

Department of Floriculture and Landscape Architecture

About the Department



The Department of Floriculture and Landscape Architecture is core department of College of Horticulture at the Banda University of Agriculture and Technology, Banda engaged in teaching, research and extension activities. The main mandate of the department is to impart quality teaching to under-graduate and post-graduate students of horticulture discipline. Presently, Master's and Doctoral degree programme is running in the department. The master programme was initiated in the year 2018 and doctorate programme was initiated in the year 2020. The programmes are running in the department as per the guidelines of ICAR New BSMA. In addition to teaching, research is also one of the mandates of our department. The department has highly qualified faculty with vast research experience in the current areas of Floriculture and Landscape Architecture. The department has initiated research activities in flower crops viz., Marigold, Tuberose, Gladiolus, Chrysanthemum, China Aster and Lilium which are suitable to agro-climatic conditions of the Bundelkhand region.

Major Thrust Areas

1. Screening of commercial varieties of important flower crops like Rose, Gladiolus, Marigold, Tuberose, Chrysanthemum, Bougainvillea, Gaillardia, Vinca etc., under Bundelkhand condition.
2. Exploration, collection, introduction, conservation and evaluation of floricultural germplasm including wild flora of Bundelkhand region (neglected and underutilized flora) for landscaping.
3. Standardization of agro-techniques for production of flowers in open and protected environment under Bundelkhand region for domestic and export market.
4. Development of standard protocol for propagation of flower crops using *in vivo* and *in vitro* techniques.
5. Development of a package for post-harvest technology of flowers and value addition in important flower crops (Dry flower techniques, floral crafts, flower arrangements etc.)


Head of Department

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| Name & Designation | : | Dr. Ajay Kumar Singh, Professor (Floriculture and Landscaping) |
| Address | : | Department of Floriculture and Landscape Architecture |
| Mobile/Phone | : | 9956669099 |
| E - mail | : | ajayorchid@gmail.com, ajaykumarsingh@buat.ac.in |


Brief Introduction

Dr Ajay Kumar Singh has post-graduate and doctorate in Horticulture from G.B. Pant University of Agriculture & Technology, Pantnagar, U.S.Nagar, Uttarakhand, India. He is having more than eighteen (19) years experience of Teaching, Research & Extension in the field of Horticulture with specialization in Floriculture and Landscaping. He has worked as Research Associate at ICAR-NRC for Orchids, East Sikkim (2003-2004), Subject Matter Specialist/Assistant Professor (Horticulture) at GBPUA&T, Pantnagar, Dist.-Udham Singh Nagar, Uttarakhand (2004-2015), Associate Professor (Floriculture and Landscaping) Banda University of Agriculture & Technology, Banda, U.P, India. (2015-2018). Dr Singh is presently working as Professor & Head (Floriculture and Landscaping) in the Department of Floriculture and Landscape Architecture, Banda University of Agriculture & Technology, Banda.


Faculty Members:

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| Dr. Ajay Kumar Singh Professor (Floriculture and Landscaping) Dept. of Floriculture and Landscaping, College of Horticulture, Banda University of Agriculture & Technology, Banda-210001, Uttar Pradesh, India Email: ajayorchid@gmail.com, ajaykumarsingh@buat.ac.in Mb: 9956669099 |  |
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|----------------------------|---|---|
| Qualifications | : | Ph. D Horticulture with specialization in Floriculture and Landscaping |
| Prior Experience | : | Post-graduate and Doctorate in Horticulture from G.B.Pant University of Agriculture & Technology, Pantnagar, U.S.Nagar, Uttarakhand, India. Having more than eighteen (18) years experience of Teaching, Research & Extension in field of Horticulture with specialization in Floriculture and Landscaping. 1. Research Associate at ICAR- NRC for Orchids, East Sikkim (2003-2004) 2. Subject Matter Specialist/Assistant Professor (Horticulture) at GBPUA&T, Pantnagar, Dist.-Udham Singh Nagar, Uttarakhand (2004-2015) 3. Associate Professor (Floriculture and Landscaping) Banda University of Agriculture & Technology, Banda, U.P, India. (2015-2018) 4. Professor (Floriculture and Landscaping), Banda University of Agriculture & Technology, Banda. (2018-till date) |
| Publications | : | Research Paper : 30, Books: 02, Book Chapter: 10, Popular articles: 50, Practical manual: 04 |
| Awards/Fellowships Availed | : | University recognition for outstanding contribution, Young Scientist Award, Excellence in Teaching Award |
| Specialization | : | Floriculture and Landscaping |

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|---|---|
| Dr. Rakesh Kumar Assistant Professor (Floriculture and Landscaping) Dept. of Floriculture and Landscaping, College of Horticulture, Banda University of Agriculture & Technology, Banda-210001, Uttar Pradesh. India Email: rakeshkashav53@gmail.com, rakeshkumar@buat.edu.in Mob No.: 7755818798 |  |
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| Qualifications | : | Ph. D. Horticulture with specialization in Floriculture and Landscaping |
| Prior Experience | : | <ul style="list-style-type: none"> Post-graduation from Punjab Agricultural University, Ludhiana and Doctorate degree from G.B. Pant University of Agriculture & Technology, Pantnagar, U.S. Nagar, Uttarakhand. Research Associate at Centre for Protected Cultivation Technology, IARI, New Delhi under NAIP Project “Protected Cultivation of High Value Vegetables and Cut Flowers- A Value Chain Approach” from 2011 to 2012. Senior Research Fellow at Directorate of Floricultural Research, Pusa Campus, Indian Agricultural Research Institute (IARI) New Delhi under DUS Project on gladiolus from 2012 to 2013. Assistant Professor (Floriculture and Landscaping) Banda University of Agriculture & Technology, Banda, U.P, India. (Sept., 2013--till date) |
| Publications | : | Research Papers : 28, Book Chapters: 06, Popular articles: 25, Practical manuals: 05 |
| Awards/Fellowships Availed | : | ICAR- Senior Research Fellowship, Best Teacher Award, Young Scientist Award and Certificate of Appreciation |
| Specialization | : | Floriculture and Landscaping |

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| Dr. Amit Kanawjia Assistant Professor (Floriculture and Landscaping) Dept. of Floriculture and Landscaping, College of Horticulture, Banda University of Agriculture & Technology, Banda-210001, Uttar Pradesh. India Email: amit_bbt@rediffmail.com, amitkanawjia@buat.ac.in Mb: 7000041406 |  |
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| Qualifications | : | Ph. D Horticulture with specialization in Floriculture and Landscaping |
| Prior Experience | : | Post-graduate in Horticulture from Institute of Agricultural Sciences, BHU, Varanasi and Doctorate in Horticulture from SHUATS, Allahabad, Uttar Pradesh, India. Having more than nine (09) years experience of Teaching, Research & Extension in field of Horticulture with specialization in Floriculture and Landscaping. <ol style="list-style-type: none"> Inspector- Organic Agriculture, ECOCERT INDIA PVT. LTD (2011-2013) Assistant Professor (Horticulture), School of Agriculture, ITM University Gwalior, MP (2013-2017) Subject Matter Specialist(Horticulture) at KVK Jalaun, BUAT, Banda (2017-2021) |

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| | | 4. Assistant Professor (Floriculture and Landscaping) Banda University of Agriculture & Technology, Banda, U.P, India. (2021 – Till date) |
| Publications | : | Research Paper: 21, Books (Edited): 01, Book Chapter: 06, Popular articles:15, Krihi Samachar Patrika: 02, Souvenir cum Abstract (Edited):01 |
| Awards/Fellowships Availed | : | University recognition for Most sincere, punctual and enthusiastic trainee Award, Young Scientist Award, KVK Scientist Award, Innovative Scientist of the Year Award. |
| Specialization | | Floriculture and Landscaping |

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|---|---|---|
| Krishna Singh Tomar Assistant Professor (Floriculture and Landscaping) Dept. of Floriculture and Landscaping, College of Horticulture, Banda University of Agriculture & Technology, Banda-210001, Uttar Pradesh. India Email:tomarhorti@rediffmail.com Mb: 9862577495 | |  |
| Qualifications | : | M.Sc. (Horticulture) with specialization in Floriculture & Landscaping |
| Prior Experience | : | 5 years & 9 months Experience as Student Welfare Officer at College of Horticulture & Forestry, Central Agricultural University, Pasighat, Arunachal Pradesh and 8 years Experience as Horticulture Assistant at College of Fisheries, Central Agricultural University, Lembucherra, Agartala, Tripura. |
| Publications | : | 17 Research Papers in National and International Journals, 1 Book, 4 Book Chapters, 40 Popular Articles, 20 Abstracts and 3 T.V. Talks. |
| Specialization | | Floriculture and Landscaping |

Current Projects

| Sr. No. | Name of the Project | Faculty Involved | Funding Agency | Budget (Rs. in lakhs) |
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| 1. | Development of botanical garden” for ex-situ conservation of indigenous, rare, endangered and threatened (RET) plants. | Dr Ajay K. Singh, PI Dr Rakesh Kumar, Co-PI Sh. KS Tomar, Co-PI Dr Amit Kanawjia, Co-PI | BUAT Banda | 86 lakhs |
| 2. | Estimation of floral reward potential of medicinal and aromatic plants and assessment of nutraceutical value of honey in Kannauj and Hathras (U.P) | Dr Ajay K. Singh, Co-PI | NBB, Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) | 60 lakhs |
| 3. | Establishment of Hi-Tech Nursery for Promoting | Dr Ajay K. Singh, Co-PI Dr Rakesh Kumar, Co-PI | RKVY | 426.0 lakhs |

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| | Horticultural and forestry plants in Bundelkhand Region of Uttar Pradesh | Sh. KS Tomar, Co-PI | | |
| 4. | AICRP MAP & Betelvine (Volunteer Centre) | Dr Ajay K. Singh, PI Dr Rakesh Kumar, Co-PI Sh. KS Tomar, Co-PI | ICAR- DMAPR, Gujrat | 4.26 lakhs |

Publications

Research Papers

1. Singh, A.K. Kumar, R. Tomar, K.S., Gupta, A.K. Kumar, H & Patel, R. 2023. Influence of potting media composition on quality flower production of petunia (*Petunia hybrida*), *Journal of Plant Nutrition*. DOI: 10.1080/01904167.2023.2188075.
2. Patel, R. Tomar, K. S., Singh A.K and Kumar, R. 2023. Genetic divergence analysis in gladiolus (*Gladiolus hybridus* Hort.). *The Pharma Innovation Journal*. 12(1): 1374-1380
3. Singh, A.K.; Singh, R.; Kumar, R.; Gupta, A.K.; Kumar, H.; Rai, A.; Kanawjia, A.; Tomar, K.S.; Pandey, G.; Singh, B.; et al.2023. Evaluating Sustainable and Environment Friendly Growing Media Composition for Pot Mum (*Chrysanthemum morifolium* Ramat.). *Sustainability*, 15, 536. [https:// doi.org/10.3390/su15010536](https://doi.org/10.3390/su15010536).
4. Kumar, R., Kumar, A., Singh, A. K., Tomar, K.S., Kanawjia, A. and Kumar, H. 2022. Genetic Variability and Correlation Studies in Gladiolus (*Gladiolus Hybridus* Hort.) Under Bundelkhand Conditions. *Bangladesh Journal of Botany*. 51(4): 705-712.
5. Tiwari, A. Singh, A.K., Kumar, R., Tomar, K.S., Kumar, S. and Singh, A. 2022. Evaluation of different germplasm of African marigold (*Tagetes erecta* L.) for phenotypic performance and floral yield under the Bundelkhand Condition. *Environment and Ecology*. 40(3B):1556-1561.
6. Kumar, R., Singh, A. K., Tomar, K.S and Gupta, A. 2022. Effects of different media on growth and flowering traits of *Calendula officinalis* L. *Bangladesh Journal of Botany*. 51(3): 417-422.
7. Singh, R.K., Singh, A. K., Kumar, R., Tomar, K.S., Kanwajia, A. Ojha, G. and Singh, A. 2022. Evaluation of different Chrysanthemum (*Chrysanthemum × morifolium* Ramat.) varieties under Bundelkhand region. *The Pharma Innovation Journal*. 11(5): 1606-1610.
8. Kumar, R., Singh, A.K., Tomar, K.S., Chugh, V. and Gangwar, V. 2021. Effect of plant growth regulators on rooting of bougainvillea var. 'Manila Red' through hardwood cuttings. *Journal of Ornamental Horticulture*. 24 (1): 58-62.
9. Kumar, S., Mishra, B.P., Kumar, R., Gupta, D., Kumar, N., Singh, B. and Chauhan, J.K. 2021. Tree diversity of Pasighat town of Arunachal Pradesh. *Journal of Pharmacognosy and Phytochemistry*. 10(1): 340-346.
10. Kumar, R. and Singh, A.K. 2020. Evaluation and variability studies in gladiolus (*Gladiolus hybridus* Hort.) under Bundelkhand conditions. *Journal of Ornamental Horticulture*. 23(1):20-26.

11. Singh, A.K., Kumar, R. and Kumar, H. 2020. Studies on genetic variability, quantitative and qualitative traits of *Lilium* cultivars (*Lilium x hybrida*) under shade net in North-Western Himalayan region of India. *Ornamental Horticulture*. 26 (4): 670-677.
12. Singh, A. K., Kumar, R., Tomar, K. S., Kumar, H., Kumar, S. and Kumar, A. 2020. Evaluation of gladiolus (*Gladiolus hybridus* Hort.) varieties for vegetative and floral characters under Bundelkhand Conditions. *International Journal of Current Microbiology and Applied Sciences* 9(05): 2612-2619.
13. Kumura, A., Pandey, G., Mishra, P.P. and Kumar, R. 2019. Effect of integrated nutrient management on growth and flowering of African marigold (*Tagetes erecta*) cv. Pusa Narangi Gaiinda. *International Journal of Current Microbiology and Applied Sciences*. 8(11): 1271-1278.
14. Parmar, R., Kanawjia, A., Chaurasiya, R., Dubey, A., Parveen, S., Kiran and Pawaiya, S. 2019. Evaluation of Different Cultivars of Chrysanthemum (*Dendranthema grandiflora* L.) Under Gird Region of Madhya Pradesh. *Int. J. Curr. Microbiol. App. Sci.* 8: 38-44.
15. Parveen, S., Singh, P.K. and Kanawjia, A. 2019. Exploitation of Heterosis in Rice (*Oryza sativa* L.) using CMS System under Upland Conditions. *Int. J. Curr. Microbiol. App. Sci.* 8: 107-121.
16. Parveen, S., Singh, L. and Kanawjia, A. 2019. Genetic Divergence in Indigenous and Exotic Genotypes of Rice (*Oryza sativa* L.) *Int. J. Curr. Microbiol. App. Sci.* 8: 122-125.
17. Chauhan, S.P.S., Kanawjia, A., Kiran, Joshi, V. and Mishra, R.C. 2019. Response of organic manure and biofertilizer on growth flowering and yield of African marigold (*Tagetes erecta* L.) cv. Pusa Narangi Gaiinda. Souvenir of National Conference on Organic and Natural Farming – A tool for Sustainable Agriculture and Economic Development pp: 41-47.
18. Jaysawal, N., Singh, G., Kanawjia, A., and Debbarma, B. 2018. Effect of different mulches on growth and yield of carrot (*Daucus carota* L.). *International Journal of Chemical Studies*. 6(4): 381-384.
19. Thakur, T.S., Kanawjia, A., Kanojia, R.K., Saket, R.K. and Jayaswal, N. 2018. Effect of different Integrated Nutrient Management on the growth and yield parameters of garlic (*Allium sativum* L.). *Research Journal of Agricultural Sciences – An International Journal*. 9(3): 557-561,
20. Soni, S., Kanawjia, A., Chaurasiya, R., Chauhan, P.S., Kumar, R. and Dubey, Saurabh. 2018. Effect of organic manures and biofertilizers on growth, yield and quality of strawberry (*Fragaria x ananassa* Duch) cv. Sweet Charlie. *Journal of Pharmacognosy and Phytochemistry*. 2:128-132.
21. Bajaraya, B., Kanawjia, A., Jaysawal, N., Dubey, A., Parveen, S. and Pawaiya, S. 2018. Performance of different cultivars of Dahlia (*Dahlia variabilis* L.) under agro climatic conditions of Gwalior. *Journal of Pharmacognosy and Phytochemistry*. 7(6):98-102
22. Debbarma, B., Kanawjia, A., Yadav, D.K., Jaysawal, N., Sagar, D., Kanojia, R.K. and Prajapati, V. 2018. Studies on effect of different organic manures on growth and yield of radish (*Raphanus sativus* L.). *International Journal of Chemical Studies*. 6(4): 378-380.
23. Singh, A. K., Kumar, R. and Tomar, K.S. 2018. Protected floriculture for diversification and livelihood security. *Annals of Horticulture*. 11 (2):161-168.

24. Pandey, G., Kumar, R., Kumar, S. and Kumar, A. 2018. Effect of Integrated Nutrient Management on Floral Parameters and Soil Nutrient Status in Chrysanthemum (*Chrysanthemum morifolium* Ramat.). *International Journal of Current Microbiology and Applied Sciences*. 7(5): 1984-1990.
25. Kumar, R., Kumar, S. and Singh, A. K. 2018. Evaluation of Snapdragon (*Antirrhinum majus* L.) Genotypes for Post-Harvest and Seed Characters under Tarai Conditions of Uttarakhand. *International Journal of Pure & Applied Bioscience*. 6(1): 942-947.
26. Singh, A.K., Singh, D.K., Singh, A.K., and Kumar, R. 2017. Evaluation of different chrysanthemum (*Chrysanthemum morifolium*) genotypes under shade net house in Northwest Himalaya. *International Journal of Pure & Applied Bioscience*. 5(1): 980-985.
27. Kadam, G.B., Kumar, G., Saha. T.N., and Kumar, R., Tiwari, A.K. and Kumar, R. 2014. Evaluation of pre-emergence herbicides in gladiolus (*Gladiolus*). *Indian Journal of Agricultural Sciences*. 84(12):1546-9.
28. Sindhu S.S., Kumar, R. and Chaudhary, V. 2014. Evaluation of gladiolus (*Gladiolus grandiflorus* L.) varieties under drip irrigation system. *Progressive Horticulture*. 46(1):143-145.

Popular Articles:

1. Kanawjia, A., Kumar, R., Prakash, S., Singh, A.K. and Tomar, K.S. 2022. Intervention of floricultural crops to revolutionize tribal's livelihood. *Agri-Life*. 7(2):16-19.
2. Kumar, R., Singh, A. K., and Sharma, P. 2022. Efficacy of landscape plants in indoor air pollution abatement. *Indian Farmers' Digest*. 55 (1): 34-37.
3. Kumar, R., Singh, A.K. and Tomar, K.S. 2022. Shobhakaripaudhon ki nursery tyar karne ki vidhiyan. *Madhya Bharat Krishak Bharti*. 17(2): 37.
4. Kumar, R., Singh, A.K., Tomar, K.S. and Kanawjia, A. 2022. Bougainvillea: An ornamental plant known for versatility. *Indian Farmer*. 9 (4): 112-115.
5. Singh, A.K., Kumar, R., Tomar, K.S. and Kanawjia, A. 2022. Rajnigandha ki viagyanik vidhi se kheti. *Madhya Bharat Krishak Bharti*. 17(1): 38.
6. Kanojia, R.K., Kanawjia, A. and Kumar, R. 2021. Possibilities of organic agriculture and certification in Uttar Pradesh. *Agri-Life*. 6(2):8-11.
7. Tomar, K.S., Pathak, J., Singh, A.K., Kumar, R. 2021. Bundelkhand Main Ghritkumari Aur Ashwagandha Ki Vyvsayik Kheti. *IISR-Ikshu*. 10(1): 60-62.
8. Patel, R.N., Kumar, R., Singh, A. K. and Tomar, K.S. 2021. Gladiolus Ki Unnat Kheti. *Star Krishi*. 9(1): 03-06.
9. Tomar, K.S., Singh, A.K., Kumar, R. and Dwivedi, S.V. 2021. Katsagon Tree: *Fernandoa adenophylla*. *Floriculture Today*. 25(9): 42-43.
10. Tomar, K.S., Kumar, R., Singh, A.K., Dwivedi, S.V. and Gupta, Y.C. 2021. Adorn Landscape with Agaves. *Nursery Today*. 8 (1): 108-114.
11. Tomar, K.S., Singh, A.K. and Kumar, R. 2021. Green Highways. *Floriculture Today*. 25(8): 10-14.
12. Kumar, R., Singh, A. K. and Kumar, S. 2020. Neem ka mahatav. *Star Krishi*. 8(3): 30-34.

13. Kumar, R., Singh, A. K. and Tomar, K.S. 2020. Landscaping with herbal plants: Scenic beauty with health. *Indian Farmers' Digest*. 53 (2): 13-16.
14. Kumar, R., Singh, A. K., Tomar, K.S. and Pandey, G. 2019. Significance of biofertilizers in flower crops. *Indian Farmer*. 6(6): 385-391.
15. Kanawjia, A., Goyal, A.K., Kanojia, R.K., Jairu, D. and Mishra, D. (2019). Uttar Pradesh mein Jaivik Kheti Evam Pramanikaran Ki Sambhavnayein
16. Kanawjia, A., Kanojia, R.K., Singh, K.K. and Singh, G. (2018). Krishi utpadan mein kam lagat taknequein., Zaid Visheshank 2018. Pp : 48-50.
17. Kanojia, R.K. Singh, K.K., Kanawjia, A. and Mishra, D. (2018). Mrida Swasthyaka Sudhaar : Achhe Utpadanka Adhaar. Pp: 62-64. *Krishak Bharti*, Zaid Visheshank 2018.
18. Kanawjia, A., Goyal, A.K., Singh, R.K. and Jaysawal, N. (2018). Aaiye papeete ki kheti karein aur lakhon kamayein. *MAC Krishi Jagran*, December. pp: 34-39.
19. Kanawjia, A., Goyal, A.K., Singh, R.K. and Jaysawal, N. (2018). Genda phool ki vyavsayik kheti, gende ki kheti karke laabh Kamayein. *MAC Krishi Jagran*, December. pp: 52-54
20. Kumar, R., Singh, A. K., Tomar, K.S. and Pandey, G. 2018. Relevance of plant growth regulators in flower crops. *Indian Farmer*. 5(12): 1471-1474.
21. Kanawjia, A., Goyal, A.K., Sharma, B., Divedi, R. and Yadav, D. (2017). Sanrakshit nursery mein sabji paudh utpadan. *Vindhya Krishi*. Pp: 29-34
22. Kanawjia, A., Goyal, A.K., Sharma, B., Kanojia, R.K. and Mishra, D. (2017). Bharat mein Sabji Utpadan mein Sanrakshit Kheti ki Upyogita. *Kisan Bharti*, July 2017. Pp- 42-44.
23. Kumar, R. and Singh, A. K., Dwivedi, S. V., Prakash, O. 2017. Mahua Tree- A Boon for Peoples of Bundelkhand Region. *Popular Kheti*(5): 10-13.
24. Kumar, R. and Singh, A. K. 2016. Interiorscaping: a new approach towards beautification. *Indian Farmers' Digest*. 50 (12): 27-29.

Chapters in Books

1. Kumar, R., Singh, A.K., Kanawjia, A., Tomar, K.S. and Dwivedi, S.V. 2022. GILOY-a powerful medicinal herb. In: *Medicinal Plant and Its Benefits in Our Day to Day Life* (Vol.8). Sharma, D. (Ed.). Published by Integrated Publications, New Delhi. ISBN: 978-93-95118-12-5. pp.3-16.
2. Singh, A.K. and Kumar, R. 2021. *Alpinia* (*Alpinia* sp.). In: *Bulbous and Rhizomatous Plants*. Roy, R.K. and Banerji, B.K. (eds.). Published by Scientific Publishers. ISBN: 9789390495061 pp.1-14.
3. Singh, A.K., Kumar, R. and Tomar, K.S. 2021. *Begonia* (*Begonia* sp.). In: *Bulbous and Rhizomatous Plants*. Roy, R.K. and Banerji, B.K. (eds.). Published by Scientific publishers. ISBN: 9789390495061 pp. 24-37.
4. Kumar, R. and Singh, A.K. 2021. *Hemerocallis* (*Hemerocallis* L.) authored by Rakesh Kumar & Ajay Kumar Singh. In: *Bulbous and Rhizomatous Plants*. Roy, R.K. and Banerji, B.K. (eds.). Published by Scientific publishers. ISBN: 9789390495061 pp.120-34.

5. Singh, A.K., Kumar, R. and Tomar, K.S. 2018. Protected cultivation of High value horticultural crops. In: Doubling Farmers Income Through Appropriate Agricultural Technologies and Extension. (Edited by B. P. Mishra, B.K. Gupta, Dhiraj Mishra and Pankaj K. Ojha). Published by Biotech Book Publisher. ISBN: 9788176224550. pp. 237-254.
6. Kanawjia, A. and Kanojia, R.K. (2018). Protected Cultivation of Vegetables for Crop Diversification Under Changing Climate Scenario. pp: 71-79.
7. Kanawjia, A., Kanojia, R.K., Sanat Pawaiya, Bik aDebbarma and Noopur Jaysawal (2018). Organic farming: Challenges and opportunities in North Eastern States of India. pp: 163-174.
8. Pandey, G., Pandey, R. and Kanawjia, A. (2018). SWOT Analysis of Farming System for Diversification in Agriculture of Sultanpur District, Uttar Pradesh. pp: 27-34
9. Kanawjia, A., Kanojia, R.K., Giri, Y., Kaithwas, M. (2016). Role of e-Governance in Indian Agriculture. Extension: Issues and Approaches, pp: 225-234.
10. Kanawjia, A., Chaudhary S., Kanojia A. (2015). Organic Farming: Nature's Way of Inclusion. Multidisciplinary Scenario of Professionalization of Education in India, pp: 211-226.
11. Singh, Brajpal, Saravanan, S., Kanawjia, A. and Mishra, P. (2015). Evaluation of Different Varieties of Bottlegourd (*Lagenaria siceraria*) in Rabi season under Allahabad Condition. Multidisciplinary Scenario of Professionalization of Education in India, pp: 227-231.
12. Singh, A.K., Singh, B. and Kumar, R. 2012. Integrated nutrient management (INM) under protected agriculture. In: System Based Integrated Nutrient Management. Gangwar, B. and Singh, V.K. (eds.). Published by New India Publishing Agency (NIPA), ISBN: 9789381450055. pp. 223-237.

Chapters published in training manual/ proceedings of seminar / symposium / conference

1. Singh, A.K., Kumar, R. and Tomar, K.S. 2021. Propagation of high value ornamental plants under protected condition. In: Compendium on Entrepreneurship Development Program organized by GBPUAT, Pantnagar from 14th Sept., 2020 to 25th Jan., 2021. pp.246-254.
2. Singh, A.K., Kumar, R. Tomar, K.S., Verma, S.K. and Gurudatt. 2021. Grihvatika main varshbhar phool utpadan avam dekhrek. In: Udyan Smarika of Divisional Fruits, Vegetable and Flower Show-2021 organized by Department of Horticulture and Food Processing, Agra Uttar Pradesh from 20th and 21st February, 2021. pp.13-17.
3. Singh, A.K., Kumar, R. Tomar, K.S., Verma, S.K. and Gurudatt. 2021. Varshbhar phoolon ki vyvsayik kheti. In: Udyan Smarika of Divisional Fruits, Vegetable and Flower Show-2021 organized by Department of Horticulture and Food Processing, Agra Uttar Pradesh from 20th and 21st February, 2021. pp.18-19.
4. Tomar, K. S., Singh, A.K. and Kumar, R. 2020. Mitigating indoor air pollution through house plants. In: Online compendium on Facts, Impacts, Challenges and Sustainable Global Security of Environment during Covid-19 Pandemic, published by SamagraVikas Welfare Society. Pp18-20.

Practical manuals

1. Kumar, R. and Singh, A.K. 2016. Principles of Landscape Gardening.
2. Singh, A.K., Kumar, R. and Prakash, O. 2016. Ornamental Horticulture.

3. Dwivedi, S.V., Chugh, V., Prakash, O., Kumar, R. and Mandge, H. M. 2016. Medicinal and Aromatic Plants.
4. Prakash, O., Kumar, S., Mandge, H. M., Dwivedi, S.V., Kumar, R., Chugh, V. and Singh, A.K. 2016. Fundamentals of Horticulture.
5. Prakash, O., Kumar, S., Dwivedi, S.V., Kumar, R. and Singh, A.K. 2016. Plant Propagation and Nursery Management.

Degree Programmes offered: -

- B.Sc. (Hons) Horticulture
- M.Sc. (Horticulture) Floriculture & Landscaping
- Ph. D.(Horticulture) Floriculture & Landscaping

Courses offered from department in undergraduate programmes:

| S.N. | Course code | Course Title | Credit Hours |
|-------------------|-------------|--|--------------|
| UG Courses | | | |
| 1 | HFL 111 | Principles of Landscape Architecture | 2(1+1) |
| 2 | HFL 211 | Commercial Floriculture | 3(2+1) |
| 3 | HFL 221 | Ornamental Horticulture | 2(1+1) |
| 4 | HFL 222 | Production Technology for Ornamental Crops, Medicinal and Aromatic Crops and Landscaping | 2 (1+1) |
| 5 | HFL 311 | Medicinal and Aromatic crops | 3 (2+1) |
| 6 | HFL 321 | Breeding and Seed Production of Flower and Ornamental Plants | 3(2+1) |
| 7 | HFL 421 | Nursery Production and Value Addition of Flowers | 10 (0+10) |

Courses offered in M.Sc. (Hort.) in Floriculture and Landscaping

| Sr. No. | Course Code | Course Title | Credit Hours |
|-----------------------------------|-------------|---|--------------|
| Major Courses (20 Credits) | | | |
| 1. | FLS 501* | Systematics of Ornamental Plants | 2+1 |
| 2. | FLS 502* | Breeding of Ornamental Plants | 2+1 |
| 3. | FLS 503* | Commercial Production of Cut Flowers | 2+1 |
| 4. | FLS 504* | Commercial Production of Loose Flowers | 2+1 |
| 5. | FLS 505* | Ornamental Gardening and Landscaping | 2+1 |
| 6. | FLS 506 | Indoor Plants and Interiorscaping | 1+1 |
| 7. | FLS 507 | Nursery Management in Ornamental Plants | 2+1 |
| 8. | FLS 508 | Turf Grass Management | 2+1 |
| 9. | FLS 509 | Value Addition in Floriculture | 2+1 |
| 10. | FLS 510 | Protected Cultivation of Flower Crops | 2+1 |
| 11. | FLS 511 | CAD for Landscaping | 1+2 |
| 12. | FLS 512 | Seed Production in Flower Crops | 1+1 |

| | | | |
|----------------------------------|---------|----------|-----------|
| Minor Courses | | | 08 |
| Supporting Courses | | | 06 |
| Common compulsory courses | | | 05 |
| 13. | FLS 591 | Seminar | 0+1 |
| 14. | FLS 599 | Research | 0+30 |
| Total Credits | | | 70 |

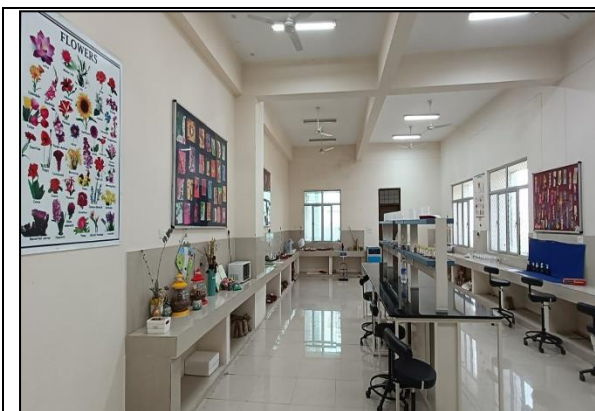
*Compulsory among major courses

Courses offered from department in Ph.D. (Hort.) in Floriculture and Landscaping

| Sr.No. | Course Code | Course Title | Credit Hours |
|----------------------------------|--------------------|---|---------------------|
| Major Courses(12 Credits) | | | |
| 1. | FLS 601* | Crop Regulation in Ornamental Crops | 1+1 |
| 2. | FLS 602* | Postharvest Biology of Floricultural Crops | 2+1 |
| 3. | FLS 603 | Specialty Flowers, Fillers and Cut Greens | 1+1 |
| 4. | FLS 604 | Biotechnological Approaches in Floricultural Crops | 2+1 |
| 5. | FLS 605* | Advances in Landscaping | 1+1 |
| 6. | FLS 606 | Vertical Gardening | 1+2 |
| 7. | FLS 607 | Modern Approaches in Breeding of Floricultural crops | 2+1 |
| 8. | FLS 608 | Current Trends in Production Technology of Floricultural crops | 2+1 |
| 9. | FLS 609 | Recent Developments in Protected Cultivation of Floricultural crops | 2+1 |
| Minor courses | | | 06 |
| Supporting courses | | | 05 |
| 10. | FLS 691 | Seminar-I | 0+1 |
| 11. | FLS 692 | Seminar-II | 0+1 |
| 12. | FLS 699 | Research* | 0+75 |
| Total Credits | | | 100 |

*Compulsory among major courses

Facilities in Department



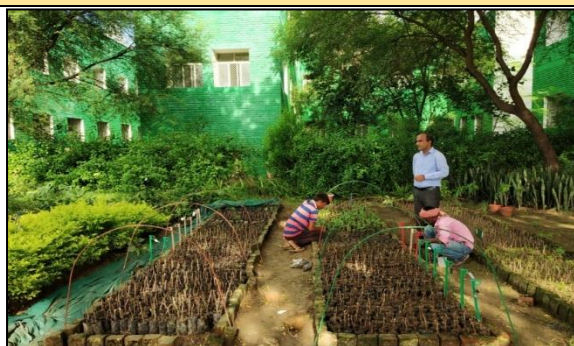
UG Lab



PG Lab



Floriculture Instructional Farm



Ornamental Nursery



Instructional Units at Farm