. The most important component in taking PA forward will be in creating a huge resource of engineers, scientists and agriculturists to develop various components of the technology. Without excellent man power and consequently good R and D, Precision agriculture will not succeed. Another way forward is when scientists from ICAR institutes, engineers from academic world, industry and farmers work to getherin developing Precision agriculture.

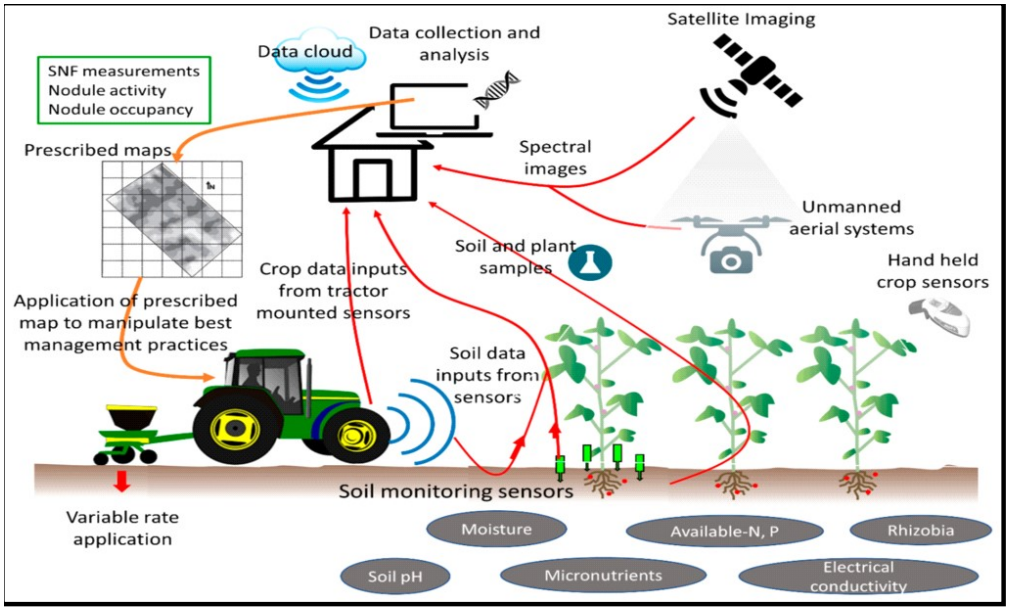

Fig. 1 Precision agriculture

Conclusion: The critical issues that plague Indian agriculture at present are the knowledge deficit and infrastructure deficit, especially in the rural areas. Problems related to irrigation in frastructure, market infrastructure and transport infrastructure add significant cost tofarmers' operations. Another issue is lack of delivery mechanisms. There are a number of schemes aimed to bring development in agriculture. We do not have effective delivery mechanisms that can translate in to effective facilitation in terms of increasing productivity or decreasing cost or increasing price realization at the ground level. Moreover, inadequate government support exacerbates these issues. Eminent experts should do research in this aspect and governments musttake a proactive action. Indian agrarian sector in fact requires very innovative ideas for up lifting of this sector. Also, without mechanization, farming is hard and back-breaking work. This has put more pressure on farmland, thereby requiring technologies to increase the productivity so that shrinking farmland can feed billion plus people of India in the future. India, though one of the biggest producers of agricultural products, has very low farm productivity, with the average only 33 per cent of the best farms world over. This needs to be increased so that farmers can get more remuneration from the same piece of land withless labour.

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