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# **Improved and High Yielding Wheat Variety HD-2967 Change the Wheat Production Scenario in District Bijnor (U.P.)**

**K. K. Singh<sup>1\*</sup> and D. P. Singh<sup>1</sup>**

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## **ABSTRACT**

Wheat Variety HD-2967 was disseminated through Front Line Demonstration and other extension methodology at farmers field in district Bijnor. The demonstration conducted during 2014 & 2015. After 2015 for more popularization of this technology we choose the other extension methodology. The demonstrations conducted and other extension methodology (from 2014 to 2019) were considered for the study. The adoption of wheat variety HD-2967 was significantly increased in farmers due to higher productivity, which ultimately resulted in increasing farmers income.

*Keywords: HD-2967; performance and adoption.*

## **1. INTRODUCTION**

Wheat is the pre-eminent among the world's crops with regards to its antiquity and its importance as a staple food of mankind. Thus wheat plays an important role in food security and poverty alleviation as a strategic crop and has an important role in economy [1] ICARDA Aleppo, Syria. Blum [2] suggested that breeding for tolerance to drought involves combining good yield potential and the selection of traits that provide drought stress tolerance. India one of the greatest success stories of green revolution is the second largest producer of wheat in the world after china and contributes more than 12% to the global wheat basket. Wheat is the second most important crop after rice in India. In India wheat is grown in about 314.65 lakh ha area with an average productivity of 2750 kg /ha (2014-15), according to Annual Report of Department of Agriculture, Cooperation & Farmers Welfare, Ministry of Agriculture & Farmers Welfare Government of India-2016-17. Out of which around one-third (11.0 m ha) lies in the state of Uttar Pradesh alone. The productivity of the state is close to the national average as the major constraints are cultivation of old low yielding and disease susceptible varieties, and adoption of poor wheat production technologies.

The yield and productivity of wheat varieties is less or stagnant due to farmers unawareness about high yielding varieties and also non availability of varieties having significantly higher yield as compared to the existing varieties under changing climatic conditions. The choice of right varieties under Irrigated condition is one of the crucial points determining the yield of wheat.

Bijnor district, total area under wheat is about 1, 50,000 ha (1, 18,000 ha in the year 2014). The choice of right varieties is one of the crucial points determining the yield of wheat. The yield and productivity of wheat varieties is less or stagnant due to farmers unawareness about high yielding varieties and also non-availability of varieties having significantly higher yield as compared to the existing varieties under changing climatic conditions.

For this contests the Krishi Vigyan Kendra, Bijnor first time introduced high yielding wheat HD-2967 in district. Variety HD-2967 is developed by IARI, New Delhi and released during 2011. The plant stature

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<sup>1</sup>Krishi Vigyan Kendra, Nagina (Bijnor), U.P., India.

\*Corresponding author: E-mail: krishna.singh1976@gmail.com;

is semi dwarf, Resistant against yellow rust and leaf blight and tolerant against heat. In terms of grain quality traits HD 2967 has excellent chapati making quality and high iron and zinc content.

## 2. METHODOLOGY

Front line demonstrations were conducted during 2014 and 2015 in district Bijnor, at 50 farmers field for evaluation of performance, effectiveness and area adoption of HD-2967 in district comparison to farmers practice. After 2015 KVK promoted this technology through other extension tools for more popularization of this technology continuously.

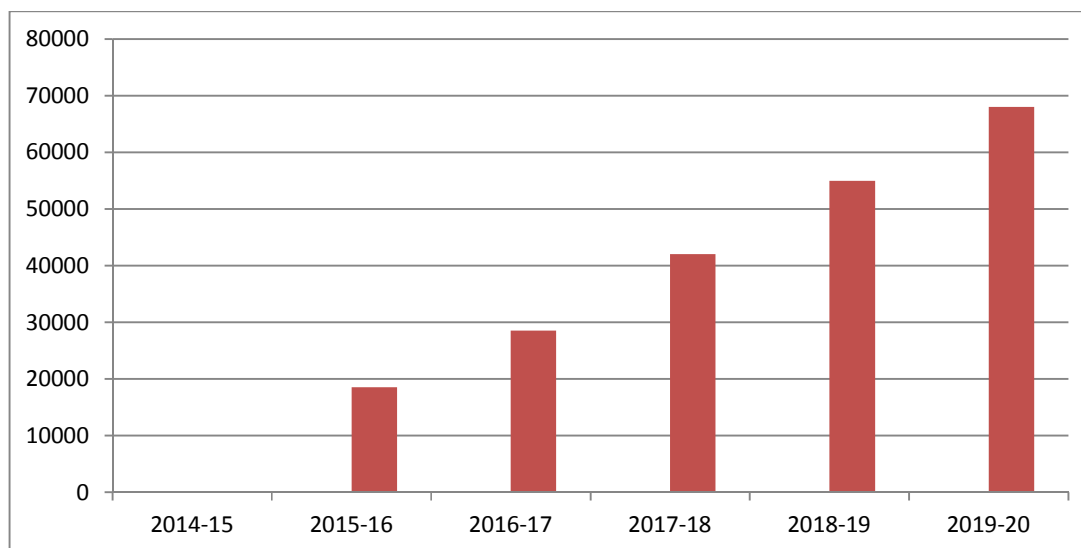
The yield data from front line demonstration, as well as farmers practice were recorded by representative samples from different locations.

## 3. RESEARCH AND DISCUSSION

The average yield at farmers field was recorded 54.25 q/ha with the cost of cultivation of Rs. 43750/-. The average net profit per ha was recorded Rs. 83356.00/- . Due to disease free, high yield and give better yield in adverse condition the area under this variety has now spread to more than 68000 ha and fully replace Var.PBW-343 from district.

Adoption of HD-2967 has significant impact on seed yield vis a vis area increasing. Yield increased in field due to adoption of newly high yielding released variety. Adoption ranged ( in ha) 0.00 to 68000 ha within five year with 100% replacement of old and low yielding varieties (Table 1). Rana et al. (2002) reported that the demonstration is quit successful in farmer practice. In 2011 Singh et al. [3] also reported adoption percentages of basmati rice variety Pusa Basamti -1401 increased in district. Singh et al. [4] also confirmed these results.

**Table 1. Area adoption of wheat variety HD-2967 in District Bijnor (Uttar Pradesh)**



Year	Yield (q/ha)	Area Coverage (ha)
2014-15	48.83	Starting year
2015-16	54.25	18500
2016-17	56.45	28500
2017-18	55.00	42000
2018-19	54.35	55,000
2019-20	--	68,000

Table 2 shows the KVK efforts for more popularization of wheat variety HD-2967 among the farmers. More effective extension tools are Frontline Demonstration, where farmers come at demonstration farmers field and see the performance of the technology and learn about technology.

**Table 2. Initiatives by the KVK for the popularization of HD-2967**

Programme		Number	Participant
OFT & FLD conducted		50	50
Capacity Building	For Farmers	10	300
	For Extension Personals	05	50
Literature Developed & distributed	Extension Literature	10	12000
	Training Manual	02	200
	Buletin	03	100
	Popular Articles	01	--
Electronic & Print Media	TV	05	-
	Radio	03	-
	News Paper	65	-
Field day		05	525
Lecture Delivered		78	32000

#### 4. CONCLUSIONS

The 50 demonstrations, conducted at farmers field during 2014, and 2015 resulted in higher yield and higher cost benefit ratio of HD-2967 led to higher adoption. The area under this variety has now spread to more than 68000 ha in five year and successfully 100% area of old varieties was replaced in district by this variety. The demand of quality seed of this variety is also increasing which has led to participatory seed production at farmer's field.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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**Biography of author(s)**



**Dr. K. K. Singh**

Krishi Vigyan Kendra, Nagina (Bijnor), U.P., India.

**Research and Academic Experience:** Above 12 Years.

**Research Area:** Evaluation and Transfer of Technology.

**Number of Published papers:** Published 24 Research papers, 19 Book chapters, 07 Training manuals, 25 Popular articles, 04 Institute level booklets and above 40 extension bulletin/ literatures.

**Special Award (If any):** Young Scientist Award-2010, Young Scientist Associate Award-2018, Best KVK Award-2011 (For my innovative technology), Certificate of Recognition for contribution in promotion of agriculture technology-2012, Best Research Paper and Paper Presentation Award-2011.

**Any other remarkable point(s):** Technology/Variety Developed:, Participatory Seed Production system-2008 Development of Farmers as Extension Agent-2008, Window Opening System in mango Orchard-2009, Nagina Vallabh Basmati-1 during 2018.



**Dr. D. P. Singh**

Krishi Vigyan Kendra, Nagina (Bijnor), U.P., India.

**Research and Academic Experience:** Above 23 Years.

**Research Area:** Evaluation and Transfer of Technology.

**Number of Published papers:** Published 17 Research papers, 13 Book chapters, 07 Training manuals, 53 Popular articles, 04 Institute level booklets and above 30 extension bulletin/ literatures.

**Special Award (If any):** Outstanding Scientist Award- 2019, Scientist of the Year Award- 2019, Best Mobilizer Award-219, Outstanding Achievement Award-2018, Excellence in Communication Award-2018.