



भारतीय कृषि एवं खाद्य परिषद्  
**INDIAN COUNCIL OF FOOD AND AGRICULTURE**

# REPORT ON HARYANA AGRICULTURE AND FARMERS' WELFARE





## Agriculture Scenario in State



Attaining Statehood on November 1, 1966, Haryana hosts less than 2% of India's population. With an area of 44.2 thousand square Km, this state occupies approximately 1.37% of the total geographical area. Barely three decades into existence, Haryana has created a distinct place for itself. As the largest recipient of investment per capita since 2000 in India, and among one of the wealthiest and most economically developed regions in South Asia, Haryana has the India's third highest per capita income at ₹214,509 (US\$3,300) against the national average of ₹112,432 (US\$1,800) in year 2016–17. Haryana's 2017-18 estimated state GSDP of US\$95 billion (52% services, 30% industries and 18% agriculture) is growing at 12.96% 2012-17 CAGR and placed on the 14th position behind only much bigger states, is also boosted by 30 SEZs (mainly along DMIC, ADKIC and DWPE in NCR), 7% national agricultural exports, 60% of national Basmati rice export, 67% cars, 60% motorbikes, 50% tractors and 50% refrigerators produced in India. Faridabad has been described as eighth fastest growing city in the world and third most in India by City Mayors Foundation survey. In services, Gurugram ranks number 1 in India in IT growth rate and existing technology infrastructure, and number 2 in startup ecosystem, innovation and livability.

Among the world's oldest and largest ancient civilizations, the Indus Valley Civilization sites at Rakhigarhi village in Hisar district and Bhirrana in Fatehabad district are 9,000 years old. Rich in history, monuments, heritage, flora and fauna, human resources and tourism with well developed economy, national highways and state roads, it is bordered by Himachal Pradesh to the north-east, by river Yamuna along its eastern border with Uttar Pradesh, by Rajasthan to the west and south, and Ghaggar-Hakra River flows along its northern border with Punjab. Since Haryana surrounds the country's capital Delhi on three sides (north, west and south), consequently a large area of Haryana is included in the economically-important National Capital Region for the purposes of planning and development.

Known as the “Bread Basket of India”, Haryana has been in the forefront in terms of adoption of latest technologies in agriculture and is also counted as one of the leading states for Agriculture production in the country.



- Haryana is self-sufficient in food production and the second largest contributor to India's central pool of food grains.
- The state makes an incredible contribution of 14 per cent to the Central Pool and has achieved 163.33 lakh MTs food grain production during 2015-16.
- The major Kharif crops are rice, jowar, bajra, maize, cotton, jute, sugarcane, sesame and groundnut, sown in April and May and harvested in November.
- The major Rabi crops are wheat, tobacco, gram, linseed, rapeseed and mustard, sown in late October or early November and harvested in March.
- About 86% of the area is arable, and of that 96% is cultivated.
- About 75% of the area is irrigated, through tube wells and an extensive system of canals.
- About 2/3rd of the State has assured irrigation, most suited for rice-wheat production system, whereas rain fed lands (around 1/5th) are most suited for rapeseed & mustard, pearl millet, cluster bean cultivation, agro-forestry and arid-horticulture.
- The ideal location of state bordering National Capital Region (NCR) enables access to a range of big markets and the international airport.
- Rice, wheat, rapeseed & mustard, bajra, cotton and sugarcane are the major crops with considerable scope for agricultural diversification as well as off farm opportunities.
- Cauliflower, onion, potato, tomato, chillies, guava and kinnow are the important horticultural crops having good potential.
- Allied sectors like dairying, poultry, fishery, arid-horticulture, mushroom farming, bee keeping, agro-forestry have great potential.
- 37 mandis in the State have been connected with the e-NAM (National Agricultural Market) scheme to make the system for marketing of agricultural produce smooth, transparent and farmer/arhtiya-

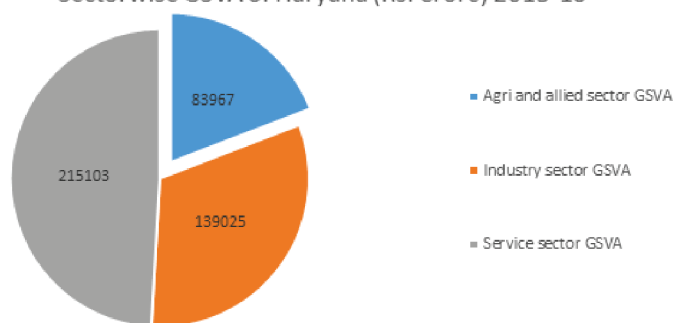
friendly.

- The state ranks second in the country in fish productivity per hectare and has been declared as a 'Fish Disease Free State' by the Indian Council of Agricultural Research.

## Sector wise GSVA

The structure of economy of Haryana is similar to that of country's economy. At the current prices in 2015-16, the tertiary sector (Service) contributed 49 per cent to the state's GSVA, followed by the secondary sector (Industry) with a contribution of 32 per cent and the least by primary sector (Agriculture and allied). For 2015-16, the contribution of agriculture and allied sector in state's GSVA stood at 19 per cent with Rs 83.9 thousand crore.

Sectorwise GSVA of Haryana (Rs. Crore) 2015-16



Source: Department of Economic and Statistical Analysis, Haryana

## Agriculture GSDP of the State

The share of agriculture sector in state's economy has been declining over the years. The share of Agriculture and Allied Sector in GSDP has declined from 60.7 per cent in 1969-70 to 21.3 per cent in 2006-07 and further to 15.3 per cent in 2013-14. The composition of state GSDP over the years clearly indicated that the share of Agriculture & Allied Sector is continuously declining due to continuously increasing share of services sector.

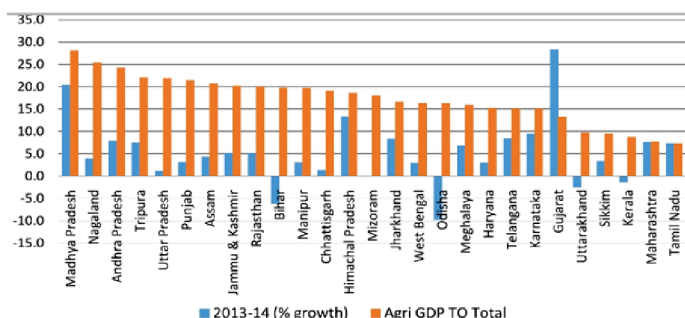
Share of Agriculture and allied sector in GSDP	States
30% and above	Arunachal Pradesh
20-29 %	Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jammu and Kashmir, Madhya Pradesh, Manipur, Nagaland, Punjab, Rajasthan, Tripura, Uttar Pradesh
15-19 %	Haryana, Himachal Pradesh, Jharkhand, Karnataka, Meghalaya, Mizoram, Odisha, Telangana, West Bengal
Less than 15%	Goa, Gujarat, Kerala, Maharashtra, Sikkim, Uttarakhand, Tamil Nadu

Source: Central Statistics Office



The agriculture and allied sector GSDP of the state has registered a growth of 9.63 per cent from 2004-05 to 2015-16. Amongst different states, Haryana ranks 19 in share of Agriculture GSDP to total GSDP.

State –wise growth and share of Agri GDP- 2013-14



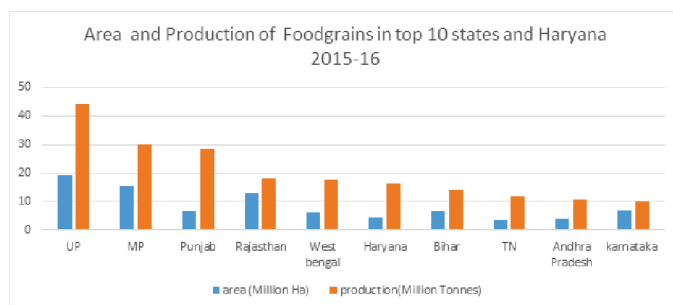
Source: Ministry of Agriculture and Farmers' Welfare

## Area and Production of Food grains

Haryana is among the top ten producers of food grains and stands at sixth place with a total production of 16.38 Million Tonnes from an area of 4.47 Million Hectares.

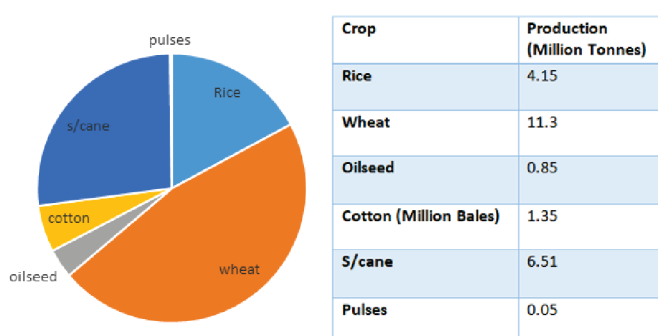
Source: Ministry of Agriculture and Farmers Welfare

Area and Production of Foodgrains in top 10 states and Haryana 2015-16



Of total food grains produced in the state, contribution of wheat and rice was 11.3 and 4.15 Million Tonnes respectively. Haryana is the 4th largest producer of wheat in the country with approximately 12 per cent of total wheat production. The state stands at 10th place in total rice production. Coarse cereals, Jowar, Bajra are also produced in the state.

## Production of Principal Crops– 2015-16

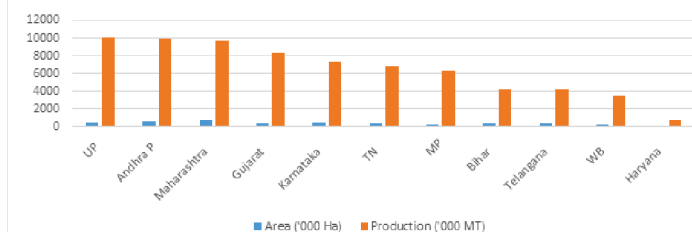


Source: Ministry of Agriculture and Farmers' Welfare

## Area and Production of Horticulture Crops

Horticulture crops cover 4.90 lakh hectare area which is 7.58 percent of the gross cropped area of the State. Production of horticultural crops in the State was 70.50 lakh MT during the year 2015-16.

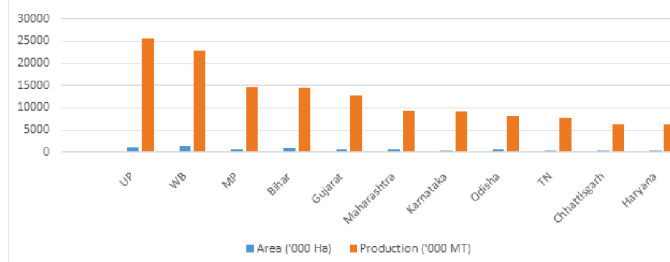
Area and Production of Fruits in Top 10 states and Haryana 2015-16



Source: Ministry of Agriculture and Farmers' Welfare

Fruits: Haryana ranks 22nd in fruit production in the country with a total production of 737.82 thousand MT from an area of 60.92 thousand Ha while UP stands first with a total production of 100.75 lakh MT.

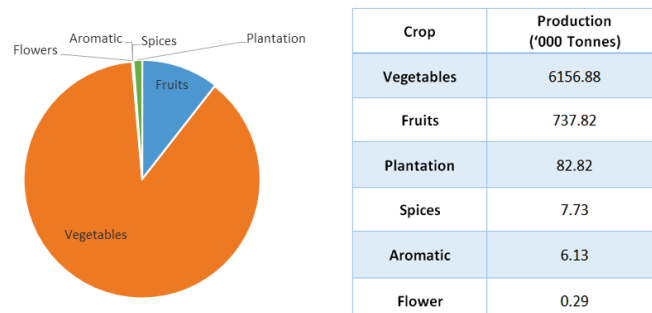
Area and Production of Vegetables in Top 10 states and Haryana 2015-16



Source: Ministry of Agriculture and Farmers' Welfare

Vegetables: Haryana ranks 11th in vegetables production in the country with a total production of 61.57 lakh MT from an area of 410.74 thousand Ha while UP stands first with a total production of 256.89 lakh MT.

Production of Horticulture Crops– 2015-16

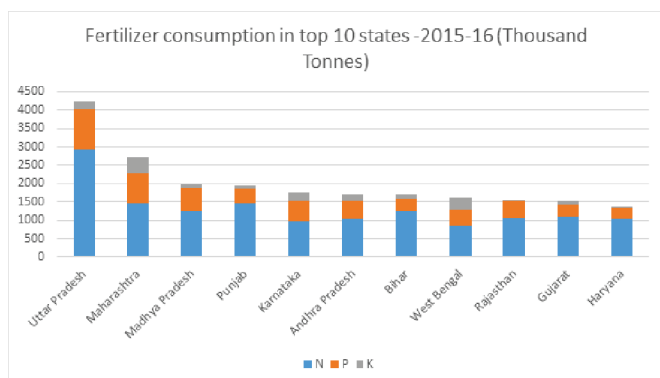


Source: Department of Economic and Statistical Analysis, Haryana



## Fertilizer Consumption

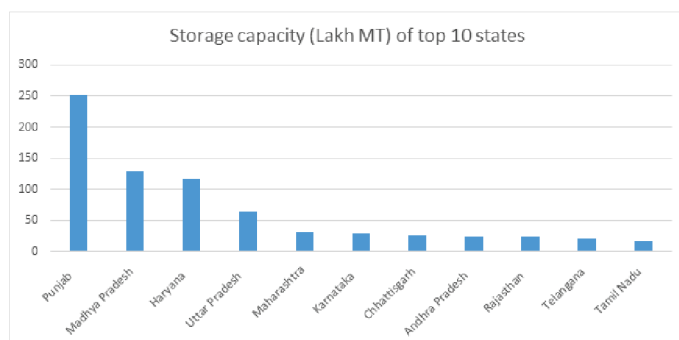
Haryana ranks 11th in total fertilizer consumption with a total consumption of 1347.4 thousand tonnes of fertilizers in 2015-16. Of the total fertilizer consumption, 77 per cent is Nitrogenous fertilizers, 21.5 per cent is Phosphoric fertilizer while potassium is mere 1.5 per cent.



Source: Ministry of Agriculture and Farmers' Welfare

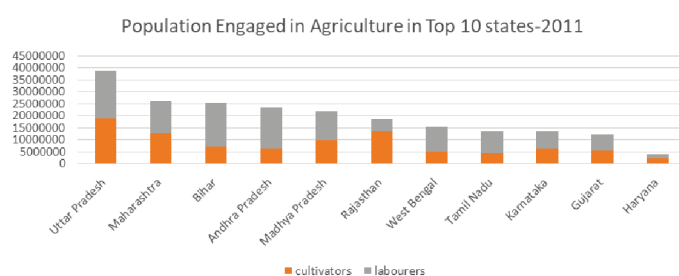
## Storage Capacity

Haryana ranks third in the country with a total storage capacity of 116.11 lakh MT and Punjab tops the chart with a total storage capacity of 2252.56 lakh MT as in March, 2016.



Source: Ministry of Agriculture and Farmers' Welfare

## Population engaged in agriculture



Source: Ministry of Agriculture and Farmers' Welfare

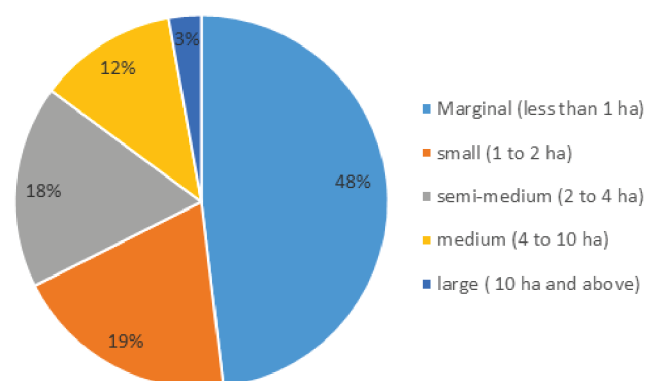
Though the share of agriculture in GSDP is continuously shrinking, majority of population continues to depend on agriculture for their livelihood. As per census 2011, Haryana has 15th largest

population engaged in agriculture with 44.96 per cent population engaged in agriculture. Of the total population engaged in agriculture, 38 per cent are labourers, who do not have their own land.

## Size of Operational holdings

Of total 16.2 lakh operational holdings in Haryana, majority i.e. 67 per cent are small and marginal in size and only 3 per cent are large holdings. The average holding size in state in 2010-11 was 2.25 ha against national average holding size of 1.15 ha. The average size of holdings has been steadily declining over the time. The small size of holdings limit the farmers' capacity to invest in advance technologies and harvest higher yields.

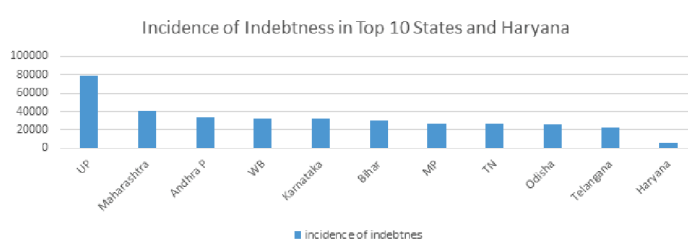
Operational Holdings in Haryana



Source: Ministry of Agriculture and Farmers' Welfare

## Indebtedness

In spite the fact that 48 per cent of farmers in the state are marginal, the incidence of indebtedness is lesser with 1.42 per cent of indebtedness incidences in the country coming from the state, whereas UP reports highest cases of indebtedness which is almost 17 per cent of total incidences of indebtedness reported in the country in 2013.



Source: Ministry of Statistics and Programme Implementation

## Major Issues in Agriculture of Haryana

One of the green revolution states, Haryana has come a long way in food production. The last few decades has seen some radical changes in the agriculture sector of the state and production and productivity have increased many fold. Earlier, the primary focus of agriculture in the State had been to increase food production and to improve livelihood of farmers, now agriculture sector is gradually becoming a technologically driven dynamic profession. However, this success has also given rise to the second generation problems.

## Natural Resource Management

- **Soil Resources:** The problems of soil degradation (soil compaction, soil salinity, sodicity, water logging, and pesticide residue), multiple nutrient deficiency, low organic carbon content and decline in the total factor productivity have been observed under different production systems in the State. Also the diversion of agricultural land for non-agricultural use is an emerging big problem.
- **Water Resources:** At present, agriculture consumes about 80% of water. The availability of good quality water for assured irrigation is about 60% in the State. This availability of irrigation water will further decline in future due to more demand of fresh water for domestic and industrial use. Over exploitation of ground water in Haryana is emerging as a serious threat. About 65% of ground water resource in Haryana is brackish. Moreover, the fresh water is being polluted through release of untreated industrial effluents and sewage water in the canal system.
- **Climate Change:** Climate change is exacerbating the challenges faced by the agriculture sector, negatively affecting both crop and livestock systems in most regions. The erratic change in climate is resulting in more stress for crops, hence increased consumption of resources and increased chances for pest resistance as well as resurgence.

## Crop Improvement

- **Stagnated productivity:** Adoption of HYV/Hybrids along with production and protection technologies, supported by appropriate infrastructure and policies, led to many significant achievements. The role of crop varieties/hybrids in enhancing crop productivity has been tremendous. However, yields of many crops are plateauing.
- **Pest management:** In the recent past, disease like yellow rust in wheat has appeared as a major challenge in Haryana. Similarly, management of

weeds has emerged as a major problem while adopting DSR and CA technologies.

- **Low Horticulture Productivity:** The per unit productivity of most horticulture crops in Haryana is low compared to the best obtained in other States.
- **Changing pattern of Demand:** The availability of horticultural produce has to be improved to meet the increasing needs of population resulting from urbanization, change in food habits and growing emphasis on nutritional security, value addition and export.

## Post Harvest Management And Value Addition

- Inadequate infrastructure facilities for storage, marketing, processing, value addition and post harvest handling, especially for perishable horticultural produce.
- Inadequate cold chain facility is one of the major factors responsible for post-harvest losses particularly in fruits and vegetables.

## Major Problems Faced by Farmers

- Decreasing farm productivity coupled with increasing cost of cultivation and poor price realization is pushing farmers especially in small and marginal categories into poverty trap.
- Quality seed ensured 15- 20% yield enhancement in different crops. Farmers often face difficulties in getting good quality seeds of improved varieties/hybrids prior to the sowing time.
- Farmers' friendly small tools and agricultural implements are either not available to the farmers or they are not convinced with their working efficiency, resulting in paying labour charges and increasing cost of cultivation.
- Agriculture is the only enterprise where prices are determined by others than the producer. Also the long chain of middlemen for marketing absorbs the farmers' margin leaving them with minimal profit for their produce.
- Yield gaps between research stations/Field Level Demonstrations and farmers field and lack of knowledge about modern agriculture technologies and environment result in increased cost of cultivation without enhancing their production and hence profits.
- Farmers' lack knowledge of latest technologies and various government schemes, this deficit of information limits their ability to make profit.





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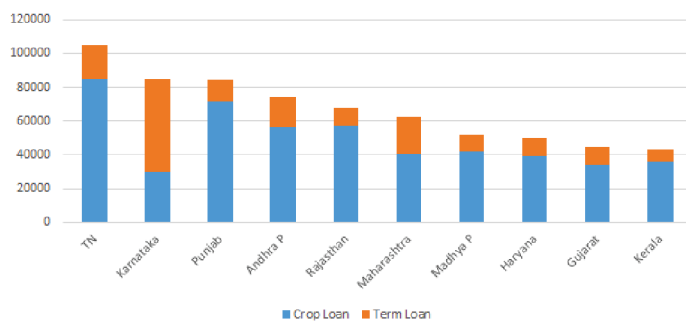
## Government Programmes for Agriculture

The state as well as central governments have been and are continuously making efforts to promote agriculture and make it more profitable and an attractive option. Schemes and programmes have been regularly introduced to enhance productivity, value addition, market linkages, investments and partnerships which have played a significant role giving a major boost to agriculture and agribusiness in the State, and thus farmers' incomes.

## Agricultural Loan

The total agricultural loan disbursed in the country during 2015-16 was Rs. 877527 crore. Haryana stands 8th in agricultural loan disbursement in the country with 5.67 per cent of the total disbursement in the year. Of total disbursement in the state approx. 79 per cent is crop loan and remaining 21 per cent is term loan.

Total Agricultural Loan Disbursed in Top 10 states during 2015-16 (Rs. Crore)

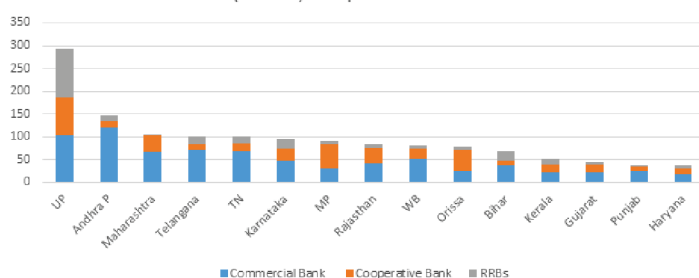


Source: Ministry of Agriculture and Farmers' Welfare

## Kisan Credit Card

Government of India introduced the Kisan Credit Card scheme (KCC) scheme in 1998 as an innovative credit delivery mechanism to enable the farmers to meet their production credit requirements in a timely and hassle-free manner.

Total KCC Issued (in Lakh) in Top 10 states as on 31st March 2016



Source: Ministry of Agriculture and Farmers' Welfare

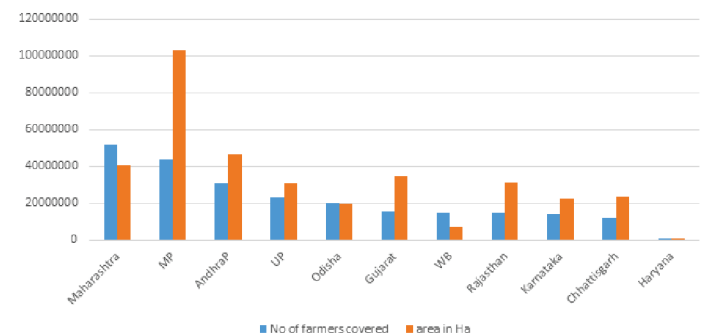
Haryana stands at 15th position in issuing KCC, with 2.42 per cent of issued KCC in the country. UP ranks first with approximately 20 per cent of total issued KCC. Of total 36.41 lakh KCCs issued in the state, 47 per cent are

issues by commercial banks, 37 per cent by cooperative banks and 16 per cent by RRBs.

## National Agricultural Insurance Scheme (NAIS)

The National Agricultural Insurance scheme is being implemented in Haryana state from Kharif, 2004. Haryana stands 15th in the country with 635778 farmers and 769038.32 Ha, while Maharashtra stands 1st with most maximum number of farmers covered under the scheme.

Farmers covered and area insured under NAIS upto Rabi-2015-16



## Major State Schemes

The State Government has launched Pradhan Mantri Fasal Bima Yojna to mitigate losses in the farm sector and provide financial support to the farmers in the event of failure of notified crops namely, paddy, bajra, maize and cotton in Kharif and wheat, barley, gram and mustard in the Rabi season.

The Government is also promoting organic farming through adoption of organic villages by making cluster of 50 acre each and arranging certification under "Paramparagat Krishi Vikas Yojana". To prevent burning of crop residue and its better management, the Government has proposed an action plan for straw management equipments, training and demonstrations. The Government's "Horticulture Vision" is to double the area under horticulture and triple the horticulture production in the State by 2030. 15 percent of the total cultivated area is envisaged to be brought under horticulture, up from the existing 7.5 percent.

The Government has established the first Horticulture University in Karnal with three Regional Research Stations and envisions further international collaborations with global institutes and universities. Haryana State Co-operative Supply and Marketing Federation Limited (HAFED) procured Moong for the first time in the history of the State this year. State Advisory Prices being paid for Sugar Cane i.e. Rs. 320, Rs. 315, Rs. 310 for early, middle and late varieties of Sugar Cane are the highest in the country.





### SCHEME FOR PROMOTION OF SUSTAINABLE AGRICULTURE – STRATEGIC INITIATIVES

A plan scheme to promote sustainable agriculture by extension through mass media in an integrated manner, Seed Treatment Programme for Rabi and Kharif Crops and Awards on the outstanding farmers villages and districts.

### SCHEME FOR PROMOTION OF CROP DIVERSIFICATION

Crop diversification is a sub Scheme of RKVY and is intended to promote technological innovations for sustainable agriculture and enable farmers to choose alternatives for increased productivity and income.

### SCHEME FOR STRENGTHENING OF AGRICULTURAL EXTENSION INFRASTRUCTURE

The objective of the scheme is not only to ensure maintenance but also to improve and pursue the mandates of training and visit programmes of Agriculture Extension.

### SCHEME FOR AGRICULTURAL ENGINEERING AND TRIAL BORING

This scheme will help to provide fuel for cooking purpose and organic manures to rural household through the construction of family type biogas plants and hence mitigate drudgery of rural women and improve sanitation in villages

### SCHEME FOR QUALITY CONTROL ON AGRICULTURE INPUTS

A plan scheme to check malpractices/ adulteration in Fertilizer/ Pesticides, Seeds and to ensured good quality of agricultural inputs to the farmers.

### SCHEME FOR PROVIDING SOIL AND WATER TESTING SERVICES TO THE FARMERS

The scheme aims to 34 Soil Testing Laboratories by providing chemicals, glass-ware equipment's and other requirements

### SCHEME FOR TECHNOLOGY MISSION ON SUGARCANE

a State Plan Scheme which aims to increase area, production, productivity of sugarcane to meet domestic demand of the country and to bring reduction in cost of cultivation and pesticides consumption for enhancing the competitiveness in the Global market

### SCHEME FOR NATIONAL PROJECT ON MANAGEMENT OF SOIL HEALTH AND FERTILITY

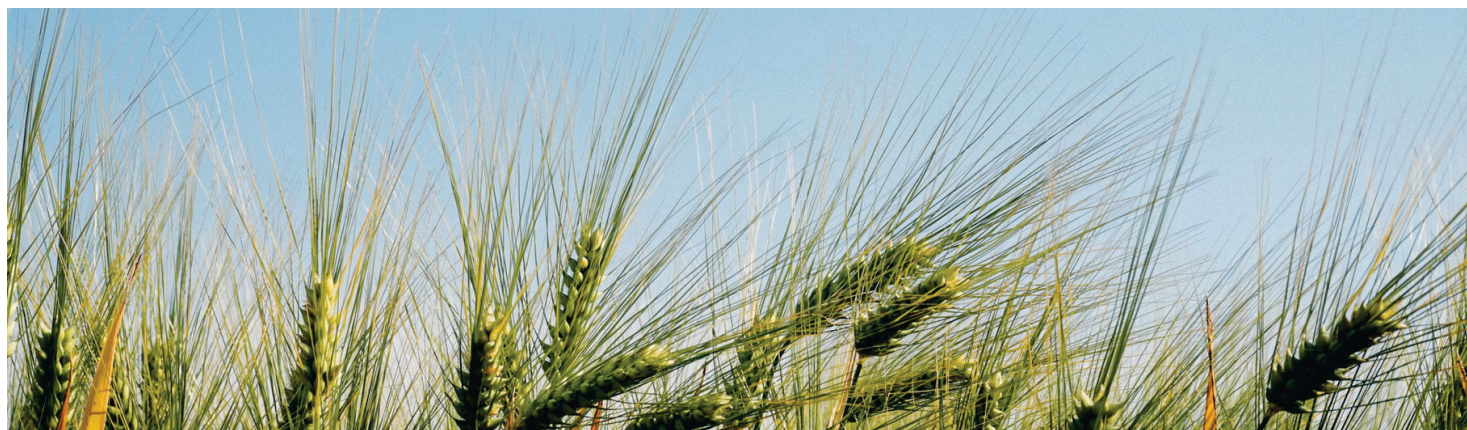
To know the optimum doses of chemical fertilizers for different soils and crops for balanced and judicious use of chemical fertilizers through free soil testing for farmers.

### SCHEME FOR PROVIDING IMPLEMENTS/MACHINERY ON SUBSIDY

The main objective of the scheme is to increase the productivity and production of crops, increase the income of SC farmers and employment generation of SC Farmers by establishing implement banks having latest agriculture implements/machinery on subsidy.

### SCHEME FOR INTEGRATED WATERSHED DEVELOPMENT AND MANAGEMENT PROJECT

Management of natural resources for enhanced agriculture productivity on sustainable basis by conservation, development & sustainable management of resources and enhancement of agriculture productivity and production in a sustainable manner.



# Way Forward

- The State should not be limited to production of few crops. It can become a strong stakeholder in export market for many agricultural products and hence must be proactive towards agricultural diversification
- Resource conservation technologies have to be adopted to reduce the cost of cultivation and to ensure efficient management of resources.
- The land holdings of the farmers are becoming smaller and smaller with further division and fragmentation. Farmers need efficient technologies for enhancement of productivity and profitability on sustainable basis.
- There is an increasing demand of organic food within and outside the country. However, there is a fear in the minds of farmers with regard to productivity, income etc. through organic farming.
- There is need to shift the focus from crop/commodity to multi enterprise based farming system's approach in order to increase employment, income and livelihood security of small holder farmers.
- There is a need to modify existing implements/develop new implements as per local needs of small holder farmers.
- There is inadequate knowledge of net-house/green-house technology and the structural designs. Also there is need to accelerate protected cultivation in the State.
- Presently agricultural produce markets working under Agricultural Produce Markets Act are the only platform for sale of farmers produce. Provision for development of private/ SHG markets will lead to competition and also improve marketing efficiency.
- Market forecasting should be an effective way to help farmers in taking right decision in planning production and sale of their produce.
- Contract farming is an important means of transfer of technology, minimizing price risk and linking farmers to market.
- Development of Krishi Vikas Kendra in each block to help the farmers can prove to be a revolutionary step.
- Scope for development of peri-urban agriculture and protected cultivation of good quality vegetables and flowers is another untapped /under-tapped opportunity for the farmers of Haryana
- Organic farming is another area for cutting down costs, improved soil fertility and increased farm income.
- Promote qualitative improvement and excellence in agricultural research and education to build capacities in agriculture space is crucial.
- Establishment of rural agro-processing complexes with required infrastructure, including development for transport and cold chain etc. need to be a priority.
- Farmers' lack knowledge of latest technologies and various government schemes, this deficit of information limits their ability to make profit.









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