



Agricultural storage Infrastructure in Haryana : An Overview

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Abstract

Saving grain equals producing grain. When one considers the amount of agricultural food that is wasted or lost after harvest as a result of poor supply chain management, these wise statements seem like ordinary proverbs. Post-harvest losses of this magnitude can be attributed to a number of factors, including inadequate warehousing, redundant food processing technologies, and a lack of value-added services for farmers due to a lack of scientific storage facilities and inefficient transportation. For their own consumption and usage, farmers are believed to hold roughly 65 percent of their entire harvest in a rudimentary and unscientific fashion. “In 2016–17, Haryana had the third highest per capita income in India, at 214,509 (US\$3,300), compared to the national average of 112,432 (US\$1,800). The state's estimated GSDP of US\$95 billion in 2017-18 (52 percent services, 30 percent industries, and 18 percent agriculture) is boosted by 30 SEZs (mainly along DMIC, ADKIC, and DWPE in NCR), 7% national agricultural exports, 60% of national Basmati rice export, 67 percent cars, 60 motorcycles, 50 tractors, and 50 percent tractors. A City Mayors Foundation poll ranked Faridabad ninth globally and third in India. With respect to IT growth and current technological infrastructure, Gurugram is India's No. 1 and No. 2 respectively It is surrounded by Himachal Pradesh to the north-east, the Yamuna to the east, Rajasthan to the west and south, and the Ghaggar-Hakra River to the north. Because Haryana borders Delhi on three sides (north, west, and south), it is included in the National Capital Region for planning and development reasons.

Keywords : technological infrastructure, agricultural, economy etc.

Introduction

Haryana became a state on November 1, 1966, with less than 2% of India's population. This state covers around 1.37 percent of the total land area. In just three decades, Haryana has carved out a niche for itself. Haryana, often known as the Bread Basket of India, has been in the forefront of adopting new agricultural technology and is one of the top producing states in the country.

There is a central pool from which the remaining amount is provided and transported to a designated warehouse or mandi for purchase or delivery. The procurement agency picks up the



quantity that the farmer has put in the central pool and delivers it to the FCI or another designated warehouse on the farmer's behalf". Allotees such as the Targeted Public Distribution System (TPDS) and wheat mill owners frequently fail to take the stock that is held in warehouses. If the stock is not properly cared for during long-term storage, it will suffer harm. The warehouse's storage space cannot be used for new arrivals of the upcoming season since the current stock has not been moved.

SCENARIO IN HARYANA AGRICULTURE

- Haryana is self-sufficient in food production and ranks second in India's central grain pool. In 2015-16, the state contributed 14% to the Central Pool and produced 163.33 lakh MT food grain.
- Grass, linseed and mustard are the principal Rabi crops. 86% of the land is arable and 96% is cultivated. The property is irrigated via tube wells and canals. Agro-forestry, agro-horticulture, and agro-forestry are best suited to the state's rain-fed lands (1/5th). The state's proximity to the NCR enables easy access to major marketplaces and the international airport. Agri-food crops with substantial agricultural and non-agricultural possibilities include rice and wheat. Major horticultural crops include cucumber, onion, potato, tomato, guava, and kinnow. Agroforestry and arid horticulture have great potential. 37 mandis in the state are now connected to e-NAM. State declared 'Fish Disease Free' by Indian Council of Agricultural Research

GSVA by sector

Haryana's economy is structured like the countries. Secondary sector (Industry) contributed 32% to the state's GSVA in 2015-16, followed by tertiary sector (Service) at 49%. (Agriculture and allied). Agriculture and allied industry contributed 19% to the state's GSVA in 2015-16, with Rs 83.9 thousand crore.

State agriculture GSDP

Agriculture's part in the state's economy has dwindled. Agriculture and allied sector's proportion of GSDP fell from 60.7 to 21.3 in 2006-07 and then to 15.3 in 2013-14. The composition of state GSDP over time shows a diminishing percentage of agriculture and allied sectors due to a rising share of services.

From 2004-05 to 2015-16, the state's agricultural and allied sector GSDP grew 9.63 percent. Haryana ranks 19th among states in terms of agriculture GSDP proportion.

Global Food Grain Production



Haryana is sixth among the top ten producers of food grains, with a total output of 16.38 million Tonnes from 4.47 million Hectares. Wheat contributed 11.3 million tonnes and rice 4.15 million tonnes to the state's total food grain production. “Haryana produces around 12% of the country's wheat. In overall rice output, the state ranks 10th. The state also produces coarse grains like Jowar and Bajra.

Crop Area and Production

Horticulture crops cover 4.90 lakh hectares, or 7.58 percent of the State's total planted area. In 2015-16, the state produced 70.50 lakh MT of horticulture crops.

- **Fruits:** Haryana produces 737.82 thousand MT of fruit per year from an area of 60.92 thousand Ha, while UP produces 100.75 lakh MT.
- **Vegetables:** Haryana ranks 11th in overall vegetable output in the country with 61.57 lakh MT from 410.74 thousand Ha, whereas UP ranks first with 256.89 lakh MT.

Haryana ranked 11th in overall fertiliser consumption in 2015-16, with 1347.4 thousand tonnes. 77 % of overall fertiliser use is nitrogen, 21.5 % is phosphoric, and 1.5 % is potassium.

Agriculture's population

Although agriculture's contribution of the GSDP is decreasing, most people still rely on agriculture for their livelihood. According to the 2011 census, Haryana has the 15th greatest agricultural population (44.96%). 38% of the overall people working in agriculture do not own land.

Capacity of Operations

In Haryana, out of 16.2 lakh operating holdings, 67% are small and marginal, while only 3% are substantial. In 2010-11, the state averaged 2.25 hectares vs 1.15 ha nationally. The average holding size has been shrinking. Small holdings hinder farmers' ability to invest in new technology and increase yields.

Indebtedness

Despite the fact that 48% of farmers in the state are marginal, the state has the lowest rate of indebtedness (1.42%) in the country, whereas UP had the highest prevalence of indebtedness (17%) in 2013.

AGRICULTURE IS A MAJOR CONCERN IN HARYANA

Haryana, one of the states that has benefited from the green revolution, has made great strides in food production. The state's agricultural industry has seen significant transformations over



the previous few decades, with production and productivity both increasing dramatically. Now, rather than increasing food production and improving the livelihoods of farmers, agriculture is becoming a more technologically driven and dynamic profession in this state. Despite its accomplishments, the second generation of issues has resulted from this achievement.

- **Management of the Earth's resources**

soil deterioration, multiple nutrient deficits, low organic carbon content, and loss in total factor productivity have been reported in diverse production systems throughout the state. Soil Resources Non-farming uses of agricultural land are also a growing concern. Agriculture now utilises around 80% of the world's freshwater supply. About 60% of the State's water supply is suitable for long-term irrigation. The supply of irrigation water will continue to drop in the future because of the increased demand for fresh water for both home and industrial use. Haryana's over-exploitation of groundwater is becoming a major concern. About two-thirds of Haryana's groundwater is salty.

In most locations, climate change worsens the problems already encountered by agriculture, having an impact on both agricultural and livestock production systems. Increased crop stress due to the unpredictable climatic change means higher resource consumption and an increased risk of insect resistance and recurrence.

- **Improved Plant Growth**

Progress halted due to inadequate infrastructure and regulations that encouraged the adoption of HYV/Hybrids with production and protection technologies. Agricultural varieties and hybrids have played a major influence in increasing crop yield. The problem, though, is that agricultural yields have plateaued.

It's becoming increasingly difficult in Haryana to control diseases like yellow rust in wheat in the recent past. Similarly, weed control has become a serious issue as a result of the use of DSR and CA technology. Haryana has one of the lowest per-unit productivity rates for horticultural crops in the country, compared to other states.

- **Management and Value-Addition after harvest**

For perishable horticulture products such as apples and pears, there is a lack of storage, marketing, processing, value addition, and post-harvest handling infrastructure. Post-harvest losses in fruits and vegetables are exacerbated by inadequate cold chain facilities.



- **Farmers Face a Wide Range of Issues**

Even small and marginal farmers are being pushed into poverty by declining agricultural production and rising costs of cultivation as well as inadequate market realisations. Using high-quality seed resulted in a 15% to 20% increase in crop yields. Getting high-quality seed of improved varieties or hybrids to farmers in time for planting is a challenge that many farmers encounter.

Agricultural implements and farmer-friendly tiny instruments are either unavailable or the farmers aren't convinced of their effectiveness, resulting in higher labour costs and increased cultivation costs. Agribusiness is the only industry in which the price is set by a third party other than the producer. Even the farmers' profit margins are being eaten away by a long network of middlemen in the marketing process.

Lack of information about current agricultural technology and the environment, as well as yield discrepancies between research stations/Field Level Demonstrations and farmers' fields, result in a rise in the cost of cultivation and hence earnings. Farmers' inability to earn a profit is hampered by their lack of familiarity with current technology and government initiatives.

AGRICULTURE PROGRAMS SPONSORED BY THE GOVERNMENT

The federal and state governments have made and continue to make efforts to promote agriculture and make it more profitable and appealing as a career option for their citizens. Agriculture and agribusiness in the state have been given a huge boost by the introduction of several programmes and schemes to improve production, value-addition, market links, investments and collaborations.

- **Borrowing for Agriculture**

Agriculture loans were Rs. 877527 crore in India in 2015-16. With 5.67 percent of the year's total disbursement, Haryana is the country's 8th-largest disburser of agricultural loans. Most of the money that goes out in the state is used for crop loans, while the rest is used for long-term loans.

- **The Kisan Credit Card**



Using the Kisan Finance Card scheme (KCC), the Indian government made it easier for farmers to get the credit they need for production by introducing the programme in 1998. With 2.42 percent of the total granted KCC, Haryana ranks 15th in the country. With almost 20% of the total KCCs issued, Uttar Pradesh takes the top spot. Commercial banks issue 47% of the 36.41 lakh KCCs issued in the state, cooperative banks issue 37%, and RRBs issue 16%.

- **Agri-Insurance Program of the United States (NAIS)**

Haryana will begin implementing the National Agricultural Insurance programme in the upcoming Kharif growing season. With 635778 farmers and 769038.32 hectares, Haryana ranks 15th in the country, whereas Maharashtra has the most farmers covered by the programme.

- **Schemes of State of Major Importance**

During the Kharif and Rabi seasons, in the case of crop failure in any of the designated crops, such as rice, bajra, maize, cotton, or wheat, the state government has launched Pradhan Mantri Fasal Bima Yojna to assist farmers in mitigating losses.

Under the Paramparagat Krishi Vikas Yojana, the government is encouraging organic farming by adopting organic villages of 50 acres each and certifying them. An action plan for straw management equipment, training, and demonstrations has been recommended by the government in an effort to avoid the burning of crop leftovers. Horticulture Vision aims to quadruple horticulture production in the state by 2030, doubling the area under cultivation. The goal is to increase horticulture's share of the overall cultivated land from 7.5 percent to 15 percent. There is a new horticulture university in Karnal with three regional research stations and plans for further international connections with global institutions and universities. It is the first time in the history of the state that Haryana State Co-operative Supply and Marketing Federation Limited (HAFED) has purchased Moong. For early, medium, and late kinds of Sugar Cane, the State Advisory Prices paid are the highest in the country (Rs. 320, Rs. 315, Rs. 310)".

Conclusion

Food grain waste that could otherwise be used to feed millions of hungry people will continue to rise unless extreme steps are done to increase the storage capacity of food grains. In order to ensure food security in the country, it is imperative to reorganise the government's food grain



storage management and hold people and agencies accountable and responsible for their roles in ensuring that food is safe and available. Using MIS to integrate all of India's storage operations will help to ensure that timely choices are made to make the most use of currently available capabilities.

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