



**AGRICULTURE**  
**AND**  
**INDIAN FARMERS**  
**ISSUES AND ROAD AHEAD**

# AGRICULTURE AND INDIAN FARMERS

## ISSUES AND ROAD AHEAD

### INDIAN AGRICULTURE

Agriculture is one of the oldest engagements of human race and has played an important role in human civilization. The history of agriculture in India dates back to Indus Valley Civilization Era and even before that, in some parts of Southern India. However, the present form of agriculture is entirely different from then agriculture practised. Today's agriculture is characterized by high yielding varieties, chemical fertilizers and pesticides, micro irrigation, automated machinery, drones, etc. Agriculture has always been pivotal for Indian economy. It not only meets the food and nutritional requirements of 1.3 billion Indians, but also contributes significantly to production, employment and demand generation through various backward and forward linkages. Moreover, it plays a crucial role in alleviating poverty and ensuring sustainable development of the economy. Indian agriculture has had a remarkable role transforming India from food importing nation to food exporting one. Today, India ranks second worldwide in farm output, which is built on the struggle and hard work of past 70 years.

At the time of independence, the agricultural production was very low (about 50 million tonnes). Agriculture was mainly rainfed and was performed subsistence farming using mainly animate sources of farm power and traditional tools and equipment. More than 80% of the population living in rural areas were dependent on agriculture for their livelihood. After Independence, India followed an agricultural development strategy that focused on self-sufficiency in staple foods like wheat and rice. Agrarian

reforms were undertaken in the form of consolidation of holdings, abolition of landlordism etc. Initially decades the farmers seemed to enjoy glorious position, but policy paralysis, ignorant and poor vision led to downfall of the condition.

After independence when Five Year Development Plans were prepared in 1950, agriculture was given priority. However, it was only during sixties, a number of major schemes and program were introduced in the country and significant investments were done for farmer's upliftment. To make the country self-sufficient in food grains and reduce our dependence on imports, high input driven "green revolution" agriculture was introduced in the late 1960s in pockets of north western and coastal peninsular India. The green revolution package comprised introduction of high yielding varieties (HYV) of seeds, application of chemical fertilizers, pesticides and expansion of irrigation. In 1967, the first harvest after the Green Revolution was a record, three million tonnes higher. Since then the country has not looked back. From an era of food imports, India graduated to food self-sufficiency. The image of a progressive farmer driving a tractor was flashed as a sign of prosperity. In reality, the increase in production did not commensurate with an accompanying increase in farm incomes. While the successive governments were content with bumper harvests, farming as a community remained neglected. Coupled with a declining rate of public sector investments, the demise of agriculture began soon after the mid-1980s.

By 1991, when the World Trade Organisation (WTO) came



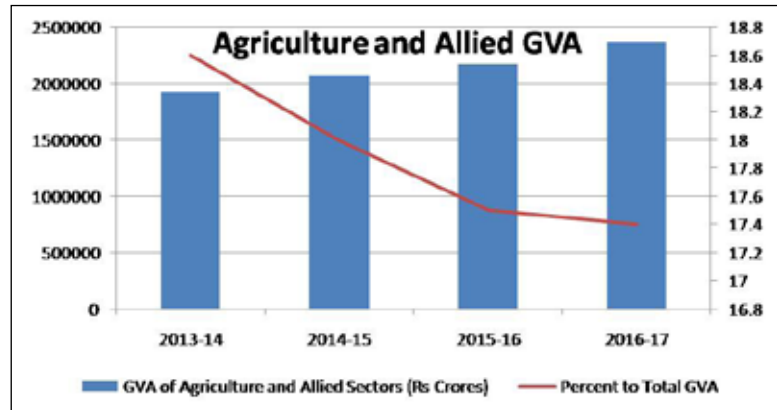
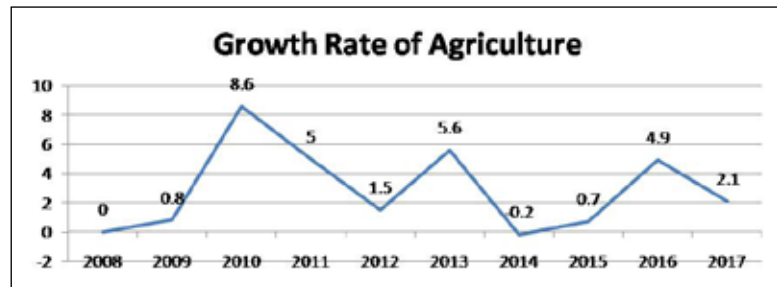


into existence, a complacent nation began to shift focus from agriculture. While farmers were denied their rightful income, huge salary jumps were provided to other sections of the society. Agriculture turned uneconomical, and repeated demands for providing a level playing field fell on deaf ears.

Agricultural sector reforms and structural adjustments were initiated in India since 1990s after it accorded to the World Trade Organization (WTO) agreement to integrate with the global trade. Globalisation of Indian agriculture though intended to improve the efficiency, productivity and cost competitiveness has had adverse impacts with both growth rate in agriculture as well as employment in rural areas declining during the post reform period (from 1990s till date). Reduction in public sector investment in agriculture, failure to encourage sustainable farming practices, and unremunerated prices for agricultural produce were among the factors that turned agriculture into a losing proposition.

About 20 years after the Green Revolution began, and somewhere in the early 1990s, the global economic thinking shifted to shrinking agriculture and boosting industry. Meanwhile, the emergence of World Trade Organisation in 1995 also shifted the focus to trade. The mainline economic thinking shifted to reducing support for agriculture and importing highly subsidized cheaper food from the developed countries. Subsequently, the World Bank and Multinational Corporations have been pushing for land acquisitions, contract farming, and creation of super markets or in other words paving the way for corporate agriculture. The state intervention in agricultural sector rendered large masses of small and marginal farmers vulnerable as they found it difficult to compete in global markets. The farmer is faced with multiple threats from all fronts –uncertain yield, uncertain price, input (spurious quality) and technology (limits to groundwater draft). To make agricultural markets responsive and to allow contract farming, the Agricultural Produce Market Committee (APMC) Act was revised. Restrictions were removed on futures trading on many commodities and Foreign Direct Investment (up to 100 per cent) allowed in many agribusiness sectors.

The key agricultural related programmes of the government today are the National Food Security Mission and Rashtriya Krishi Vikas Yojana. India also came up with a National Farmers Policy in 2007. In an agricultural dominant economy, the landless labourers, marginal and



small farmers are treated as target group, who receive a high order of priority in the strategy of planning for rural development.

In India agriculture plays a dominant role with a contribution of 17.3% in GDP. GDP from Agriculture in India decreased to 3461.02 INR Billion in the third quarter of 2018 from 4197.47 INR Billion in the second quarter of 2018. The agriculture and allied sector continues to be pivotal to the sustainable growth and development of the Indian economy. The growth rate of agriculture has faced many ups and downs during last decade.

As per the Provisional Estimates released by Central Statistics Office (CSO), Ministry of Statistics & Programme Implementation on 31.05.2017, agriculture and allied sectors contributed approximately 17.4 percent of India's GVA at current prices during 2016-17.

Besides research and technological advancement and policy reforms, the key factor in driving this outstanding growth of Indian agriculture is the every single farmer practicing agriculture. Agriculture is deeply rooted in the culture of Indian society to an extent that traditions as well as festivals are governed by agriculture of the region. Agriculture for farming community is not only a livelihood activity, rather is style of living. The gravity of the sector is due to the fact that nearly 55% of population of the country derives its livelihood from the agriculture.

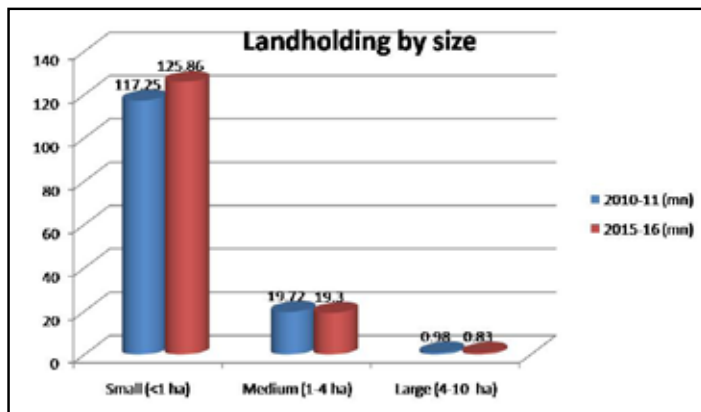
## SOCIO-ECONOMIC CONDITION OF FARMERS

The Economic Survey 2017-18 had key implications for

agriculture sector, a space which employs more than 50 per cent of the total workforce in India and contributes around 17-18 percent to the country's GDP. It has also been discussed that the condition of farmers in this dominant sector of Indian economy has been vulnerable.

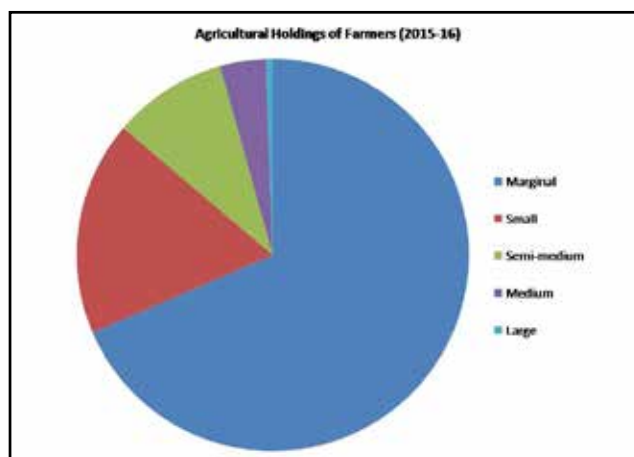
### AGRICULTURAL HOLDINGS OF FARMERS

The condition of most of the Indian farmers is terrible. Small and marginal holdings (Below two hectares) constitute 86.21% of the total land holdings as per census



2015-16, an increase of 1.2 percentage points compared to 2010-11. It is noteworthy that marginal, small and medium land holdings constitute the lion's share of operated area – large land holdings account for only 9% of the total operational area. The average size of operational holdings is highest in Nagaland (5 hectares) and lowest in Kerala (0.18 hectares). Migration of farmers from Large holdings to medium holdings can be accounted due to the operation of land ceiling act under land reforms, whereas migration of medium sized holdings to small size holdings and small sized holdings to marginal farmers has been due to subdivision of land holdings by heirs.

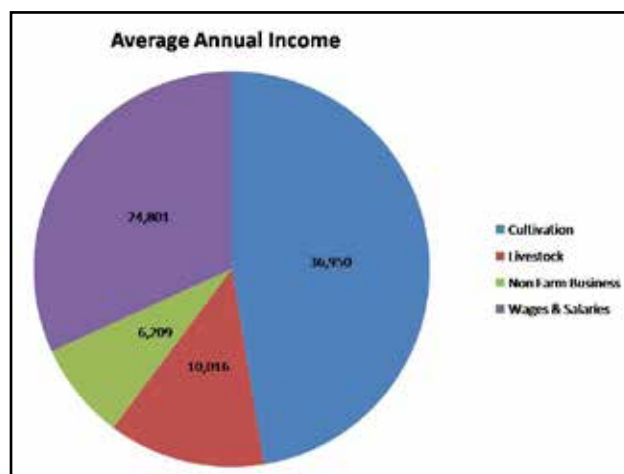
The total number of operational holdings in the country has increased from 138 million in 2010-11 to 146 million 2015-16 i.e. an increase of 5.33% however there is a decrease



in the operated area from 159.59 million ha. in 2010-11 to 157.14 million ha. in 2015-16 showing a decrease of 1.53%.

### FARMERS' AVERAGE INCOME

The agriculture supports nearly 50 percent of the employment but contributes only 15 percent to the Gross Domestic Product (GDP). Farming being a tough job with earnings that hardly measure up to the hard work and toil involved, many farmers are migrating from their traditional farming work and moving to other occupations such as labourers. The major reason behind it being low level of income of farmers which has been brought into notice from time to time by various agencies. The NABARD All India Rural Financial Inclusion Survey (NAFIS) shows that average agriculture household income was a mere Rs 8,931 per month in 2016-17. Apart from a paltry income, farmers are facing rising indebtedness, lesser financial inclusion, and absence of insurance facility, according to the report. This income level of farmers when compared with NSSO study in 2012-13 reveals an increase of mere Rs 2505 per month in the past four years.

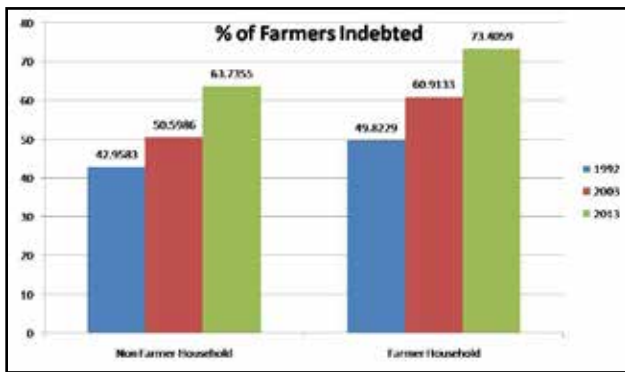


Source: Survey NSSO 70th Round (Figures indicate the estimated share in the total income)

Survey also reported that the average household income in Kharif season is higher than that in Rabi season. The all-India average household income was Rs. 21,490 for Kharif Season and Rs. 15,460 for Rabi Season.

### INDEBTEDNESS OF FARMERS

The survey also shows that 70 per cent of rural households are indebted, of which majority is of agriculture households. NSSO Survey also revealed that nearly 74% of agricultural households were in debt in 2013 of which major proportion was that of farmers with large land holding as compared to small & medium land holdings. A farmer as per survey in 2013 is 22 percentage points more likely to have a standing loan than a farmer in 1992. Thus, the likelihood of a farmer



being in debt has increased over the past decades.

Also most of the farmers attempted suicide in past few years due to numerous reasons especially high indebtedness or crop failures due to lack of rainfall or unavailability of water sources. According to the National Crime Records Bureau, at least 8,007 farmers in the country killed themselves in 2016 alone. Indebtedness was listed as the primary reason for 55% of farmer suicides in 2015 and more than 300,000 Indian farmers have committed suicide since 1995.

### FARMERS VERSUS FARM LABOURERS

Census 2011 shows that only 54.6 per cent of total workers in India are now part of the agriculture sector with a decline of 3.6 per cent as compared to 2001. As per the census of 2011, 263 million people are engaged in the agriculture sector and over half of them are now agricultural labourers. 14 per cent women and 3.2 per cent of cultivators since 2001 have abandoned farming. The alarming decrease in cultivators can be because of two reasons. One is that farmers are losing their land and are being forced to work as labourers in the fields of others. The second can be that people are trying to work under MGNREGA so that they can live in their villages and work as agricultural labour.

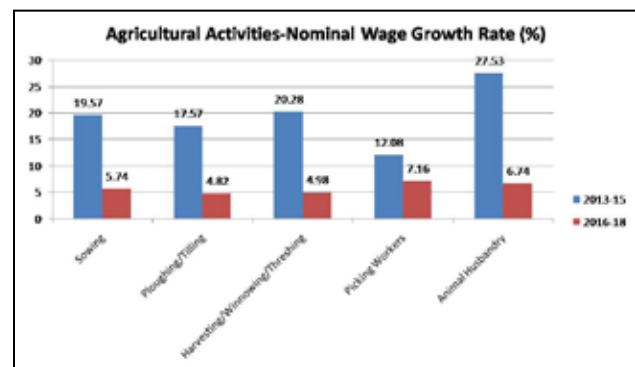
### WOMEN IN FARMING

The percentage share of female operational holders has increased from 12.79% in 2010-11 to 13.87% in 2015-16 with the corresponding figures of 10.36% and 11.57% in the operated area. This shows that more and more females are participating in the management and operation of agricultural lands.



### AGRICULTURAL WAGES

Wages constitute a major component of cost of cultivation in the country, because of the labour intensive nature of agricultural operations. The all India annual average daily wage rate for field labour (male) and Field labour (female), during 2015- 16, was Rs. 281/day and Rs. 218/day respectively. In case of skilled labour at all India level, the wage rate was Rs. 359/day during 2015-16. In spite of the high growth of the Indian economy during past few decades, agricultural and rural wage labourers are unable to enjoy the benefits of macroeconomic prosperity. This is partly due to multiple years of drought that led to a



decline in agricultural production and partly due to very low agricultural prices in real terms, in particular relatively low Minimum Support Prices.

### AGRICULTURAL CREDIT

In India small and marginal farm households, which constitutes 80% of total households, depend on credit for meeting their basic expenses. The rural credit market in the country is characterised by multiple players, both institutional and non-institutional credit sources such as public banks, commercial banks, moneylenders, landlords, traders, friends and relatives co-exist. These sources facilitate and influence the terms and condition of loans, which provides both opportunities and challenges in rural investment environment. As per RBI, gross NPAs for agriculture and allied activities of all SCBs for the last three years shot up from Rs 51,964 crore as on March 2016 to Rs 85,482 crore on March 2018. NSSO in a survey in 2013 found that the average loan outstanding per agricultural household stood at Rs. 47,000. It also estimated that at the all-India level, 25.8 per cent of the loans were sourced from money lenders, at steep interest rates.

### ORGANIC FARMING IN INDIA

India is home to 30 per cent of the total organic producers in the world, but accounts for just 2.59 per cent (1.5 million hectares) of the total organic cultivation area of 57.8 million hectares, according to the World of Organic Agriculture 2018 report. With 835,000 certified organic producers, India is home to more than 30 per cent of total

number of organic producers (2.7 million) in the world. As per the available statistics, India's rank in terms of World's Organic Agricultural land was 9th and in terms of total number of producers was 1st as per 2018 data (Source: FIBL & IFOAM Year Book 2018). As on 31st March 2018, total area under organic certification process (registered under National Programme for Organic Production) is 3.56 million Hectare (2017-18). This includes 1.78 million ha (50%) cultivable area and another 1.78 million Hectare (50%) for wild harvest collection.

## FARMERS' ISSUES AND CHALLENGES

Despite of India being an agrarian country with half of its population not only practicing agriculture as occupation rather living agriculture strongly embedded in its culture, farmers of the country are in distress. Large majority of the farmers are trapped in the vicious cycle of poverty built by declining productivity, failing market and limited access to credit. The problems of agriculture are also aggravated due to increased pressure of producing more food from shrinking resources, while maintaining ecological balance.

- 1. Smaller operational holdings:** Agriculture in India is a family occupation with assets being divided amongst next generation resulting in smaller land holding passed to every next generation. The smaller holding size limits scale of operation as well as reduced capacity of the farmer. The states with large population (agricultural population) the problem of small holdings is acutely observed. The other critical aspect about land holdings is that the gap between the holding size of large, small and marginal farmer is huge. Also, cases of distress sale of land have been on rise.
- 2. Erratic climatic changes:** The most deliberated issue is global warming and climate change. The climate change has adversely affected Indian agriculture and farmers, as Indian agriculture is heavily dependent on monsoon for irrigation. Due to erratic climate changes and irregular rainfall, irrigation is affected, resulting in yield deviation.
- 3. Deviating youth and labour in agriculture:** With more and more youth migrating to urban areas and being engaged in industrial and construction activities, agriculture has been left with limited agricultural labourers. Decreased supply of agricultural labourers and inflation have resulted in increased wages. Though older generation brings lots of experience and indigenous knowledge to agriculture, lack of youth in the sector limits energy, compassion and risk taking ability along with adoption of new technologies.
- 4. Poor Quality inputs:** Agricultural output is governed by quality of inputs supplied. Large number of companies are supplying agricultural inputs to farmers through wide network of distributors and retailers. Quality of inputs is compromised at different points from manufacturer to retailer due to inadequate handling knowledge and also sometimes intentionally. The regulatory mechanism in place is multilevel and complex which reduces its efficiency to check spurious inputs in market. Also, the incentives to distributors and retailers by manufacturers lead in prescribing wrong inputs, compromising yield at farmers' end.
- 5. Inadequate storage structures:** Approximately one third of the total agricultural produce in country is wasted. Proper storage facilities are essential for preventing loss of produce. Further, inadequate storage capacity in terms of cold storage and warehouses limits the bargaining power of farmers and result in selling of produce at not so remunerative prices.
- 6. Inadequate marketing facilities:** Marketing is a crucial aspect for any enterprise, agriculture is no exception. With inadequate marketing facilities and long chain of intermediaries, farmers' profits are jeopardized. Large numbers of incidences of distress selling of agricultural produce due to fear of crop loss coupled with inadequate storage facilities have been observed.
- 7. Farmers' debt and loan:** Farmers in country utilize both institutional and non-institutional sources of credit. Both the systems have their own merits and demerits. Institutional sources being more organised require proper paper work which especially landless labourers are unable to supply, diverting to non-institutional sources of credit. However, different factors listed above result in insufficient income and piling of loans, trapping them in continuous poverty cycle. Despite repeated loan waivers, not all farmers have been relieved and the schemes have its own drawbacks which leave farmers borrowing from non-institutional sources and utilizing own savings.
- 8. Lack of Information:** Government and various other agencies have been untiringly working for empowerment of farmers through multiple schemes and programs. However, most of these schemes and programs due to inappropriate communication are not able to percolate to ground level to benefit the needy ones. Government has been adopting various measures to spread the information like, farmers fairs, digital technologies like mobile apps, messages and toll free number for disseminating information, though active participation of farming community is essential for





success of these initiatives.

**9. Minimum Support Price:** Government every year fixes a minimum support price for major crops grown to support farmers, however, farming community strongly feels that cost of production calculated for the purposes varies from actual cost. Also fixing MSP by government decreases the bargaining power of the farmers.

**10. Farm Subsidies:** Agriculture in country is non-lucrative activity unable to largely keep youth interested in it. Further inflation, less availability of labour, climate change and limited marketing facilities coupled with declining farm subsidies from government has resulted in lost interest in the occupation. Though youth coming towards agriculture is more interested in agri-technologies and other aspects than actual farming practices.

## WAY FORWARD

Indian farmers are going through tough time and Indian agriculture is at crossroads. With all the never imagined innovations and technologies coming up in the agriculture, huge scope of growth exists but issues currently holding farmers back to realize the potential of these innovations need to be tackled. When the population of world is continuously increasing the future food requirement, the resources for agriculture are declining not only in quantity but also in qualitative terms. Area under agriculture has decreased and has been diverted to other activities like industry and housing. Also, the remaining land has depleted nutrient profile and hence productivity. Increasing cost of production, errant weather, degrading natural resources

such as soil nutrient and water level and lesser returns have made agriculture unprofitable resulting in more number of farmers giving up agriculture.

It is obvious that these challenges are interlinked and hence need to be tackled strategically. The key requirement is to significantly increase public investment in agriculture and allied activities, ensuring better price to farmers, reducing input cost through innovation in agricultural techniques, promotion of climate resilient crops varieties, better and more local storage and distribution of food grains, improvement of soil and water quality, promotion of integrated and contract farming, incentives for organic farming, better market access and information etc.

Efficient implementation of reforms is crucial for its success and delivering the intent in all its aspects. In order to make agriculture profitable for farmers, it is necessary to come up with strategies to increase returns to farmers while reducing cost for consumers, while making it environmentally sustainable.

**1. Eliminating intermediaries:** With the existing marketing structure, margins are distributed among intermediaries leaving meager profits for farmers. On the other end, the prices for consumers are drastically high. Given the fact that over last few decades there has been disproportionate increase in the incomes of farming and non-farming sector, where the cost of production in agriculture is increasing, reducing farmers' margin, while the incomes from non-farming sector have been increasing rapidly. In order to increase farm income, it is essential to adopt some mode of direct farming, eliminating intermediaries and

increasing farmers' share of profit. Government has come up with e-NAM but it will take lots of efforts to percolate the benefits to small and marginal farmers.

2. **Bringing market close to farm:** Given the diversity in agricultural production, the market need to be customized as well as brought in close proximity to farmers to give farmers a better access of physical market. Physical and virtual market structures need to be built simultaneously for better market options to farmers and more scope for better prices.
3. **Storage structures:** In the light of future food requirement and current rate of wastages, it is imperative to move towards zero loss to ensure food security for future and making agriculture profitable. Adequate storage structures i.e., warehouses and cold structures need to be developed to minimize losses. Considering the small operational scale of Indian farmers, community warehouses need to be promoted. Support from private sector can result in significant benefits. Further, there is need to invest in cold transport chain and also educate the transporters of importance of cold transport chain to maintain quality and shelf life of produce, which will help in further in reducing losses.
4. **Economies of scale:** With majority of farmers being small and marginal, economy of scale is not implemented resulting in higher cost and lower margins. The concept of Farmer Producer Organisations is one point solution to numerous problems. It not only activates the scale economy and reduces cost of inputs and machinery, but also increases bargaining power of the farmers, negotiating for higher prices for their produce. Moreover, it provides with the opportunity for collective sharing of information, experiences and ideas for development.
5. **Promotion of Good Agriculture Practices:** In order to ensure judicious use of inputs and maintaining quality of produce, it is necessary to implement good agriculture practices. While ensuring quality produce grown in ecologically sustainable manner, it also includes the aspect traceability, providing consumer the details of producer bringing accountability and responsibility to individual farmers.
6. **Promotion of Organic Agriculture:** Organic is luxury. Owing to their quality, organic produce are capable of fetching higher prices compared to conventional agriculture produce and is more of indigenous agricultural practices involving no use of chemicals in new packing. As it is a well-established fact that hilly region of the country are by default practicing organic agriculture, with minimal use of synthetic chemicals. These areas can be converted to certified organic to reap benefits of certified organic produce in national and international markets. Farmer clusters for commercially important crops can be made to increase marketable quantity.
7. **Promoting diversification:** Diversification of farm activities by integrating different all in one in a planned manner is a sure shot formula for success, as it not only reduces cost of cultivation, but also increases risk bearing capacity of the farmer. Moreover, Integrated agriculture is ecologically sustainable.
8. **Promoting Contract farming :** One of the major concerns of marketing of agricultural produce and fetching good price is very well taken care in contract farming. Farmers working in collaboration with firm for producing desired commodity are reaping high margins. Crops like potato and also seed production have observed successful cases. The same can be replicated for other crops.
9. **Building resilience for climate change:** With changing climatic patterns, agriculture has become riskier than ever. There is need to improve research in this direction. Public private partnership can pave a way for building resilient agriculture practices. Besides public private partnership, it is necessary to take actual practitioner, THE FARMER, on board to analyse actual on ground results of any initiative.
10. **Transforming Farmers into Farmpreneurs:** With changing national and international market scenario, farmers perspective of engaging in agriculture need to be changed. More and more trainings on vocational skills, latest technologies, policy and market reforms as well as business operations need to be provided to keep them updated. Agri universities and agri-business management institutes in collaboration with existing network of KVK can prove to be suitable fit.
11. **Quality Inputs for agriculture:** Quality inputs are imperative for quality output, therefore stringent regulatory framework should be put in place to control availability of spurious inputs. Further, quality inspection need to be practiced religiously and severe punishment for defaulters.

Indian Agriculture is at crossroads and it is high time that focus be shifted from improving state of agriculture to improving state of farmers to continue feeding the increasing population and economic growth.





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