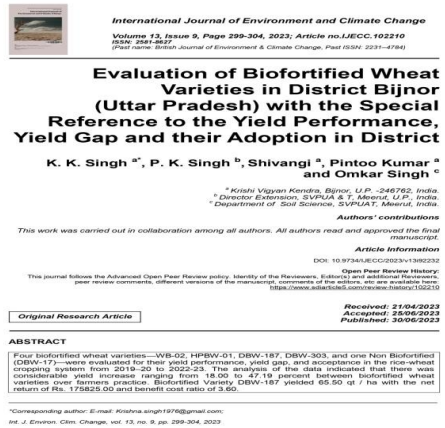
Publication

SN	Title of paper	Name of Author	Department of the Teacher	Name of th Journal/ Magazine/ New Paper	Year of Publication	ISSN No.	
	Research Paper						
1	Evaluation of Biofortified wheat varieties in district Bijnor (UP) with the special reference to the yield performance, yield gap and their adoption in District	K. K. Singh , P. K. Singh, Shivangi, Pintoo Kumar and Omkar Singh	Directorate of Extension	International Journal of Environment and Climate Change Volume 13, Issue 9, Page 299-304; Article no. IJECC. 102210 (Past name: British Journal of Environment & Climate Change) ISSN No 2581-8627	2023	2581-8627	 *International Journal of Environment and Climate Change* *Volume 13, Issue 9, Page 299-304, 2023; Article no.IJECC.102210* *ISSN: 2581-8627* *(Past name: British Journal of Environment & Climate Change, Past ISSN: 2231–4784)* **Evaluation of Biofortified Wheat Varieties in District Bijnor (Uttar Pradesh) with the Special Reference to the Yield Performance, Yield Gap and their Adoption in District** K. K. Singh [a*], P. K. Singh [b], Shivangi [a], Pintoo Kumar [a] and Omkar Singh [c] [a] Krishi Vigyan Kendra, Bijnor, U.P. -246762, India. [b] Director Extension, SVPUA & T, Meerut, U.P., India. [c] Department of Soil Science, SVPUAT, Meerut, India. *Authors' contributions* This work was carried out in collaboration among all authors. All authors read and approved the final manuscript. *Article Information* DOI: 10.9734/IJECC/2023/v13i92232 Open Peer Review History: This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: https://www.sdiarticle5.com/review-history/102210 Original Research Article Received: 21/04/2023 Accepted: 25/06/2023 Published: 30/06/2023 ABSTRACT Four biofortified wheat varieties—WB-02, HPBW-01, DBW-187, DBW-303, and one Non Biofortified (DBW-17)—were evaluated for their yield performance, yield gap, and acceptance in the rice-wheat cropping system from 2019–20 to 2022-23. The analysis of the data indicated that there was considerable yield increase ranging from 18.00 to 47.19 percent between biofortified wheat varieties over farmers practice. Biofortified Variety DBW-187 yielded 65.50 qt / ha with the net return of Rs. 175825.00 and benefit cost ratio of 3.60. *Corresponding author: E-mail: Krishna.singh1976@gmail.com; Int. J. Environ. Clim. Change, vol. 13, no. 9, pp. 299-304, 2023
2	Analysis of yield performance and yield gap of biofortified mustard variety Pusa double zero mustard-31 with the special reference to adoption in district Bijnor, UP, India	Singh K.K., Singh P.K., Shiwangi and Singh O.	Directorate of Extension	International Journal of Agriculture Sciences, Volume 14, Issue 10, pp.-11774-11775	2022	--	 International Journal of Agriculture Sciences ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 14, Issue 10, 2022, pp.-11774-11775. Available online at https://bioinfopublication.org/pages/journalrva.php?id=BP.0000217 Research Article **ANALYSIS OF YIELD PERFORMENCEAND YIELD GAP OF BIOFORTIFIED MUSTARD VARIETY PUSA DOUBLE ZERO MUSTARD-31 WITH THE SPECIAL REFERENCE TO ADOPTION IN DISTRICT BIJNOR UTTAR PRADESH, INDIA** SINGH K.K.[1], SINGH P.K.[2], SHIWANGI[3] AND SINGH O.[3] [1]ICAR-Krishi Vigyan Kendra, Nagina, Bijnour, 246762, Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut, 250110, Uttar Pradesh, India [2]Directorate of Extension, Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut, 250110, Uttar Pradesh, India [3]Department of Soil Science and Agricultural Chemistry, Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut, 250110, Uttar Pradesh, India *Corresponding Author: Email - krishna.singh1976@gmail.com. Received: October 10, 2022; Revised: October 26, 2022; Accepted: October 28, 2022; Published: October 30, 2022 **Abstract**: Biofortified Mustard variety Pusa Double Zero Mustad-31 was disseminated through Front Line Demonstrations at farmer's field in Bijnor district. The demonstrations conducted during last three years (2018-19to 2021-22), were considered for the study. The adoption of Biofortified Mustard variety Pusa Double Zero Mustad-31 was significantly increased in farmers due to higher productivity, which ultimately resulted in more net return against existing farming technology. **Keywords**: *Biofortified, Mustard variety, Yield gap, Performance and adoption* **Citation**: Singh K.K., *et al.*, (2022) Analysis of Yield Performance and Yield Gap of Biofortified Mustard Variety Pusa Double Zero Mustard-31 with The Special Reference to Adoption in District Bijnor Uttar Pradesh, India. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 14, Issue 10, pp.- 11774-11775. **Copyright**: Copyright©2022 Singh K.K., *et al.*, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited. **Academic Editor / Reviewer**: Dr Nilprasad Namdeorao Jambhulkar **Introduction** Rapeseed-mustard is an important group of oilseed crops in India. It contributes 24.7% and 29.4%, respectively, to total area and production of oilseeds during 2018-19. Further, considering 25% contribution from secondary sources and 20-25% from rapeseed-mustard, the projected demand for this crop would be around 16.4-20.5 m t by 2030 from the current production of 9.26 mt. from the level of production of 33.50 m t during 2019-20. In India, the major rapeseed-mustard growing states are Rajasthan, Uttar Pradesh., Haryana, Madhya Pradesh., West Bengal., Assam and Gujarat accounting for 92.7% of the area and 95.8% of production during 2017-18 of which Rajasthan alone account for 36.6% and 40.9%, respectively, of the area and production [1]. In Bijnor district, Uttar Pradesh, India total area under Mustard is about 6000ha with average district yield 10.00 qt/ha. The choice of right varieties is one of the crucial points determining the yield and quality of Mustard. The yield and productivity of Mustard varieties is less or stagnant due to farmers unawareness about Biofortified and high yielding varieties and non availability of varieties having significantly higher yield as compared to the existing varieties under changing climatic conditions. Pusa Double Zero Mustard 31 is a pure line variety and contains low erucic acid (<2.0%) in oil and glucosinolates (<30.0 ppm) in seed meal. It has been released and notified in 2016 for Rajasthan (north and western parts), Punjab, Haryana, Delhi, western Uttar Pradesh, plains of Jammu and Kashmir and Himachal Pradesh. Its average oil content is 41.0 per cent, with a seed yield of 23.0 q/ha. It matures in 142 days and is suitable for timely sown irrigated conditions. This biofortified variety has been developed by ICAR-IARI, New Delhi [2]. The Krishi Vigyan Kendra, Bijnor (U.P.) were conducted 122 Front Line Demonstrations of Mustard variety Pusa Double Zero Mustard 31 during 2018-19 to 2021-22 at farmers field of district Bijnor for the study of its yield performance, yield gap and adoption in district **Material and Methods** The Front line demonstrations were conducted during 2018-19 to 2021-22 in Kotwali, Afajgarh,Nehtor, Kiratpur, Haldaur, Dhampur,Seohara, Najibabad, Jalilpur, M. Dewmal and Noorpur blocks of district Bijnor, at 122 farmers field for evaluation of performance, effectiveness and adoption of Pusa Double Zero Mustard 31in comparison to farmers practice. The yield data from front line demonstration, as well as farmers practice were recorded by representative samples from different locations. The following formulae have been used for estimation of technology gap, extension gap and technology index as per methods of Samui *et al.*, (2000) [3] and Sagar and Chandra (2004) [4]. *Technology gap = Potential yield – Demonstration yield* *Extension gap = Demonstration yield – farmers yield* *Technology index = [(Potential yield – Demonstration yield) / Potential yield) x100* **Results and Discussion** The field performance and yield gap of the Pusa Double Zero Mustard 31along with the local check were evaluated and data are given in [Table-1]. From the data given in [Table-1] it is quit clear that seed yield increased significantly in the range of 14.00 to 19.65 qt./ha in different blocks of Bijnor district, as compared to local check. Singh and Rana, (2006) [5] reported seed yield increase up to 20.70 qt. / ha by Pusa Barani Variety of mustard crop under irrigation condition. Singh *et al.*, (2018) [6] reported seed yield in Wheat variety HD-3059. The benefit cost ratio of Pusa Double Zero Mustard-31 was also higher in all the blocks in comparison to local check. It varied from 2.60to 3.45. In 2006, Hedge reported that mustard crop by nature is hardy and mostly grown under rainfed condition and can impart stability of production system under harsh condition [7,8]. The benefit cost ratio of HD-2967 was also higher in all the blocks in comparison to local check in district Saharanpur of Utter Pradesh [9]. Singh and Singh (2019) [10] also reported higher benefit cost ratio in timely sown Wheat varieties. International Journal of Agriculture Sciences ISSN: 0975-3710&E-ISSN: 0975-9107, Volume 14, Issue 10, 2022 11774

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3	A study on socio-economic status of bulb crops vegetable growers in Bijnor district of Western Uttar Pradesh	Desh Pal Singh, Satya Prakash, Vikas Malik, Krishna Kumar Singh, Shakuntala Gupta	Directorate of Extension	Prog. Agric. 21 (1) : 143-148	2021	--	
4	a study on socio-economic status of Cole Crops vegetable growers in Bijnor district of Western Uttar Pradesh	Desh Pal Singh, Satya Prakash, Vikas Malik, Krishna Kumar Singh, Shakuntala Gupta	Directorate of Extension	Prog. Agric. 21 (1) : 149-154	2021	--	

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SN	Title of paper	Name of Author	Department of the Teacher	Name of th Journal/ Magazine/ New Paper	Year of Publication	ISSN No.	
5	Adoption New Improves Technology of Guava (Psidium guajava L.) Cultivation in Bijnor District of Uttar Pradesh of India	Desh Pal Singh, Satya Prakash, Vikas Kumar, Krishna Kumar Singh and Prerna Sharma	Directorate of Extension	International Research Journal of Pure & Applied Chemistry 21(24): 147-153; Article no. IRJPAC. 63229	2020	--	 International Research Journal of Pure & Applied Chemistry 21(24): 147-153, 2020; Article no.IRJPAC.63229 ISSN: 2231-3443, NLM ID: 101647669 Adoption New Improves Technology of Guava (Psidium guajava L.) Cultivation in Bijnor District of Uttar Pradesh of India Desh Pal Singh[1*], Satya Prakash[2], Vikas Kumar[3], Krishna Kumar Singh[1] and Prerna Sharma[4] [1]Krishi Vigyan Kendra, Nagina (Bijnor), India. [2]College of Horticulture, India. [3]Krishi Vigyan Kendra, Shamli, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut (UP), India. [4]Student Rohta Road, Meerut, India. Authors' contributions This work was carried out in collaboration among all authors. All authors read and approved the final manuscript. Article Information DOI: 10.9734/IRJPAC/2020/v21i2430342 Editor(s): (1) Dr. Hao-Yang Wang, Shanghai Institute of Organic Chemistry, China. Reviewers: (1) Alaa El-Din Khalil S. Omar, King Faisal University, Kingdom of Saudi Arabia. (2) Nur Fadlan Mohd Zawawi, Universiti Malaysia Kelantan, Malaysia. (3) Noor-ul-Ain Soomro, University of Sindh, Pakistan. Complete Peer review History: http://www.sdiarticle4.com/review-history/63229 Original Research Article Received 01 October 2020 Accepted 07 December 2020 Published 31 December 2020 ABSTRACT Guava is one of the most important nutritious and commercially cultivated fruit crop belonging to the family Myrtaceae. Owing to its hard nature, it is grown successfully in tropical and subtropical regions in India over an area of 246.85 thousand hectares with production of 4053.51 thousand metric tons. The total area under guava cultivation in Uttar Pradesh is 49.53 thousand hectares with 928.44 thousand metric tons production during 2017-18 [1]. Guava grown in diverse agro climatic conditions faces different biotic and abiotic stresses limiting the production and productivity of guava that its influence the economic condition of guava growers. Keeping these facts in mind, the present study was conducted in Bijnor district of Western Uttar Pradesh to analyze the socio-economic condition of guava growers. The result indicated that among the all study characteristics majority of the guava growers belonging to the middle ages 46 to 60 years (56.36 percent), general *Corresponding author: E-mail: dpsingh0107@gmail.com
6	A Study on Socio-Economic Status of Mango Growers in Bijnor District of Western Uttar Pradesh	Desh Pal Singh, Satya Prakash, Vikas Malik, Krishna Kumar Singh, Narendra Singh, Shakuntala Gupta and Prerna Sharma	Directorate of Extension	International Journal of Environment and Climate Change 10 (12): 13-19; Article no. IJECC. 61933 (Past name: British Journal of Environment & Climate Change) ISSN No 2581-8627	2020	2581-8627	 International Journal of Environment and Climate Change 10(12): 13-19, 2020; Article no.IJECC.61933 ISSN: 2581-8627 (Past name: British Journal of Environment & Climate Change, Past ISSN: 2231–4784) A Study on Socio-Economic Status of Mango Growers in Bijnor District of Western Uttar Pradesh Desh Pal Singh[1*], Satya Prakash[2], Vikas Malik[3], Krishna Kumar Singh[1], Narendra Singh[1], Shakuntala Gupta[1] and Prerna Sharma[4] [1]Krishi Vigyan Kendra, Nagina (Bijnor), Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, India. [2]College of Horticulture, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, India. [3]Krishi Vigyan Kendra, Shamli, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, India. [4]Department of Home Science (Food & Nutrition), CCS University, Meerut, Uttar Pradesh, India. Authors' contributions This work was carried out in collaboration among all authors. All authors read and approved the final manuscript. Article Information DOI: 10.9734/IJECC/2020/v10i1230280 Editor(s): (1) Dr. Wen-Cheng Liu, National United University, Taiwan. Reviewers: (1) Tayo Sunday Joseph, Federal University of Technology Akure (FUTA), Nigeria. (2) Md. Juthar Ali, Begum Rokeya University, Bangladesh. (3) Cawnir Chidiebere Onyeneke, Hezekiah University, Nigeria. Complete Peer review History: http://www.sdiarticle4.com/review-history/61933 Original Research Article Received 24 August 2020 Accepted 29 October 2020 Published 28 November 2020 ABSTRACT Mango is a tropical and subtropical fruit crop grown in India over an area of 2258.13 thousand hectares with production of 21822.32 metric tons. The total area under mango cultivation in Uttar Pradesh is 265.62 thousand hectares with 4551.83 metric tons production 2017-18. In Bijnor district of Uttar Pradesh, mango grown 5.91 thousand hectares area with 118.09 metric tons production of mango in the same period. Mango grown in diverse agro climatic conditions faces differential biotic and abiotic stress limiting the production and productivity of mango that in influenced the economic condition of mango Growers. The purpose of the present study was to examine the socio-economic status of mango growers in Bijnor district of Western Uttar Pradesh. The result of the analysis shows that 39.09 percent of respondent fall within the age range of 46 to 60 years, general caste (53.64 percent), education level-literate (50.91 percent), family type-joint *Corresponding author: E-mail: dpsingh0107@gmail.com;

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SN	Title of paper	Name of Author	Department of the Teacher	Name of th Journal/ Magazine/ New Paper	Year of Publication	ISSN No.	
7	Constraints Faced by Guava Growers in Adoption of Guava Production Technology and Suggestions for Suitable Extension Strategies to Overcome the Problem in Bijnor District of UP	Desh Pal Singh, Satya Prakash, Vikas Kumar, Krishna Kumar Singh and Prerna Sharma	Directorate of Extension	International Research Journal of Pure & Applied Chemistry 21(22): 41-47; Article no. IRJPAC .62230. NLM ID: 101647669, ISSN No 2231-3443	2020	2231-3443	 International Research Journal of Pure & Applied Chemistry 21(22): 41-47, 2020; Article no.IRJPAC.62230 ISSN: 2231-3443, NLM ID: 101647669 Constraints Faced by Guava Growers in Adoption of Guava Production Technology and Suggestions for Suitable Extension Strategies to Overcome the Problem in Bijnor District of UP Desh Pal Singh[1*], Satya Prakash[2], Vikas Kumar[3], Krishna Kumar Singh[1] and Prerna Sharma[4] [1]Krishi Vigyan Kendra, Nagina (Bijnor), Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, India. [2]College of Horticulture, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, India. [3]Krishi Vigyan Kendra, Shamli, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut, Uttar Pradesh, India. [4]Department of Home Science (Food & Nutrition), CCS University, Meerut, Uttar Pradesh, India. Authors' contributions This work was carried out in collaboration among all authors. All authors read and approved the final manuscript. Article Information DOI: 10.9734/IRJPAC/2020/v21i2230295 Editor(s): (1) Dr. Farzaneh Mohamadpour, University of Sistan and Baluchestan, Iran. Reviewers: (1) Aurel Maxim, University of Agricultural Sciences & Veterinary Medicine Cluj Napoca, Romania. (2) Dr. Vinod Sen, Indira Gandhi National Tribal University, India. (3) Pr. Raissouni Ahmed, University of Abdelmalek Essaadi, Morocco. (4) Ekanta, Cornelius Michael, Ahmadu Bello University, Nigeria. Complete Peer review History: http://www.sdiarticle4.com/review-history/62230 Original Research Article Received 22 August 2020 Accepted 29 October 2020 Published 30 November 2020 ABSTRACT Guava grown in diverse agro-climatic conditions faces differential biotic and abiotic stress that limiting the production and productivity of guava and consequently, influenced the economic condition of its growers. Keeping these facts in mind, the present study was conducted in Bijnor district of UP to find out the constraints faced by guava growers in adoption of production technology and suggest suitable extension strategies to overcome the problems. Two villages from 11 blocks were selected randomly on the basis of orchard availability. Five guava Growers was selected from *Corresponding author: E-mail: dpsingh0107@gmail.com;
8	Constraints Faced by Mango Growers in Adoption of Mango Production Technology and Suggestions for Suitable Extension Strategies to Overcome the Problem in Bijnor District of UP	Desh Pal Singh, Satya Prakash, Vikas Kumar, Krishna Kumar Singh and Prerna Sharma	Directorate of Extension	Int. J. Curr. Microbiol. App. Sci Special Issue-10: 605-611	2020	--	 Int.J.Curr.Microbiol.App.Sci (2020) Special Issue-10: 605-611 International Journal of Current Microbiology and Applied Sciences ISSN: 2319-7706 Special Issue-10 pp. 605-611 Journal homepage: http://www.ijcmas.com Original Research Article Constraints Faced by Mango Growers in Adoption of Mango Production Technology and Suggestions for Suitable Extension Strategies to Overcome the Problem in Bijnor District of UP Desh Pal Singh[1*], Satya Prakash[2], Vikas Kumar[3], Krishna Kumar Singh[1] and Prerna Sharma[4] [1]Krishi Vigyan Kendra, Nagina (Bijnor), [2]College of Horticulture, [3]Krishi Vigyan Kendra, Shamli, Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut (UP) [4]M.Sc. Student Rohta Road, Meerut *Corresponding author ABSTRACT Mango grown in diverse agro climatic condition faces differential biotic and abiotic stress limiting the production and productivity of mango that influenced the economic condition of mango growers. Keeping these facts in mind, the present study was conducted in Bijnor district of UP to find out the constraints faced by mango growers in adoption of mango production technology and suggestions suitable extension strategies to overcome the problems. Two villages from 11 blocks were selected randomly on the basis of Orchard availability. 10 mango Growers was selected from all selected villages. Thus the total sample size was of 220 respondents for the investigation. The mango respondents faced the constraints in adoption of mango production technology. Total constraints mainly divided into to five groups. Among the input constraints, unavailability of quality chemicals like plant growth regulator, water soluble fertilizer and plant protection chemicals at government sale centre got first rank with 78.18 percent respondent followed by unavailability of quality sapling of mango at Government nursery (75.00 percent). Among the technological constraints, lack of knowledge about organic farming of mango got first rank with 93.18 percent respondents followed by lack of knowledge about drip irrigation schedules (91.82 percent). Among the socio- psychological constraints, lack of coordination among the beneficiary and state/district horticulture department got the first rank with 90.00 percent respondents followed by inadequate extension activities were conducted by state/district horticulture department (80.00 percent). Among the marketing constraints, exploitation of mango growers by middle men get first rank with 91.36 percent respondents followed by lack of quality storage facility (88.91 percent). Among the financial constraints lack of government initiative in funding of loan and granting of subsidies got first rank with 94.55 percent followed by high labour charges (91.82 percent).lack of knowledge about organic farming of mango was identified as major constraints in qualitative mango production. It is therefore, suggested the extension workers should organise mango growers in different groups of organic farming. They should plan knowledgeable programmes for the respondents so they can be motivated to what the organic farming of mango and can increase their knowledge about quality mango production practices through extension work like group discussion, training, demonstrations, exhibition etc. The growers therefore are required to be educated to follow up all the recommended production practices for mango, use of timely inputs, nutrients and plant protection management practices which will help in increasing the production and productivity. Keywords Mango growers, Production technology, Extension strategies 605

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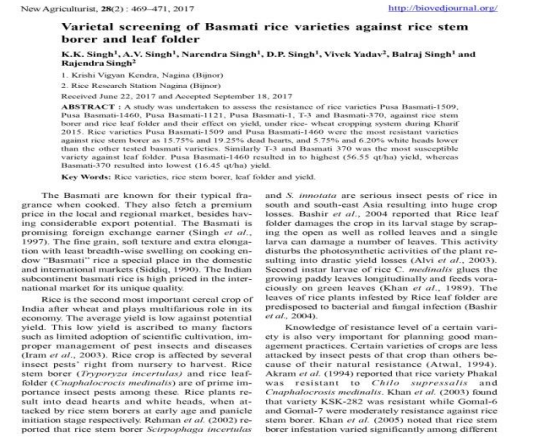
9	Evaluation of wheat varieties for timely sown condition in district Bijnor (Uttar Pradesh) with the special reference to the yield gap and their adoption in district.	K.K. Singh and D.P. Singh	Directorate of Extension	Journal of Community Mobilization and Sustainable Development. Vol. 14 (3), 435-438, Sept.-Dec., 2019	2019	--	
10	Adoption of wheat variety HD-3059 in district Bijnor with the special reference to analysis of yield gap and their performance	Singh K.K., Singh D.P., Singh Narendra, Singh A.V., Yadav S. K., Singh Balraj, Yadav Vivek and Singh Rajendra	Directorate of Extension	International Journal of Agriculture Sciences, Volume 10, Issue 7,pp.-5663-5664	2018	--	

Publication

SN	Title of paper	Name of Author	Department of the Teacher	Name of th Journal/ Magazine/ New Paper	Year of Publication	ISSN No.	
11	Assessment of yield Performance and Adoption of Basmati variety Pusa Basmati-1509 in district Bijnor of Uttar Pradesh, India.	K.K. Singh, D.P. Singh and A. V. Singh	Directorate of Extension	Multilogic in Science, VOL. VIII, Issue XXV, April 2018, Pp-290-292.	2018	--	
12	Varietal screening of wheat varieties for yield performance against disease resistance for the farmers of district Bijnor (U.P.)	K.K. Singh	Directorate of Extension	New Agriculturist. 29 (2): 1-2	2018	--	

Publication

SN	Title of paper	Name of Author	Department of the Teacher	Name of th Journal/ Magazine/ New Paper	Year of Publication	ISSN No.	
13	Participatory quality seed production: An innovative farming technology for rural development and rural entrepreneurship.	K.K. Singh and P.K. Singh	Directorate of Extension	Bioved, 28 (2): 299–302	2017	--	 Bioved, **28**(2) : 299–302, 2017 http://biovedjournal.org/ **Participatory quality seed production : An innovative farming technology for rural development and rural entrepreneurship** **K.K. Singh and P.K. Singh** Krishi Vigyan Kendra, Directorate of Extension, SVPUA&T, Meerut, U.P. Received March 21, 2017 and Accepted June 15 2017 **ABSTRACT :** Agriculture is the lifeline of India and seed is the lifeline of any crop production system. In all agricultural inputs only seed had inbuilt potential, where as other agricultural inputs i.e. nutrients, irrigation, and plant protection chemicals only contributes to the production potential of seed. If potential of seed is poor, optimum yield is not possible of judicious use of inputs. Many research results indicate that the 10-15 per cent increase in yield is attributed to good potential quality seed. The main reasons for low productivity of field crops are unavailability of reliable quality seeds in the local markets at the time of sowing. To increase productivity, seed should be of high quality, which will express full potential yield of the genotype under farmers farming environments. Therefore, there is basic need to establish quality seed sources at village level. For seeing this scenario, the Krishi Vigyan Kendra Saharanpur introduced an innovative farming technology "Participatory Quality Seed Production" at farmer's field during Rabi 2008 in Saharanpur district for production of good quality seeds of Paddy and Wheat. After implementation, this innovative farming technology the average seed replacement rate increased by 38.0 – 58.0 per cent in wheat and 38.0 – 54.0 percent in paddy, in operational area. Yield increased in wheat up to 42.0 – 59.0 qt/ha and in paddy 47.0 – 60.0 qt/ha in operational area . Adoption level of improved varieties by the farmers had increased. Informal seed production programme had emerged as an income generating enterprise. **Key Words:** Participatory quality seed production, field crops. The major field crops of district Saharanpur are wheat and rice. The seed replacement rate (SRR) of these two crops is not better, for example, SRR of rice and wheat is about 11-15% in district. The present level of SRR for field crops in India is just 5-70% (Roy, 2011). Farmers Participatory Seed Production in India is one of the few countries (Chowdhury *et al*., 2010) where the seed sector has advanced in parallel with the agricultural productivity. However, availability of quality seed of improved varieties and hybrids is grossly inadequate and is one of the major constraints for enhancing production. For the supply of such seeds, the informal seed sector (namely, farmer managed seed, seed village programmes, Farmers' Participatory Seed Production and farmer seed distribution system systems) and the formal seed system (seed enterprises) have a great role to play. Farmers can produce quality seeds of some self-pollinated crops, such as, rice, wheat, mustard, and vegetative propagated crops, namely, potato seed tuber, elephant foot yam, Arachis pintoi (Neef *et al*., 2004) etc. at their own farm for 2-3 generations, provided they are trained the package of practices to maintain genetic purity. **Materials and Methods** **(A) Innovative farming technology (IFT) disseminated** The KVK initiated Participatory Quality Seed Production programme of Wheat and Paddy in its operational area during 2008-09 to 2012-13, based on the location specific newly released Wheat and Paddy varieties, seeds were provided to selected farmers as major component of Front Line Demonstration. 60-80 farmers were selected each year for Participatory Quality Seed Production in operational area. The identified farmers of different villages were trained on different aspects of seed production. **(B) Farming practice before IFT** The farmers used to grow grain from their own
14	Varietal screening of Basmati rice varieties against rice stem borer and leaf folder.	K.K. Singh, A.V. Singh, Narendra Singh, D.P. Singh, Vivek Yadav, Balraj Singh and Rajendra Singh	Directorate of Extension	New Agriculturist. 28 (2): 469–471.	2017	--	 New Agriculturist, **28**(2) : 469–471, 2017 http://biovedjournal.org/ **Varietal screening of Basmati rice varieties against rice stem borer and leaf folder** **K.K. Singh[1], A.V. Singh[1], Narendra Singh[1], D.P. Singh[1], Vivek Yadav[2], Balraj Singh[1] and Rajendra Singh[2]** 1. Krishi Vigyan Kendra, Nagina (Bijnor) 2. Rice Research Station Nagina (Bijnor) Received June 22, 2017 and Accepted September 18, 2017 **ABSTRACT :** A study was undertaken to assess the resistance of rice varieties Pusa Basmati-1509, Pusa Basmati-1460, Pusa Basmati-1121, Pusa Basmati-1, T-3 and Basmati-370, against rice stem borer and rice leaf folder and their effect on yield, under rice- wheat cropping system during Kharif 2015. Rice varieties Pusa Basmati-1509 and Pusa Basmati-1460 were the most resistant varieties against rice stem borer as 15.75% and 19.25% dead hearts, and 5.75% and 6.20% white heads lower than the other tested basmati varieties. Similarly T-3 and Basmati 370 was the most susceptible variety against leaf folder. Pusa Basmati-1460 resulted in to highest (56.55 qt/ha) yield, whereas Basmati-370 resulted into lowest (16.45 qt/ha) yield. **Key Words:** Rice varieties, rice stem borer, leaf folder and yield. The Basmati are known for their typical fragrance when cooked. They also fetch a premium price in the local and regional market, besides having considerable export potential. The Basmati is promising foreign exchange earner (Singh *et al*., 1997). The fine grain, soft texture and extra elongation with least breadth-wise swelling on cooking endow "Basmati" rice a special place in the domestic and international markets (Siddiq, 1990). The Indian subcontinent basmati rice is high priced in the international market for its unique quality. Rice is the second most important cereal crop of India after wheat and plays multifarious role in its economy. The average yield is low against potential yield. This low yield is ascribed to many factors such as limited adoption of scientific cultivation, improper management of pest insects and diseases (Iram *et al*., 2003). Rice crop is affected by several insect pests' right from nursery to harvest. Rice stem borer (*Tryporyza incertulas)* and rice leaf-folder (*Cnaphalocrocis medinalis*) are of prime importance insect pests among these. Rice plants result into dead hearts and white heads, when attacked by rice stem borers at early age and panicle initiation stage respectively. Rehman *et al*. (2002) reported that rice stem borer *Scirpophaga incertulas* and *S. innotata* are serious insect pests of rice in south and south-east Asia resulting into huge crop losses. Bashir *et al*., 2004 reported that Rice leaf folder damages the crop in its larval stage by scraping the open as well as rolled leaves and a single larva can damage a number of leaves. This activity disturbs the photosynthetic activities of the plant resulting into drastic yield losses (Alvi *et al*., 2003). Second instar larvae of rice *C. medinalis* glues the growing paddy leaves longitudinally and feeds voraciously on green leaves (Khan *et al*., 1989). The leaves of rice plants infested by Rice leaf folder are predisposed to bacterial and fungal infection (Bashir *et al*., 2004). Knowledge of resistance level of a certain variety is also very important for planning good management practices. Certain varieties of crops are less attacked by insect pests of that crop than others because of their natural resistance (Atwal, 1994). Akram *et al.* (1994) reported that rice variety Phakal was resistant to *Chilo supressalis* and *Cnaphalocrosis medinalis*. Khan *et al*. (2003) found that variety KSK-282 was resistant while Gomal-6 and Gomal-7 were moderately resistance against rice stem borer. Khan *et al*. (2005) noted that rice stem borer infestation varied significantly among different