Dr VIJAY VEER SINGH
Pr Scientist (Plant Breeding)
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1	**Date of birth**	1-7-1971
2	**Education Qualification**	Ph.D. (Plant Breeding and Genetics)
3	**Joining date in ICAR**	19-8-2006 (Joined in RAU, Bikaner as Asstt. Prof on 7-5-1996)
4	**Joining date in DRMR**	19-8-2006
5	**Discipline/Specialization**	Plant Breeding
6	**Research Experience**	20 Years
7	**Training/advance exposure in the area of work**	1. Technology for Sustainable Production of Oilseeds 2. Advances in Seed Quality Evaluation 3. MDP Workshop on Policy and Prioritization, Monitoring and Evaluation

8**. Contribution to the scientific advancement**

1. Varietal development

- NRCHB 101 (Indian mustard) For late sown irrgated areas of zone III (parts of Rajasthan, Madhya Pradesh, Uttar Pradesh and Uttarakhand (2008)
- NRCHB 506 (Hybrid-Indian mustard) For irrgated areas of Rajasthan and Uttar Pradesh (2008)
- NRCYS 05-02 (Yellow sarson): For general cultivation in yellow sarson growing areas of the country (2008)
- NRCDR-601 (Indian mustard: For irrigated areas of zone II (parts of Rajasthan, Punjab and Haryana (2008)
- DRMR 150-35 (Indian mustard) identified for early sown rain fed areas of Zone V (Bihar, Jharkhand, Odisha, West Bengal, Asom, Manipur) (2015)
- DRMR 1165-40 (Indian mustard) identified for timely sown rainfed conditions of Haryana, Rajasthan, Punjab, Delhi and J&K (2018)

2. Genetic stocks developed

- DRMR 541-44 registered during 2015 for drought tolerance (High Water Use Efficiency under rain fed conditions)
- DRMR 2019 & DRMR 2035 registered for White rust resistance during 2017
- NRCKR-304 registered during 2010 for early maturing, long main shoot and bold seed
- BPR-541-4 and BPR-543-2 registered during 2010 for thermo tolerant at terminal stage, salinity tolerant at juvenile stage and high water use efficient
- NRCGS-1 registered during 2010 for early maturity and dwarfness
- BPR 349-9 registered during 2011 for salinity and thermo tolerant
- BPR 540-6 registered during 2013 for salinity, thermo- tolerant at juvenile stage
- BPR 549-9 registered during 2013 for salinity tolerant at juvenile stage, high water use efficient
- WF yellow sarson registered during 2013 for yellow sarson with white flower.
- Developed donors for high temperature tolerance at seedling stage (DRMR 1165-40, DRMR 15-51), moisture stress (DRMR 541- 44, DRMR 10-40), radiation stress (DRMR 541-44)

- Optimized regeneration and transformation protocol in Indian mustard cultivars Pusa bold and Rohini using chickpea lectin gene construct for aphid resistance.
- Developed base populations/germplasm for drought, Alternaria blight tolerance and high oil content and practiced Half Sib and Full Sib progeny selection in Indian mustard
- Validation two white rust resistant loci (AcB1-A4.1 and AcB1-A5.1) and quality traits markers (FAE II- erucic acid and GER 1, GER 5, Myb28, At5g41, At5GAJ67 - glucosinolate) in popular Indian mustard varieties.
- Popularization of new varieties NRCHB 101, NRCDR 02, RH 406,RH 749 of Indian mustard and YSH 401, NRCYS 05-02 of yellow sarson through participatory seed production.
- Capacity building of farmers involved in the participatory seed production. Total 11 training programmes on various aspects of quality seed production and storage technologies were organized in which 284 farmers participated and benefitted

9. Current research Project and future planning of research

Current Projects (As PI)

1. Breeding for High Yield and Oil Content under Normal and Moisture Stress Conditions
2. IRA Scheme on Molecular genetic analysis of resistance/tolerance to different stresses
3. Molecular breeding for improvement of tolerance to biotic (white rust/stem rot) and quality traits (low erucic acid and glucosinolates) in Mustard,

Future planning of research

1. Genetic enhancement for abiotic stresses
2. Developing high seed and oil yielding genotypes for rainfed conditions

10. Awards/Recognitions

- **Gold medal** PG programme (1994) Rajasthan Agricultural University, Bikaner
- **Best Scientist Award** (2010-11), ICAR-DRMR Bharatpur
- **Distinguish scientist award** (2010-11), Society for Recent Advances in Agriculture, Meerut
- **Managing Editor,** Society for Rapeseed-mustard Research (2009-2011)
- **Member,** Editorial board, Society for Rapeseed-mustard Research (2011-15)
- **Recognition Award** (2010-11), as member of Institute Purchase Committee, ICAR-DRMR Bharatpur
- **Member** of selection committee as an expert (Asstt Prof, Asstt Agriculture Officer) in University, RPSC,s (2013)
- **Member,** Editorial Board, Agriculture for Sustainable Development, Varanasi (2013-14)
- **Fellow Award**, Indian Society of Genetics and Plant Breeding, New Delhi (2013)
- **Certificate of Appreciation Award** for contribution in bringing and honoring the Directorate by Mahindra Samriddhi India Agri Awards 2015
- **Best performing Unit (PME) Award** as Incharge 2015 DRMR, Bharatpur
- **Eminent Scientist** Award (2016), ISGBD, Agra
- **Best scientist Award (2016),** ICAR-DRMR, Bharatpur
- **Best Unit award (2016)** as Incharge PME ICAR-DRMR, Bharatpur
- **Convener,** Technical session and Chairman, technical programme committee in International seminar on Oilseed Brassica (ISOB) held at SIAM Jaipur (Feb, 23-27, 2017)
- **Appreciation Award** for significant contribution in organization of ISOB 2017 at Jaipur during Feb 23-27, 2017.

- **Best Poster Presentation award** during International seminar on Oilseed Brassica held at SIAM Jaipur (Feb, 23-27, 2017)
- **Outstanding Achievement Award (2017) by** Society for Scientific Development in Agriculture and Technology, Meerut

11. Publications

- **Singh, V.V.,** Singhania, D.L. and Sastry, EVD (2003). Evaluation of half sib progenies in fennel (*Foeniculum vulgare* Mill.). *Indian. J. Genet.*63 (3): 227-278.
- **Singh, V.V.** and Sastry, E.V.D. (2003). Mass, full and half sib selection for genetic improvement of fennel (*Foeniculum vulgare* Mill.). *J. Spices and Aromatic Crops.* 12 (2): 179-182.
- **Singh, V.V.;** Sastry, E.V.D. (2006).Genetic variances and expected selection response in a fennel (*Foeniculum vulgare* Mill.) population. *Indian J. Genet.* 66 (1):63-64
- **Singh, V.V.,** Ramkrishna, K and Arya, R.K. (2006). Induced chemical mutagenesis in cowpea (*Vigna unguiculata* L. Walp). *Indian J. Genet.,* 66(4): 312-315.
- **Singh, V.V**., Singh, Sudheer, Verma, Vandana, Meena, S.S. and Kumar, Arvind (2009). Genetic variability for seedling traits in In dian mustard under moisture stress conditions. *Indian J. Plant Genet. Resour*. 22(1): 46-49.
- **Singh, V.V.,** Verma, Vandana, Pareek, A.K., Mathur, Monika, Yadav, R., Goyal, P., Thakur, A.K., Singh, Y.P., Koundal, K.R., Bansal, K.C., Kumar, Arvind and Kumar, Sandeep (2009). Optimization and development of regeneration and transformation protocol in Indian mustard using lectin gene from chickpea [*Cicer arietinum* (L.)]. *J. Plant breed. Crop Sci.* 1(9):306-310.
- **Singh, V.V.,** Yadav, Rajbir, Meena, S.S. Verma, Vandana, and Arvind Kumar (2010). Development of Introgressed lines with Unique Characteristics in *Brassica carinata*. *Indian J. Plant Genet. Resour*. 23(2): 237-238.
- **Singh, V.V.,** Singh, M, Chauhan, J.S. and Kumar Sunil (2011). Development and evaluation of full sib progenies for moisture stress conditions in Indian mustard (*Brassica juncea* L.). *Indian J. Genet* 71 (1): 78-81.
- **Singh, V. V.,** Siddiqui, S.A., Verma, Vandana, Rai, P.K. and Arvind Kumar (2011). Phenotypic, Cytological and Molecular Investigation on Introgression of *Brassica juncea* into *Brassica carinata*. *Vegetos* 24 (1): 114-119.
- Chauhan, J.S., Singh, K.H., **Singh, V. V.** and Kumar, Satyanshu (2011). Hundred years of rapeseed mustard breeding in India: accomplishments and future strategies. *Indian J. Agric. Sci*. 81 (12); 1093-1109.
- **Singh, V V,** Chauhan, J S, Bhagirath Ram, Singh, Maharaj and Meena, M L (2012). Genetics of yield and yield-contributing traits in Indian mustard (*Brassica juncea*). *Indian Journal of Agricultural Sciences.* 82 (10): 881–884
- **Singh,** V V**,** Singh, M., Chauhan, J S, Kumar S, Meena M L, Singh B K , Singh K and Singh U B (2012). Development and evaluation of half sib progenies for morpho-physiological characters in Indian mustard (*Brassica juncea* L.) under rainfed conditions. *SABRAO Journal of Breeding and Genetics*.44 (2):229-239.
- **Singh V V,** Chauhan, J S, Meena, M L and Singh, B R (2013). Development of random mating population for genetic enhancement of yield traits in Indian mustard (*Brassica juncea* L.). *Indian J. Agric Sciences* 84 (3): 418-20.
- **V V Singh**, B Ram, Singh Maharaj, Meena M L and Chauhan J S (2014). Generation mean analysis of water stress tolerance parameters in Indian mustard (*Brassica juncea* (L) Czern & Coss) crosses. *SABRAO J of Breeding and Genetics*, 46 (1): 76-80.
- Meena H S, Kumar A, Ram B, **Singh V V** , Meena P D, Singh B K and Singh D. (2015). Combining ability and heterosis for seed yield and its components in Indian mustard (*Brassica juncea* L.). (2015) J Agr Sci Tech 17: 1861-1871.

- Singh B K, Nandan D, Ambawat Supriya, B Ram, Kumar A, Singh T, Meena H S, Kumar Vinod, **Singh V V,** Rai P K and Singh D (2015). Validation of molecular markers for marker assisted pyramiding of white rust resistance loci in Indian mustard (*Brassica juncea* L). Canadian J Plant Sci. 95 (5): 939-945.
- **Singh, V V,** Meena M L, Singh, B R and Singh D (2015). Patterns of genetic variation, correlations under irrigated and rainfed conditions in Indian mustard (Brassica juncea L.). Indian J Plant Genet Resour 28 (2): 198-204.
- Singh, B K, Mishra, D C, Yadav, Sushma, Supriya Ambawat, EraVaidya, Kishor U Tribhuvan, Kumar, Arun, Kumar, Sujith, Kumar, Sanjeev, Chaturvedi, K K, Reema Rani, Yadav, Prashant, Anil Rai, Rai, PK, **Singh, V. V.** and Dhiraj Singh (2016). Identification, characterization, validation and cross-species amplification of genic-SSRs in Indian Mustard (*Brassica juncea*). J. Plant Biochem. Biotechnol. DOI 10.1007/s13562-016-0353-y
- **Singh, V V,** Garg Pankaj, Meena, H S and Meena M L (2018). Drought stress response of Indian Mustard (Brassica juncea L) genotypes. Int. J. Curr. Microbiol. App. Sci 7(3): 2519-2526
- Sharma, P., Samkumar, A., Rao, M., **Singh, V V**, Prasad, L. Mishra, D C, Bhattacharya, R C, Gupta, N C (2018). Genetic diversity studies based on morphological variability, pathogenicity and molecular phylogeny of the Sclerotinia sclerotiorum population from Indian mustard (Brassica juncea). Front. Microbiol., 05 June 2018 | https://doi.org/10.3389/fmicb.2018.01169

12. **Other Achievement, if any**

1. Training Programmes/ Short courses organized:

10 as Course Director, 02 as Convener

2 Teaching activities

Ten Years' experience of teaching various courses of UG and PG programme related to Plant Breeding, Genetics and Seed Technology (1996-2006)

Designed Course Curriculum of UG and PG classes (Plant Breeding, Seed Technology) (2004-2006)

Guided 09 students of Plant Breeding for M. Sc (Ag) thesis (2003-2015)