

Dr Dharminder Kumar (Senior Scientist and Head)



Specialization: Vegetable Science

Achievements:

- Best Oral presentation (Genetic variability, heritability and genetic advance in newly Introduced genotypes of cauliflower (*Brassica oleracea* var. botrytis L.) award during 2022 in the 2 nd International Conference on Climate change and Impacting, Emerging Frontiers in Biological Sciences. Awarding agency: Pioneer College Of Education, Srinagar, Jammu and Kashmir,191101, India,15-22 July 2022.
- Best Oral presentation award (Quality and phytochemicals evaluation of different chilli cultivars grown in hilly regions of India (2 nd position) during 2022 in the International Conference on “Existing Climate Change Scenario and its Arising Risks” Awarding agency: Collaboration with SKUAST, Jammu at Baba Jitto Auditorium, Jammu, 21-22 October,2022
- Awarded as First Best POSTER award on the topic entitled, “Wide association studies for yield and related attributes in potato, during 24-26 Feb 2024 in the ISVS Golden Jubilee National Seminar on Technological Innovations in Vegetable Production under Changing Climate at Acharya Narendra Deva University of Agriculture & Technology, Ayodhya, UP, India.
- Best Oral/poster presentation award (Integrated farming system under resilient ... Chamba, Himachal Pradesh) in the 2nd International Conference organized by Indian Society of Dryland Agriculture(ISDA) held at ICAR Central Research Institute for Dryland Agriculture(CRIDA) Hyderabad, India during 29-31 January 2025

Publications

Author(s)	Title	Name of Journal	Volume	Page	Year
Thakur KS, Kumar Dharminder, Amit Vikram, Thakur AK and Mehta DK	Effect of organic manures and biofertilizers on growth and yield of tomato and French bean under mid-hills of Himachal Pradesh.	Journal of Hill Agriculture	I (2)	176-178	2010

M Rana, R Sharma, P Sharma, SV Bhardwaj, M Sharma and D Kumar.	Genetic diversity estimation in <i>Capsicum</i> spp. using molecular markers.	Journal of Ecobiotechnology	4 (2)	121-123.	2012
S Kumar, R Kumar, D Kumar , YR Shukla, DS Thakur and S Kansal.	Assessment of genetic diversity among cucumber (<i>Cucumis sativus</i> L.) genotypes in north-western himalays.	Journal of Ecobiotechnology	4 (2)	234-237	2012
Dharminder Kumar , Rajeev Kumar, Sandeep Kumar, MC Thakur, Ramesh Bhardwaj, Kuldeep Thakur, Dogra Balbir and Prince Kumar	Genetic Variability, Correlation and Path-coefficient analysis in tomato (<i>Solanum lycopersicum</i> L.).	International Journal of Vegetable Science,	19(4)	313-324	12 July2013
Kumar Dharminder , Kumar, Sandeep, Prakash Chander, Kumar Manish, Thakur K S, Dogra BS, Kumari Santosh and Singh SP	Assessment of genetic variability in cabbage germplasm for yield and important horticultural traits.	Plant Archives	13(1)	457-461	2013
Prince Kumar, Dharminder Kumar , Sandeep Kumar and Subhash Sharma	Effect of Integrated nutrient management practices on seed yield and economics of seed production in radish (<i>Raphanus sativus</i> L).	Plant Archives	13(1)	243-246	2013
Kumar Sandeep, Kumar Dharminder , Kumar Ramesh, Thakur Kuldeep and Dogra Balbir Singh.	Estimation of genetic variability and divergence for fruit yield and quality traits in cucumber (<i>Cucumis sativus</i> L.) in North Western Himalayas	Universal Journal of Plant Science,	1(2)	27-36.	2013
Sudeep Chandra, ML Bhardwaj, Ramesh Kumar, Dharminder Kumar , Sandeep Kumar, Nidish Gautam, Balbir Dogra & Subhash Sharma	Estimation of parameters of variability for different quantitative traits in okra, <i>Abelmoschus esculentus</i> (L) Moench.	International Journal of Farm Sciences	4(3)	33-41	2014
Ramesh Kumar,	Characterization of	Indian	84(6):	765-769	2014

Sandeep Kumar, Dharminder Kumar and RK Gupta.	cucumber (<i>Cucumis sativus</i> L.) genotypes through principle component and regression analysis	Journal of Agricultural Science,			
Dharminder Kumar , SV Dwivedi, Sandeep Kumar, Faizan Ahmed, RK Bhardwaj, KS Thakur and Prabal Thakur	Potential of Biodiversity Conservation Strategies of Underutilized or Indigenous Vegetables in Himachal Pradesh	International journal of Agricultural Sciences/	10(1)	459-462	2014
Nidish Gautam, Dharminder Kumar , Ramesh, Bhardwaj Sandeep Kumar, Subhash Sharma and Balbir Dogra	Growth and Yield of garlic (<i>Allium sativum</i> L) as influenced by clove weight and plant growth regulators.	International Journal of Farm Sciences	4(3)	49-57	2014
Prince Kumar, ML Bhardwaj, Dharminder Kumar , Sanjeev Kumar, KS Thakur and BS. Dogra	Comparision of head yield, nutritional quality & nutrient uptake under INM of sprouting broccoli cv Green Head in Hills	Green Farming	6(5)	1015-1020	2015
Ramesh Kumar, Sangita Kaushal, Sandeep Kumar, Dharminder Kumar , YR Shukla and BS. Dogra	Morphological characterization of newly introduced lettuce (<i>Lactuca sativa</i> L.) germplasm through principal component and regression analyses.	Electronic Journal of Plant Breeding,	7(3)	742-749	2016
Sandeep Kumar, Ramesh Kumar, Dharminder Kumar , Nidhish Gautam, RK Dogra, DK Mehta, H Dev Sharma, and I Sandeep Kansa.	ParthenocarpicGynocious Parental Lines of Cucumber Introduced from Netherlands for Developing High-Yielding, Quality Hybrids.	Journal of Crop Improvement.	30(3),	352–369	2016
Sandeep Kumar, Ramesh Kumar, Dharminder Kumar , Nidhish Gautam, Navjot Singh, Parkash Chander, Mast Ram Dhiman and YR Shukla.	Heterotic potential, potence ratio, combining ability and genetic control of yield and its contributing traits in cucumber (<i>Cucumis sativus</i> L.)	New Zealand Journal of Crop and Horticultural Science.	45(3),	175-190.	2017
Rajesh Kumar,	Response of mango	Indian	44	712-	2017

Bhardwaj ML, Mandraria RK and Dharminder Kumar.	cultivar Dashehari under INM Module in the subtropical conditions of Himachal Pradesh	Journal of Ecology,	Special issue (6)	714,	
Dharminder Kumar, ML Bhardwaj, Sandeep Kumar, Rajesh Kaler, Ramesh Kumar, Sudhir Verma, Subhash Sharma, Nidhish Gautam and Sudip. Chandra	Comparative Performance of Cherry Tomato and Lettuce Genotypes Under Different Protected Structures in Low-Hills of Himachal Pradesh.	Bulletin of Environment, Pharmacology and Life Sciences	7 (4),	14-18	2018
Nidhish Gautam, Manish Kumar, Dharminder Kumar, Sandeep Kumar, Amit Vikram, Rajesh Dogra and Shikha Sharma	Combining ability and gene action studies for important quality traits in tomato (<i>Solanum lycopersicum</i> L.).	International Journal of Chemical Studies	6(2)	1992-96.	2018
Badhani Harish Chandra, Kumar Sandeep, Singh Amit Kumar, Pant Satish Chandra, Paliwal Ajaya and Kumar Dharminder.	Predicting magnitude of variability and genetic divergence for yield and quality traits in tomato (<i>Solanum lycopersicum</i> L.).	International Journal of Agricultural Sciences, he	15(2):	263-270.	2019
Rajesh Kumar, M L Bhardwaj, Atul Gupta, Vipin Guleria, Dharminder Kumar and VGS Chandel	Effect of con-joint application of inorganic and organic sources of nutrients with bio fertilizers on growth, yield and fruit quality of Kinnow mandarin	Journal of Tree Sciences,	39 (2)	9 – 15	2020
Dharminder Kumar, Achal Kashyap, Balbir Singh Dogra, Kumud Jaryal, Atul Gupta, Sandeep Kumar, Aanchal Chauhan, Kumari Shiwani, and Rajesh Kaler.	Genetic evaluation of tomato (<i>Solanum lycopersicum</i> L.) germplasm for yield and quality traits.	International Journal of Current Microbiology and Applied Sciences,	9 (11)	3848-3859	2020.
Dharminder	Correlation and	Biological	13(1)	762-767	2021

Kumar, Deepali Chaudhary, Ramesh Bhardwaj, Rajesh Dogra, Aanchal Chauhan, Sandeep Kumar, Kumari Shiwani and VGS Chandel.	genetic divergence studies of cauliflower (<i>Brassica oleracea</i> var. <i>botrytis</i>) under lower hilly region of Himachal Pradesh.	Forum-An International Journal			
Dharminder Kumar, Shubham, Balbir Singh Dogra, Sunil Thakur, Sandeep Kumar, Kumari Shiwani, VGS Chandel, Rajesh Kaler, Vipin Guleria and Aanchal Chauhan	Genetic evaluation of garden pea (<i>Pisum sativum</i> L.) for pod yield and its contributing traits,	Biological Forum-An International Journal	13(1)	768-775	2021.
Rajat Chandel, Vikas Kumar, Ramandeep Kaur, Satish Kumar, Ankit Kumar, Dharminder Kumar and Swati Kapoor	Bioactive compounds, health benefits and valorization of <i>Pyrus pyrifolia</i> (Sand pear): a review.	Nutrition and Food Science.	Vol.53(7)	1061-1080	2022
Rajat Chandel, Vikas Kumar, Ramandeep Kaur, r SatishKuma, Mandeep Gill Singh, Rakesh Sharma, Rajesh Wagh V, Dharminder Kumar	Functionality enhancement of osmo dried sand pear cubes using different sweeteners quality bioactive textural molecular and structural characterization.	Journal of Food Measurement and Characterization	17(4):	1-13	2023
Atul Dhiman, Ramandeep Kaur, Rajat Chandel, Satish Kumar, Baljeet Singh, Dharminder Kumar, Vikas Kumar and Suhag Rajat.	Effect of blanching and dehydration on rheological, structural, functional and physicochemical properties of okra	Journal of Food Measurement and Characterization	Vol 17(4)	4236–4248	2023
Jagmeet Singh, Dharminder Kumar* , Shivani	Role of omics approached in vegetable breeding for	SN Applied Sciences,	5(364)	http://doi.org/10.1	2023

Chauhan, Harnoor Kaur Dhillon, Sandeep Kumar, Vikas Kumar, Renu Kapoor.	insect pest resistance	If was 2.8 in 2023:		007/s424 52-023- 05522-5	
Kumar Dharminder, Singh Jagmeet, Pathania Rahul*, Dogra Balbir Singh and Chandel VGS.	Revealing genetic diversity for improvement of pod yield in okra (<i>Abelmoschus esculentus</i> L. Moench).	Electronic journal of Plant breeding,	14(4):	1497-1504.	2023
Dharminder Kumar, Praveen Kumar, Jagmeet Singh, Balbir, Dogra Sandeep Kumar *, VGS Gaurav Chandel and Renu Kapoor.	Revealing genetic diversity and association studies for improvement of yield in vegetable mustard (<i>Brassica juncea</i>).	Vegetable Science.	51(1)	86-95	2024.
Jagmeet Singh, Dharminder Kumar* , Salej Sood, Vinay, Bhardwaj Ramesh Kumar and Sandeep Kumar.	Genetic variability and association studies for yield and its attributes in cultivated potato.	Vegetable Science	51(1)	148-153	2024
Jagmeet Singh, Dharminder kumar*, Vinay Bhardwaj, Salej Sood and Rakesh Kumar Daroch.	Biochemical profiling of tetraploid potato (<i>Solanum tuberosum</i>) genotypes.	Indian Journal of Agricultural Sciences,	94(10):	1069-1074	2024
Renu Kapoor, Dharminder Kumar, VGS Chandel Gaurav, Anil Kumar, Anurag Sharma, Rajesh Kaler and Vipin Guleria.	Response of exotic vegetables to plant spacing, fertilization and insect pest management under sub-tropical region of western Himalayas of Himcahl Pradesh.	Innovare Journal of Agricultural Science,	12(4)	6-9	2024
Renu Kapoor, Anurag Sharma, Raina Rajeev, Kumar Dharminder, Sushil Dhiman, Kehar Singh Thakur and Jaya Chaudhary	Economics and Yield Potential of Him Mash Variety of Black Gram (<i>Vigna munga</i> L.) Under Rainfed Conditions in Himachal Himalayas	India. J. Mountain Research	19(1)	193-202	.2024

Dharminder Kumar, Akanksha Singh, Ankit Kumar, Aadisha Saini, Vikas Kumar, Sandeep Kumar*, Raj Kumar, Chander Parkash, Amit Vikram and Jagmeet Singh.	Phytochemical and Antioxidant Profiling of Chilli (<i>Capsicum annuum</i> L.) Landraces from Hilly Regions of India.	European Journal of Nutrition & Food Safety	16(9):	11-21	2024
Guleria Amit, Singh Sukhvir, Sheoran Parvender, Sood, Pankaj Mahajan Vishal, Kumar Dharminder, Singh Satbir, Singh Gurdeep and Rana Rajesh Kumar.	Price Transmission and Market Integration Analysis of Black Gram (Urad Dal) across major Indian States.	Frontiers in Sustainable Food Systems, section Agricultural and Food Economics	Volume 9 - 2025 https://doi.org/10.3389/fsufs.2025.1589518	1-15	2025
Jagmeet Singh, Shivani Chauhan, Dharminder* kumar , Chander Prakash, Kumar Sandeep, Dogra Balbir Singh and Chandel VGS .2025. Agriculture	Biofortification of vegetable crops to boost nutraceuticals in human diet: A Review.	Association of Textile Chemical and Critical Reviews Journal (AATCC Review)	13 (2),	276-282	2025
Dharminder Kumar and Sandeep Kumar* Niju Rana, Akhilesh Sharma	Detection of Epistasis for Yield and its Contributing Traits in Garden Pea under Mountain Himalayan Region.	Biological Forum an International journal	17 (6),	102-108	2025
Shubham, Dharminder Kumar* , Vikas Gill, Balbir Singh Dogra	Assessment of genetic divergence in pea (<i>Pisum sativum</i> L.) based on morphological and horticultural traits	International Journal of Research in Agronomy	8 (6),	313-316	2025
Shubham, Dharminder Kumar*, Vikas Gill, Balbir Singh Dogra	Trait Association and Path Analysis for Yield Improvement in Garden Pea (<i>Pisum sativum</i> L.).	Journal of Advances in Biology & Biotechnology	28 (6),	1328-1335	2025

Anupriya, Dharminder Kumar, , Ramesh Kumar, Rajesh kumar dogra, Chander parkash, Sandeep kumar, & Jagmeet Singh	Evaluation of cabbage (Brassica oleracea) hybrids for round the year production in low hill conditions of Himachal Pradesh.	<i>The Indian Journal of Agricultural Sciences,</i>	95(6),	722–727	(2025).
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Books/ E-Book/ Technical Manual/ Book Chapters


Books	Authors	Publisher
Pushp Beej Utpadan – Ek Vayavysai(Book)	Baweja HS; Verma AK;Kumar Dharminder and Baweja PK (pp. 1-88)	Directorate of Extension Education,UHFNauni(Solan) HP
Swarojgar Sushak Pushp Utpadan(Book)	Baweja HS; Verma AK;Kumar D and Baweja PK (pp. 1-71)	Directorate of Extension Education,UHFNauni(Solan) HP
Polyhouse m Carnation (Book)	Baweja HS; Verma AK;Kumar D and Baweja PK (pp. 1-71)	Directorate of Extension Education,UHFNauni(Solan) HP
Question bank on Post Harvest Technology, specially written for JRF, SRF, NET, SET, ARS and Ph.D Scholars(Book)	Guleria, SPS, Verma AK; Kumar D and Anil Gupta(pp1-256p)	New India Publishing Agency (NIPA), New Delhi (India)
Post Harvest Technologies for Commercial Floriculture. (Book)	Verma AK, Anil Gupta, Kumar D and Dhiman MR(pp 1-375) ISBN 10 9390175399 · ISBN 13 9789390175390	New India Publishing Agency (NIPA), New Delhi (India).
Objective Horticulture. (Book)	Verma AK, Dhiman A, Anil Gupta, Kumar D and Kumar P(pp670.)	New India Publishing Agency (NIPA), New Delhi (India) 2 nd Edition
Question bank on Post Harvest Technology, (2nd revised and Enlarged Edition) specially written for JRF, SRF, NET, SET, ARS and Ph. D Scholars(Book)	Guleria, SPS; Verma AK; Kumar Dharminder; Gupta Anil and SVS Chaudhary.	New India Publishing Agency (NIPA), New Delhi (India).
Himachal Pradesh Ke Nichle Parvatiya Kshetron mein Sabjiyon ki Kheti. (Book))	Dharminder Kumar, M L Bhardwaj, Ramesh Bhardwaj, Vipan Guleria, Rajesh Kaler, Sandeep Kumar, Nidhish Gautam, Vishav Chandel	Directorate of Extension Education, University of Horticulture & Forestry
Practical Manuals		
Practical Manual of Horticulture crops volume 1 Production Technologies	Verma AK;Gupta,A; Kumar D and Dinesh kumarsharma(pp520)	New IndiaPublishing Agency (NIPA), New Delhi(India)-2015

Practical Manual of Horticulture crops volume 11: Processing and post harvest technology	Vaidya,D;VermaAK;Gupta,A;Kumar Dharminder and sharma DK	New IndiaPublishing Agency (NIPA), New Delhi India,2015
Book Chapters		
1. Recent Advances in potato propagation. (Book Chapter)	Shiwani Kumar, Rajeev Kumar, Anchal Chauhan, Dharminder Kumar, Neha Sharma and Nirmal Singh.	In book Recent Trends in propagation of Forest and Horticultural Crops
2. An over view of Brassica Sprouts(Book Chapter)	Kumar Ankit, Kaur Ramandeep, Kumar Satish, Kumar Dharminder, Chandel Rajat and Kumar Vikash	Advances in Plant Sprouts-Photochemistry and Bifunctionalities (Springer)
3. Radish Sprouts and Mustard Green Sprouts(Book Chapter)	Kumar Ankit, Kaur Ramandeep, Kumar Satish, Thakur Ramesh, Kumar Dharminder, Chandel Rajat and Kumar Vikash	Advances in Plant Sprouts-Photochemistry and Bifunctionalities (Springer)
Popular articles		
Breeding Strategies for Abiotic Stress Tolerance in Vegetable Crops	Sharma Shweta, Kumar Dharminder, Kumar Sandeep and Gautam Nidhish(1-2pp)	Biomolecule Reports- An International eNews letter
Himachal Pradesh Ke Niman Parvatiyava Maidani Kshetron mein Aam ki Bagvani – Ek Sampoorna Janakari. Auidhyauniki evam Vaniki	Rajesh Kumar, VGS Chandel, M L Bhardwaj, Dharminder Kumar, Atul Gupta and Vipan Guleria(pp102-110)	Directorate of Extension Education, University of Horticulture & Forestry
Lettuce Utpadan ki Unnat Prodyogiki	Ashok Kumar and Dharminder Kumar(pp129-136)	Directorate of Extension Education, AudhyanikievamVaniki 30(1)
Pryavarana Badlavmein Himachal Ke Nichle Va Madhyavargiya Kshetron Mein Lassudde ki Kheti	Vipan Guleria, Rajesh Kumar, Dharminder Kumar, Atul Gupta and VGS Chandel(pp150-153)	Directorate of Extension Education, AudhyanikievamVaniki 30(1)
Breeding and biotechnological approaches for biotic stress resistance in vegetable crops	Jagmeet Singh,Dharminder Kumar and Richa.	Agritech today
Importance of double haploids in plant breeding	Jagmeet SinghSandeep kumar, Chander Parkash and Dharminder Kumar	Agritech today
ADVANCES IN GRAFTING TECHNIQUES IN VEGETABLE CROPS FOR HIGHER PRODUCTIVITY	Dharminder Kumar, Sandeep Kumar, Chander Parkash, MR Dhiman, Raj Kumar and Jagmeet Singh	AgriGate- An International Multidisciplinary Monthly e-Magazine

EXOTIC VEGETABLES, THEIR HEALTH BENEFITS AND CHALLENGE'S	Nidish Gautam, Deepika Negi, Kiran Pathania and Dharminder Kumar	Agriculture & Food newsletter
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Contributions

Sl. No	Details of Processes, Patents, Varieties, Products and Technologies	Patent No./Country of patent Release/ notification details	Whether a Developer, Co-developer or Associate
i.	<p>Solan Aadwik: This is an open pollinated variety of summer squash developed and recommended for cultivation in hilly regions of the state. The fruits are long and have attractive green colour at marketable stage. The harvesting starts from 40-45 days after transplanting and lasts up to 75-80 days. It yields about 36.48 t/ha. This variety has a potential for its large-scale cultivation during summer-kharif season in hilly regions of Himachal Pradesh (zone I, II & III). It has been recommended for release in the State Level Officers' Workshop held at CSK HPKV Palampur o 04-05-2024 as conveyed vide letter no. OSD. 3-5/CSKHPKV/DEE/Tech/ 2393-2481 dated: 29/07/2024 from Director Extension, CSKHPKV, Palampur.</p>  <p style="text-align: center;">Solan Aadwik</p>	<p>It has been recommended for release in the State Level Officers' Workshop held at CSK HPKV Palampur o 04-05-2024 as conveyed vide letter no. OSD. 3-5/CSKHPKV/DEE/Tech/ 2393-2481 dated: 29/07/2024 from Director Extension, CSKHPKV, Palampur.</p>	Developer
ii.	<p>Solan Adhiraj This is an open pollinated variety of okra developed and recommended for cultivation in zones I and II of Himachal Pradesh. The fruits are long and green colour in colour,</p>	<p>It has been recommended for release in the State Level Officers' Workshop held at</p>	Developer

	<p>which are non-fibrous at marketable stage. Its average plant height is 170.43 cm and harvesting starts from 70-80 days after sowing. This variety is tolerant to okra fruit and shoot borer and yields about 20.37 t/ha. This variety has a potential for its large-scale cultivation during summer-Kharif season in hilly regions of the state. It has been recommended for release in the State Level Officers' Workshop held at CSK HPKV Palampur on 04-05-2024 as conveyed vide letter no. OSD. 3-5/CSKHPKV/DEE/Tech/ 2393-2481 dated: 29/07/2024 from Director Extension, CSKHPKV, Palampur.</p>  <p style="text-align: center;">Solan Adhiraj</p>	<p>CSK HPKV Palampur on 04-05-2024 as conveyed vide letter no. OSD. 3-5/CSKHPKV/DEE/Tech/ 2393-2481 dated: 29/07/2024 from Director Extension, CSKHPKV, Palampur.</p>	
<p>iii.</p>	<p>Pusa Red Cabbage Hybrid-1: This is the first hybrid of red cabbage from public sector in India, developed by using cytoplasmic male sterility (CMS) system. The average head weight and yield under multi-location evaluation trials is 1.10 kg and 43.63 t/ha, respectively, which is 10.50% and 21.40% higher in yield over the commercial hybrids, Pusa Cabbage-1 and Primero, respectively. It matures in 70-75 days after transplanting and has an excellent field staying capacity (25-30 days). The anthocyanin concentration in the edible portion is 7.94 mg/100 g (7.5 times higher than that in white cabbage, 1.05 mg). It has been released by the DSSSC during</p>	<p>Notified by the CVRC in its 29th meeting held on 23.03.2022,</p>	<p>Associate</p>

2021 and notified by CVRC during 2022 for NCT of Delhi (S.O. 3254(E) dated 20.07.2022).



Pusa Red Cabbage Hybrid-1