

# Food Safety and Farming in Rohtak District (Haryana): A Geographical Analysis

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## ABSTRACT

Legislature of India has propelled half way supported National Food Security Mission in the State from Rabi 2007-08. Two harvests in particular wheat and heartbeats have been secured under the Mission. It has been visualized to concentrate on regions having potential yet moderately low degree of profitability. Seven regions of the state to be specific Ambala, Yamunanaga, Bhiwani, Mahendergarh, Gorgaon, Rohtak and Jhajjar have been secured under NFSM-Wheat. If there should be an occurrence of heartbeats, five regions for example Bhiwani, Hisar, Sirsa, Rohtak and Sonapat were secured during 2007-08 to 2009-10. From the year 2010-11, every one of the locale have been secured under NFSM-Pulses. The territory of Haryana saw an astounding development since its creation. Today Haryana comes one of created conditions of India. In any case, Haryana is topographically a little State, however it contributes 3.5 percent in the National Gross Domestic Product at consistent costs (2004-05) in 2013-14. The GSDP of state at factor cost at current costs has ascended at the pace of 14.45 percent during 1980-81 to 2010-11.

## 1. Introduction

Everybody in the food generation chain, 'from the stable to the table', or from pre-reap to post-gather, has a job and obligation in guaranteeing the safety of the food supply. Makers around the globe perceive that food safety starts with them and pay attention to this obligation. Guidelines on food safety may not be as evident on the homestead or farm as they are in preparing plants, stores or eating foundations, yet they as of now exist in numerous regions. While guidelines address food safety issues by authorizing principles, makers are, as a rule, finding a way to guarantee food safety by setting up species explicit projects to manage potential concerns. The principles that administer universal exchange are additionally worried about food safety and influence the activities of makers and food processors.

'Food safety' for the most part alludes to all risks that may make food harmful to the buyer, while 'quality' incorporates those properties that impact the estimation of an item. Food quality ordinarily has a scope of qualities that might be worthy and this range is regularly determined by market powers. Makers get value motivations, positive or negative, that are proposed to mirror the worth that buyers place on their items. Then again, food safety is viewed as non-debatable. It is normal by buyers and consequently administered by government authorities. Therefore, a mixture of national and worldwide organizations and guidelines look to secure the safety of the food supply in many nations.

Haryana is known as 'bread bushel' of India. The state has different agro-environment and trimming design. The primary rural harvests created in the state are rice, wheat, sugarcane, cotton, oil seeds, pearl millet, gram, and grain. Over 60% fare of Basmati Rice from India

happens from Haryana. Throughout the years, Haryana has sought after dynamic approaches for fortifying agriculture by improving ventures, advancing innovative work framework, open appropriation framework, irrigation advancement, land obtaining arrangement, sponsorships towards credit and power

use, foundation like street, advertise, control age and supply, and so forth. The selection of such dynamic best in class arrangements joined with open farming network has added to an extremely consistent development for the State in agriculture. The portion of agriculture area (essential division) in the state's GSVA is around 19.5%. The part has shown colossal development of 7% in 2016-17 from 3.2% in 2015-16. Haryana is developing as one of the main states in the field of horticulture. The state is additionally endeavoring towards improved development of other unified exercises of agriculture, for example, fisheries, creature cultivation, ranger service, irrigation. Proceeding, the state is advancing expansion in the ranch division, improving innovative work framework and redesigning foundation according to worldwide norms to bridle the developing open doors in the agriculture segment of the state.

### 1.1 What Characterizes an Effective Preventive Food Safety System?

In his workshop initial comments, Ned Groth<sup>1</sup> clarified that, while arranging this workshop, Forum individuals built up a lot of key criteria for a viable preventive food safety procedure or framework. A defensive food safety framework ought to be:

- systematic (i.e., from homestead to table);
- risk-based (i.e., with set needs and set up risk management rehearses);
- transparent and participatory;
- cost-powerful; and
- minimally problematic of exchange (which is a commitment of all nations in any case, according to the SPS Agreement<sup>2</sup>).

These criteria filled in as a structure for the day's discourse. The initial three criteria specifically figured noticeably over the span of the workshop, with an accentuation on:

- the requirement for progressively straightforward and powerful correspondence among all partners and the

requirement for all ranch to-table partners to take an interest in food safety management;

- the need to consider the worldwide extent of the ranch to-table food creation process; and
- the requirement for science-and information based basic leadership when endeavoring to improve the safety and lower the risks of food creation.

Cost-viability and the commitment to negligibly disturb exchange were referenced throughout the workshop discourse yet were not expounded on to about the degree that different criteria were.

Likewise in his introductory statements, Groth underlined that advancement can be accomplished and that even troublesome food safety issues are resolvable. For instance, he recounted to an episodic anecdote about certain shipments of shrimp from Southeast Asia being declined section into the United States and European Union (EU) various years back in view of the identification of unsatisfactory degrees of chloramphenicol residue.<sup>3</sup> The rejected passages devastatingly affected shrimp send out all through Southeast Asia. Throughout the most recent five years, in any case, the Vietnamese shrimp industry has made a marvelous rebound, in spite of starting issues in instructing the a great many low-tech and generally ignorant shrimp ranchers about what they expected to do to address the issue. To a great extent through specialized help gave from a few European nations, the Vietnamese government has built up a reconnaissance, observing and expository limit that basically did not exist at any level five years back. Today, the United States and EU represent practically 50% of all Vietnamese shrimp sends out.

A bunch of different examples of overcoming adversity were told somewhere else throughout the day's dialog. For instance, at one point during the day's dialog it was noticed that many creating nations that one may not really hope to have advanced food safety frameworks set up are in any case ready to meet the exceptionally high EU import models. It was recommended that maybe this is a result of direct working connections among sending out and bringing in nations and the organizations in that.

Groth's early on comments were trailed by Taylor's keynote address: Institutional Roles in Risk-Based Management. A key message of Taylor's discussion was that food safety is as much an institutional test as it is a logical, business, or administrative test. The "uplifting news" concerning food safety, Taylor stated, is that approach producers are "getting it." Food safety is on the radar screen and, truth be told, Americans are at a defining moment in their history as for having the chance, means, and political will to improve our food safety framework. Be that as it may, institutional jobs duties still should be explained, institutional limit should be reinforced (so every foundation can meet its obligations), obstructions to data trade and coordinated effort should be separated, and new instruments for cooperation should be made. To put it plainly, even with the expanded arrangement center around food safety, undeniably more work should be done so as to encourage an institutionally incorporated, frameworks based way to deal with food safety. Taylor's accentuation on the institutional idea of the test of food

safety was a noteworthy hidden subject of the rest of the workshop introductions and talks.

## 2. Farming

Farming is an item not only of physical setting, yet additionally of artificial structure. The system of possession and propensity of the land, the size of homestead, the ranch laborers, the rural executes, the degree of irrigation, the area of market, and so forth all impact the utilization of rural land. Human skills and frames of mind are essential elements for horticultural modernisation and advancement in any area or domain. So agriculture of a region isn't influenced by the physical factors yet by the financial factors likewise, for example, populace, irrigational offices, rural technology, size of land property, utilization of substance composts, utilization of high yielding assortment of seeds, and so on, which assume significant job for rural advancement. De, Wilde (1967) has expressed in his investigation that human stock is the crucial financial asset and through the use of this asset that improvement of agriculture like some other kind of monetary action is conceivable. Morgan (1969) saw that the job of human and social factors in agriculture is significant in the event of the tropical world, where monetary advancement to a great extent suggests rural improvement. And still, after all that, and lamentably along these lines, a large portion of the investigations of tropical agriculture start with the order of the land use or the subsistence idea of tropical agriculture, rather than with the rancher himself who, truth be told, is the 'prime mover' in any advancement procedure. In this manner the fluctuating physical conditions are without a doubt in charge of varieties in provincial examples of farming wonders.

### 2.1 Analysis of Food Grain Crops in Haryana

Haryana has gained exceptional ground in the field of agriculture since its beginning. The complete edited zone which was 4599 thousand hectare in 1966-67 expanded to 6489 thousands hectare in 2011-12. The all out agriculture generation of food grains, which was 3298 thousand tons in 1966-67 expanded to 16354 thousand tons in 2012-13. The reason of this gigantic presentation in agriculture generation is increment in efficiency of real yields during the Green Revolution time frame, which make Haryana, a state who is assuming a significant job in country's food security. The State is second biggest supporter of the focal food grains pool. The all out food grains efficiency in the State is 1.8 occasions higher than the normal at nation level. On the off chance that we see land use example of state, 80% of absolute region under development (Figure:1). The gross trimmed zone in the State was 65.05 lakh hectare in 2010-11. About 3.069 m ha (84 % of developed region) was watered and the trimming power had been more than 184 percent. The portion of woodlands, land not accessible for development, lasting fields and other nibbling lands altogether geological territory of Haryana has declined over the period. The portion of forestland has 50 dropped from 3.78 percent to 1.01 percent since 1966. This isn't fitting for the feasible advancement of agriculture in the state.

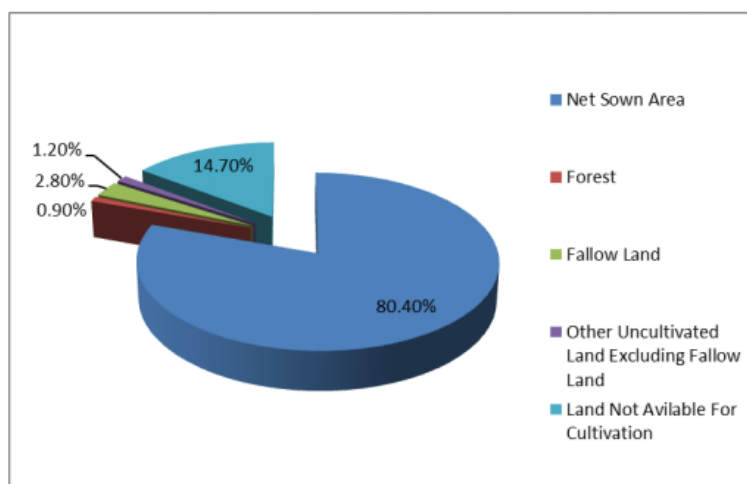


Figure: 1 Land Utilization in Haryana

### 3. Food safety of India: Role of Rohtak

Reduction of neediness and food security involves improvement of agriculture efficiency particularly in nation like India where half of the populace is working in this division. Development of agriculture adds to accessibility of food as well as assumes a significant job in access of food and satisfies nourishing substance of populace. At the season of independence India’s food security concerns were centered distinctly around accessibility of food grain and to decrease India’s reliance on imports. The new procedure introduced around then was planned for „maximizing the generation of cereal” involved in building a strong establishment of food security on three key components, viz. (an) arrangement of an improved technology bundle to the farmers; (b) conveyance of modern farm inputs, specialized skill and institutional credit to the farmers; and (c) affirmation of a gainful marketing and pricing condition for farmers brought

about Green insurgency. During 1980’s India maintained adequate degree of food grain creation. Be that as it may, a few concerns have emerged regarding the agreeable circumstance as far as accessibility of food grains made by Green Revolution lately because of stagnation in agriculture area. In this segment we will think about the exhibition of food grain part by and large Indian economy. The development rate is determined for five timespans starting from 1966-67 to 1980-81, when the seeds of Green unrest was planted in India, 1981-82 to 1990-91, when the endeavors during green unrest period.

Get more extensive inclusion; from 1991-92 to 2000-01 covering the timeframe of early advancement, when the arrangement center move away from the agriculture and 2001-02 to 2006-07. Development rate for 2007-08 to 2011-12 determined independently to see the presentation during eleventh multi year plan in which agriculture got unique consideration of arrangement creators.

Agriculture development, which is indispensable for the food security of the nation, can't keep pace with the monetary development. The development during 1991-92 to 2011-12 2.9% during 1991-92, much lower than focused 4 percent in multi year plans. In post change time GDP of agriculture diminished while non agrarian GDP increased fundamentally.

Agriculture GDP is 5.8 percent in eighth multi year plan; diminish to about 2.55 percent in tenth arrangement, while non-agriculture GDP increased 5.45percent to 9.3 percent during this period. The proportion of development pace of genuine horticultural GDP to that of all out genuine non-rural GDP was most minimal (0.27%) in tenth Five Year Plan period contrasted with that in eighth Five Year Plan period (1.07%), indicating deceleration in farming development contrasted and non agriculture GDP. Agriculture developed at the pace of 3.3 percent in eleventh Five Year superior to anything ninth and tenth Five Year Plan in view of unique projects like National Food Security mission and Rashtriya Krishi Vikas Yozana (RKVY); however beneath the objective 4 percent. Inability to arrive at the objective development is one of the reason of high inflation in food costs and other essential items that persevere in spite of the ongoing lull in by and large GDP development which increased the battle of poor classes to access to food and make food security circumstance increasingly powerless.

Creation execution of Indian agriculture during the most recent decade portrays that there is critical increase in the generation of food grain which arrived at 241.6 million tons during 2010-11 which was around 74.23 million tons in 1966-67. the pattern in food grain generation from 1966-67 to 2012-13. The figure demonstrates that there was noteworthy increase in food grain generation, which makes the nation food secure. Colossal increase was seen wheat and rice creation since 1966-67. In 1966-67 the generation of rice was 30.44 million tons, it increase to 53.63 million tons in 1980-81, and 74.29 million tons in 1990-91. In 2001-02 generation of rice was recorded 93.34 million tons which came to 105.30 million tons in 2011-12. The wheat generation likewise saw gigantic increase. It was 11.39 million tons in 1966-67 and increase to 36.31 million tons in 1980-81, and 55.14 million tons in 1990-91. In 2001-02 creation of wheat was recorded 72.77 million tons which came to 94.88 million tons in 2011-12. Heartbeats and coarse grain creation did not develop in a similar stage during this period. The real reason was much center moved to rice and wheat creation. The coarse grain creation recorded 24.05 million tons in 1966-67 and 29.02 million tons in 1980-81, and 32.70 million tons in 1990-91. In 2001-02 generation of coarse grain was 31.08 million tons which come to 40.04 million tons in 2012-13. The beats creation likewise saw extremely moderate development. It was 8.3 million tons in

1966-67 and increase to 10.63 million tons in 1980-81, and 14.26 million tons in 1990-91. In 2000-01 creation of heartbeats declined to 11.08 million tons yet enlisted development after 2007-8 and came to 17.09 million tons in 2011-12.

### 3.1 Contribution of Haryana in India's Food Economy

The post independence period in India encountered a truly extraordinary development of farming creation following a time of stagnation. Haryana alongside Punjab have been main driver of the remarkable development and assume significant job in securing food security of India. Haryana which was before a piece of Punjab presently assumes a significant job in nation's food-grain generation. Before the arrangement Haryana was less grown piece of previous Punjab. During 1952-53 to 1964-65 yearly development pace of yield of Punjab was, 5.6 percent, this was most noteworthy among the all States or more the national normal. Within the State, be that as it may, the two zones which currently structure the States of Haryana and Punjab had various paces of development. Haryana locale enlisted the development pace of 2.8 percent which was far beneath the Punjab district. Its net watered zone was 3.54 percent against 58.48 percent of Punjab. Along these lines the region presently forming Haryana State was moderately in reverse.

Haryana State appeared at the same time with green transformation for example 1966-67. After the development Haryana rise as leading State in field of agriculture generation. The agrarian economy of Haryana is dominated by food grains.

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Haryana has developed as one of the significant food grains producing States in the nation. Consisting just 2.3 percent of nation's absolute zone, Haryana has been contributing fundamentally to the food bin of the nation.

### 4. Conclusion

Cropping example express the portion of various harvests in farmer's complete developed territory in an agrarian year. It is a significant indicator of farmer's basic leadership capacity which observes dynamism over existence because of the change in physical and financial elements. Cropping example alludes to the proportionate region under various harvests during a farming year. It implies the arrangement of harvests at a point of time. Cropping example must guarantee the best productivity of man, manures, irrigation and different inputs. It is dynamic idea as no cropping example can be reasonable for all occasions to come. An effective cropping example infers the most proficient utilization of arable land, endless supply of water assets, bio-synthetic inputs and such. What's more, it must offer the cultivators the likelihood to amplify agrarian profitability per unit territory per unit of time. A cropping example is determined by the interaction of physical and financial factors over some stretch of time. No cropping example can be useful for all occasions to come. In any case, there is often a propensity for the cropping example to settle over some stretch of time in various agro-climatically homogeneous farming territory.