Curriculum Vitae

Full Name:	DR. JITENDRA SINGH BUTOLA
Designation:	Assistant Professor
Department:	Forestry and Natural Resources
Campus:	Chauras campus
Email:	drbutola.hnb@gmail.com
Date of Birth:	03/07/1978
Educational Qualification:	MSc (Forestry)
	MBA (Marketing Management)
	PhD (NWFP-Medicinal Plants)



Fields of Specialization: Medicinal and Aromatic Plants, Non-Wood Forest Products, Business management of Forest produce

Job Profile:

- Assistant Professor at Department of Forestry and Natural Resources, HNB Garhwal University, Srinagar, joined on 5th March 2020.
- Consultant- GIZ, Germany
- Senior consultant at WAPCOS, Govt. of India
- Assistant Professor at College of Forestry, VCSG Uttarakhand University of Horticulture and Forestry, Ranichauri
- Consultant at Herbal Research and Development Institute, Govt. of Uttarakhand
- Research Associate at GB Pant National Institute of Himalayan Environment, Govt. of India

Area of Interest:

- Planning, Policies and Protocols for production, utilization, conservation and sustainable management of Rare Endangered and Threatened (RET) high value medicinal plants
- Himalayan Medicinal Plants diversity, distribution, habitat ecology and conservation status
- Value chain development, marketing research, quality control and certifications on medicinal plants and other high value resources of Himalayan region
- Non-Wood Forest Product (NWFP) resource development for livelihood support and economic growth

Special Contribution:

- Volunteer- Wildlife Crime Control Bureau, Govt. of India for illegal extraction of medicinal plants
- Founder Director- HUMAN (Himalayan Union for Man and Nature)- a society works for resource augmentation, conservation and sustainable utilization of Himalayan medicinal and aromatic plants through commercial farming business and policy development.

Research Supervision: PhD 04 (Ongoing), MSc dissertation (12)

Research Projects/ Collaborations:

- Research collaborations- SKUAST, Kashmir & Centre for Aromatic Plants, Dehradun
- 02 research projects completed and 03 projects ongoing at HNB Garhwal University.
- 10 research projects and 03 research consultancies before joining the University.

Research Publications: 96 @ Research Gate

Administrative Experience:

• Assistant Dean Student Welfare, HNB Garhwal University Srinagar from the year 2021

• Hold various responsibilities at VCSG Uttarakhand University of Horticulture and Forestry as an In-Charge of Medicinal and Aromatic Plants Institute and Institute of Food Science and Technology and Assistant Director, Labour Welfare department.

Honors & Awards:

- Excellence in Research Award by Society for advancement in Agriculture Science and Technology, UP, in June, Year 2022
- Excellence in Extension Award by Society for advancement in Agriculture Science and Technology, UP, in December, Year 2021
- UGC-Startup Award by University Grant Commission, New Delhi in Year 2021
- RET Species Conservation Award by Nutrition and Natural Health Science Association, New India, Year 2017
- Excellence in Teaching Award by Society for advancement in Agriculture Science and Technology, UP, Year 2016
- Young Scientist Award by Aastha Foundation, UP, Year 2015

Membership/Associations:

- National Medicinal Plants Board, New Delhi (Govt. of India) Principal investigator on Himalayan medicinal plants
- Quality Council of India, New Delhi (Govt. of India)- Principal Investigator on Himalayan medicinal plants quality and certification
- WAPCOS Ltd, Gurgaon (Govt. of India Undertaking) as an expert Medicinal plants and Forestry
- Uttarakhand State Biodiversity Board, Dehradun (Govt. of Uttarakhand)- TSG member of Medicinal plants diversity, cultivation and marketing (Value chain and ABS)
- Society for Conservation and Resource Development of Medicinal Plants, New Delhi.- Life Membership
- Human (Himalayan Union for Man and Nature), Uttarakhand- Life Membership

Scientific visits Abroad/ International Collaboration: Visited Nepal for marketing research on Himalayan medicinal plants

Conference/Symposium/Workshops Attended during the last 5 years (Nos.): 12

Conference/Symposium/Workshop Organized during last five years (Nos.): 04

Research Publications:

FOREIGN JOURNALS (21)

- 1. BUTOLA, JS, RK VASHISTHA, CP KUNIYAL, AR MALIK, AASIF ALI (2014). Germination ecophysiology of Angelica glauca Edgew. seeds. European Journal of Medicinal Plants 4(4): 404-412.
- 2. KUNIYAL CP, BISHT VK, NEGI JS, BHATT VP, BISHT DS, BUTOLA JS, SUNDRIYAL RC, SINGH SK (2014). Progress and prospect in the integrated development of medicinal and aromatic plants (MAPs) sector in Uttarakhand, Western Himalaya. Environment, Development and Sustainability, DOI 10.1007/s10668-014-9595-9. 1.4.
- 3. KUNIYAL CP, BHATT VP, BUTOLA JS, SUNDRIYAL RC (2014). Promoting nursery enterprise in high altitude villages: a participatory approach for conservation and commercialization of Himalayan threatened medicinal plants. Journal of Medicinal Plants Research 8 (48) 1399-1407.
- 4. KUNIYAL CP, KUNIYAL PC, BUTOLA JS, SUNDRIYAL RC (2013). Trends in the marketing of some important medicinal plants in Uttarakhand, India. Int. J. Biodiversity Science, Ecosystem services and Management, USA. DOI: http://dx.doi.org/10.1080/21513732.2013.819531
- 5. KUNIYAL CP, PUROHIT, V, BUTOLA JS, SUNDRIYAL RC (2013) Seed size correlates seedling emergence in Terminalia bellerica. South African J. Botany 87 (92-94).
- 6. MALIK, A.R, SHAMET, GS, BUTOLA, JS, BHAT, N, MIR, AA, NABI, G. (2013) Standardization of seed storage conditions in Chilgoza pine (Pinus gerardiana Wall.): an endangered pine of Hind Kush Himalaya. Trees 27: 1497-1501.
- 7. MALIK, AR, SHAMET, GS, BUTOLA, JS (2012) Natural regeneration status of Chilgoza pine (Pinus gerardiana Wall.) in Kinnaur of Himachal Pradesh, India: An Endangered pine of high edible value. Applied Ecology & Environmental Research 10 (3): 365-373.
- 8. MALIK, AR, SIDDIQUE, MAA, SOFI PA, BUTOLA JS (2011) Ethnomedicinal practices and conservation status of Medicinal plants of north Kashmir Himalayas. Research J. of Medicinal Plants 5 (5): 515-530.
- 9. BUTOLA, JS, SAMANT, SS (2010) Saussurea species in Indian Himalayan Region: Diversity, distribution and indigenous uses. Int. J. Plant Biology 1 (e9): 43-51.
- 10. BUTOLA, JS, VASHISTHA, RK, MALIK, AR, SAMANT SS (2010) Assessment of inter-population variation in Heracleum candicans Wall. with emphasis on seed characteristics and germination behavior. Journal of Medicinal Plants Research 4 (3) 1523-34.
- 11. LANKER, U, MALIK, AR, GUPTA, NK, BUTOLA, J.S. (2010). Natural regeneration status of Taxus baccata Hook. F. Syn wallichiana: an Endangered Medicinal Plant in Northwest Himalaya, India. Int. J.

- Biodiversity Science, Ecosystem services and Management, USA, 6 (1): 20--27.
- 12. BUTOLA, JS, BADOLA, HK (2008) Himalayan threatened medicinal plants and their conservation in Himachal Pradesh. Journal of Tropical Medicinal Plants, Malaysia 9 (1): 125-142.
- 13. BUTOLA, JS, BADOLA, HK (2008) Propagation conditions for mass multiplication of three threatened Himalayan high value medicinal herbs. International Plant Genetic Resource Newsletter, Italy 153: 43-47.
- 14. BUTOLA, JS, BADOLA, HK (2007) Use of Sodium Hypochlorite to enhance seedling emergence, vigour and survival of Angelica glauca and Aconitum heterophyllum. Journal of Herbs, Spices and Medicinal Plants, USA 13 (4): 1-10.
- 15. BUTOLA, JS, BADOLA, HK (2007) Vegetative propagation of Angelica glauca and Heracleum candicans. Journal of Tropical Medicinal Plants, Malaysia 8 (1): 85-91.
- 16. SAMANT, SS, BUTOLA, JS, SHARMA, A (2007) Assessment of diversity, distribution, conservation status and preparation of management plan for medicinal plants in the catchment area of Parbati Hydroelectric Project Stage III in Northwestern Himalaya. Journal of Mountain Science, China 4 (1): 34-56.
- 17. BUTOLA, JS, PANT, S, SAMANT, SS (2007) Diversity, distribution and indigenous uses of Hypericum species in Indian Himalayan Region. Ethno-botanical Leaflets: International Web Journal, 11: 16-23 (www.ethnoleaflets.com/leaflets/hyperic.htm).
- 18. BUTOLA, JS, SAMANT, SS (2006) Physiological studies on seed germination of Angelica glauca. Journal of Tropical Medicinal Plants, Malaysia 7 (2): 205-212.
- 19. BUTOLA, JS, SAMANT, SS (2006) Seed viability of Saussurea costus. Journal of Tropical Medicinal Plants, Malaysia 7 (2): 197-203.
- 20. BADOLA, HK, BUTOLA, JS (2005) Effect of ploughing depth on the growth and yield of Heracleum candicans: a threatened medicinal herb and a less-explored potential crop of the Himalayan region. Journal of Mountain Science, China 2 (2): 173-180.
- 21. BADOLA, HK, BUTOLA, JS (2003) Cultivation production trials of Heracleum candicans, a threatened high value medicinal Herb in Himachal Himalaya. Umbellifereae Improvement Newsletter, USA 13: 6-10.

INDIAN JOURNALS (42)

- 22. Butola JS (2022). Value addition and product development of fruits through intervention of Vacuum Freeze drying technology: an industrial prospect for wild edibles in Uttarakhand. *Medicon Agriculture & Environmental Sciences* 3 (2) 1-2.
- 23. Butola JS, Himshikha, Jadon V, Sharma P, Malik AR and Vashistha RK (2022). Conservation of a medicinal orchid through ex-situ cultivation: an experimental trial on Saalampanja (Dactylorhiza

- hatagirea D.Don) Soó RET species in North Western Himalaya. *Eco. Env. & Cons.* 28 (May Suppl. Issue) 140-146.
- 24. Tana D, Gusain H, Butola JS and Dobhal S (2022) Weed Community Composition, Structure and their Quantitative Evaluation under Tropical Conditions in Garhwal Region. *Medicon Agriculture & Environmental Sciences* 3 (1): 47-56.
- 25. Bansal, P, Butola JS, Himshikha and Negi AK (2021). Comparative Study of Morpho-Physical Quality Characteristics in Wild and Planted Amla (Phyllanthus emblica Linn.) Fruits and Seeds. Frontiers in Crop Improvement 9: 2704-2709 (Special Issue-VI December 2021).
- 26. Sharma P, Butola JS, Kumar V, Himshikha, Malik, AR and Samant SS (2021) Vulnerbility assessment and Conservation Prioritization of Ethnomedicinal Plants in Banjar Valley, North-Western Himalaya. Frontiers in Crop Improvement 9: 2693-2699 (Special Issue-VI December 2021).
- 27. Singh D, Gusain Himshikha, Butola JS and Negi AK (2021). Synchrony of Phenophase and Seasonal Variations in Wild Species from Anacardiaceae Family in Garhwal Himalaya. Frontiers in Crop Improvement 9: 2668-2673 (Special Issue-VI December 2021).
- 28. Thejanguzo T.R., Himshikha, Negi AK, Butola JS, Kandari LS and Dhanai CS (2021) Diversity and Phytosociological Analysis of Weed Species: An Important Tool for Crop Management. Frontiers in Crop Improvement 9: 1090-1098 (Special Issue-III August 2021).
- 29. BALKRISHNA ACHARYA, SAXENA, P, PATEL S, VASHISTHA RK, GOND DK, BUTOLA JS, RAWAT B (2020) Diversity, Ethnomedicinal knowledge and conservation status of plant species in a part of North West Himalaya. Medicinal Plants 12 (3) 356-370.
- 30. DHANUSH C, KIRAN KC, REDDY BM, DABRAL A, BUTOLA JS, HAREESH TS (2018). Diversity of wild edible plants resources in Tehri Garhwal Himalayas. Int. J. of Usuf. Mngt. 19: 32-47.
- 31. PANT S, RINCHEN T, BUTOLA JS (2018). Indigenous knowledge on bioresources management for sustainable livelihood by the cold desert people, Trans-Himalaya, Ladakh, India. Indian Journal of Natural Products and Resources 9(2) 168-173.
- 32. LAL P, BUTOLA JS, KHANDURI VP, PRASAD RK (2018). Smallest life studies at the various societies in Uttrakhand North-West Himalaya. Plantica 2 (3): 213 223.
- 33. LAL P, BUTOLA JS, KHANDURI VP (2018). Natural regeneration status of Forest communities at Dandachali Forest, Tehri Forest Division in North West Himalaya Uttrakhand, India. Plant Archives 18 (1) 885-892.
- 34. LAL P, CHAUHAN DS, BUTOLA JS, KHANDURI VP (2018). Native, Endemic and Utilization Pattern of Woody Species of Dandachali forest of Tehri Forest Division, North-West Himalaya. Indian Journal of Ecology 45(1): 70-76.

- 35. SHARMA A, SAMANT SS, BHANDARI, S, BUTOLA JS (2017). Diversity, Distribution, and Conservation status of Orchids along an altitudinal gradient in Himachal Pradesh, North Western Himalaya. J. Orchid Soc. India 31: 23-32.
- 36. LAL. P, BUTOLA JS, KHANDURI VP (2017). Community structure of Dandachali forest of Tehri Forest Division, North-West Himalaya. Journal of Plant Development Sciences 9 (10): 933-939.
- 37. SOFI, PA, MALIK, AR, BUTOLA JS, BHAT, GM, DHANAI, CS (2016) Determination of storage techniques in Cedrus deodara seeds. Indian Forester 142 (4): 390-393.
- 38. BUTOLA JS, VASHISTHA RK, MALIK AR, RAWAT MS. (2016) Ethnomedicinal importance of Gandrayan (Angelica glauca Edgew.) in the North Western Part of Indian Himalayan Region. Medicinal Plants 8 (4) 313-318.
- 39. DHANAI, CS, VERMA, VK, BUTOLA, JS, RATHOD, D (2015). An assessment of phytotoxic potential of Emblica officinalis on germination and growth pattern of wheat and barley. Progressive Research An International Journal 10 (Special-VI): 3297-3300.
- 40. KORANGA, SS, BUTOLA, JS, PANDEY, MM, NEGI, KS, RAWAT AKS (2015) Variation in essential oil yield of Acorus calamus L. across India. Progressive Research An International Journal 10 (Special-VII): 4004-4006.
- 41. BUTOLA, JS, RK VASHISTHA (2013). An overview on conservation and utilization of Angelica glauca Edgew. In three Himalayan States of India. Medicinal Plants 5 (3): 171-178. NAAS Rating=4.3
- 42. KUNIYAL CP, PUROHIT, V, BUTOLA JS, SUNDRIYAL RC (2013) Do the seed pulp and storage time affects seedling emergence in the Indian Bay Leaf (Cinnamomum tamala). National Academy Science Letters 36 (3): 331-334.
- 43. PUROHIT, V, BUTOLA JS, KUNIYAL CP, SUNDRIYAL RC (2012) Seed pulp significantly inhibits seedling emergence in Terminalia bellerica. Current Science 103 (7): 764.
- 44. BUTOLA, JS, MALIK AR (2012) Phenology and Survival of some Himalayan medicinal plants domesticated at different altitudes. Int. J. Medicinal & Aromatic Plants 2(4) 683-687.
- 45. BUTOLA, JS, MALIK AR, BABA JA (2012) Livelihood diversification in cold arid desert of Indian Himalaya: urgent need of transforming traditional agroforestry system with emphasis on adoption of herbal farming. Int. J. Medicinal & Aromatic Plants 2(3) 544-548.
- 46. SINGH, A, BUTOLA, JS, SAMANT SS, LAL M, SHARMA P, MARPA S (2012) Indigenous techniques of product development and economic potential of Seabuckthron: a case study of cold desert region of Himachal Pradesh, India. Proceeding of National Academy of Sciences 82 (3) 391-98.
- 47. MALIK, AR, BUTOLA, JS (2010) Production potential of Agrihorticulture System in Temperate Himalaya: an experimental trial

- in North Kashmir, India. Indian Journal of Horticulture 67 (4): 142-145.
- 48. BUTOLA, JS (2010) Post-cultivation evaluation of germplasm in Himalayan threatened medicinal herbs: Implication for ex-situ cultivation and conservation. National Academy Science Letters 34 (1-2): 49-58.
- 49. BUTOLA, JS, SAMANT, SS (2010) Medicinally important species of Hypericum in Indian Himalayan Region: Implication for conservation and sustainable utilization. Medicinal Plants (4)2: 104-110.
- 50. VASHISTHA, RK, CHATURVEDI AK, BUTOLA JS, NAUTIYAL MC (2010) Evaluation of emergence and vigour of Ashwagandha (Withania somnifera Dunal) seedlings under the influence of Sodium Hypochlorite (NaHClO3) and different micro-environmental conditions. Biological Forum 2 (1): 30-34.
- 51. BUTOLA, JS, VASHISTHA, RK, SAMANT, SS, MALIK, AR (2010) Technology for propagation and cultivation of Angelica glauca Edgew.: a high value Himalayan threatened medicinal cum edible herb. Medicinal Plants 2 (1): 67-72.
- 52. BUTOLA, JS, MALIK, AR (2010) Survival and Phenophases of some Himalayan Medicinal Plants cultivated at different altitudes: a case study of district Kullu, Himachal Pradesh, India. International Journal of Forest Usufructs Management 11 (2): 86-93.
- 53. VASHISTHA, RK, BUTOLA JS, NAUTIYAL BP, NAUTIYAL MC (2010) Phenological attributes of Angelica species expressed at two different climatic zones in western Himalayas, Uttarakhand. Online Access Journal of Medicinal & Aromatic Plants 1 (1): 07-12.
- 54. BUTOLA, JS (2009) Transplantation age of Angelica glauca Edgew and Heracleum candicans Wall seedlings: two high value threatened Himalayan medicinal herbs. Journal of Tropical Agriculture 47 (1-2): 74-76.
- 55. BUTOLA, JS, BADOLA, HK (2008) Chemical induction of seed germination and seedling growth in Seabuckthorn (Hippophae rhamnoides L.): a multipurpose plant species. Journal of Plant Biology 35 (1): 75-80.
- 56. SHARMA, S, BUTOLA, JS (2008) Role of Minor Forest Produce in the livelihoods of Gaddis: a Tribal community in Bharmour region, Himachal Pradesh, India. International Journal of Forest Usufructs Management 9 (2): 68-83.
- 57. BUTOLA, JS, BADOLA, HK (2007) Growth, phenology and productivity of Dactylorhiza hatagirea (D. Don) Soo, a critically endangered medicinal orchid in Himalaya: domestication compared with wild. International Journal of Orchid Society of India 20 (1-2): 37-43.
- 58. BUTOLA, JS, SAMANT, SS (2007) Effect of different growth environments on seed germination and growth performance of

- seedlings of Ashwagandha (Withania somnifera Dunal). Indian Journal of Forestry 30 (4): 529-534.
- 59. BUTOLA, JS, PANT, S, SAMANT, SS (2007) Effect of pre-sowing seed treatments in Hypericum perforatum Linn.: a high value medicinal plant. Seed Research 35 (2): 205-209.
- 60. BUTOLA, JS, BADOLA, HK (2006) Effects of growing medium on vegetative propagation of Himalayan endangered medicinal plants, Angelica glauca and Heracleum candicans, using rhizome segments. Journal of Hill Research 19 (2): 65-70.
- 61. BUTOLA, JS, BADOLA, HK (2006) Chemical treatments to improve seedling emergence, vigour and survival in Heracleum candicans Wall. (Apiaceae): a high value threatened medicinal and edible herb of Himalaya. Journal of Plant Biology 33 (3): 215-220.
- 62. BUTOLA, JS, BADOLA, HK (2006) Assessing seedling emergence, growth and vigour in Angelica glauca Edgew. and Heracleum candicans Wall. under different growing media and environments. Journal of Non-Timber Forest Products 13 (2): 141-153.
- 63. BUTOLA, JS, BADOLA, HK (2004) Effect of pre-sowing treatment on seed germination and seedling vigour in Angelica glauca, a threatened medicinal herb. Current Science 87 (6): 796-799.
- 64. BUTOLA, JS, BADOLA, HK (2004) Seed germination improvement using chemicals in Heracleum candicans Wall, a threatened medicinal herb of Himalaya. Indian Forester 130 (5): 565-572.

BOOK CHAPTERS (05)

- 65. MALIK et al. (2022). Integrated approach of sustainable forestry development in cold arid region of Indian Himalaya. In: Diversity and Dynamics in Forest Ecosystems (Ed. Munesh Kumar et al.), CRC Press. USA. pp. 195-213.
- 66. Narayan Singh et al (2013). Economic and promising tree Cinnamomum tamala in Kumaon region of Central Himalaya: SWOT analysis and identified issues for sector development. In Ethnobotany and Medicinal Plants (Eds. PK Bharti et al). Ancient Publishing House, New Delhi, Chapter 6. (ISBN: 978-93-81385-97-5).
- 67. PHONDANI, PC et al (2013). Sustainable Development of Medicinal Plants through People Participation: Implementation for conservation and livelihood Opportunities. In Ethnobotany and Medicinal Plants (Eds. PK Bharti et al). Ancient Publishing House, New Delhi, Chapter 8. pp. 120-135. (ISBN: 978-93-81385-97-5).
- 68. BUTOLA, JS, SAMANT, SS, VASHISTHA, RK, MALIK, AR (2010) Propagation and cultivation techniques of Heracleum candicans Wall.: a Himalayan medicinal resource under peril. In Medicinal Plants and Sustainable Development, edited by Dr. C.P. Kala. Nova Publishers, New York (ISBN: 978-1-61761-942-7).
- 69. SHARMA, S, BUTOLA, JS, SHARMA, P (2009) Himachal Pradesh main jiwan ka aadhaar (Jal, Jungle aur Jamin): vishtaar, samasya aur samadhan. In: Kausal Kumar, Bandooni, S.K. and Negi, B.S., Eds,

- Himalaya Parwat Main Sansadhan ewam Prabhandan, Research India Publication, New Delhi, pp. 161-167 (ISBN: 978-81-89131-29-6).
- 70. SAMANT, SS, NANDI, SK, BUTOLA, JS (2009) Conservation status and Cultivation of selected medicinal plants in the Indian Himalayan Region. Singh, S.B., Chaurasia, O.P., Yadav, A., Rimando, A.M. & Terrill, T.H. (Eds.) Advances in Agriculture, Environment & Health: Fruits, Vegetables, Animals and Biomedical Sciences. Satish Serial Publishing House, Delhi, pp. 185-214. (Paper presented) (ISBN: 978-81-89304-59-1).

PAPERS IN PROCEEDINGS (03)

- 71. BUTOLA, JS et al. (2021). Commercial production, value chain development, and conservation of high altitude RET medicinal plants: an income generation programme for women farmers in District Rudraprayag, Uttarakhand: In the proceeding "Forestry research, sustainable forest management and livelihood", HFRI, Shimla.
- 72. SINGH, A, SAMANT, SS, LAL, M, SHARMA, P, BUTOLA JS, MARPA S (2011) Assessment, Mapping and Harnessing economic potential of Hippophae species for the socio-economic development of tribal communities in Himachal Pradesh, India. Proceeding (Dec. 1-3, 2011) 260-269. CSK HPAU, Palampur, HP.
- 73. SAMANT, SS, SINGH, M, LAL, M, SHARMA, A, BHANDARI, S, SINGH, A, PANT, S, BUTOLA, JS (2006) Diversity, distribution pattern and economic importance of the Agro-forestry trees and shrubs in Kullu District, Himachal Pradesh. Workshop Proceeding, 14-16, November, 2006, pp. 34-42. (Paper presented)

BOOKS/ BOOKLETS (10)

- 74. DHANUS C AND BUTOLA JS (2020) Wild Edible plants in parts of Himalayan region: Diversity, Quantitative availability and Livelihood support. Lambert Academic Publishing. (ISBN: 978-6202563796).
- 75. BUTOLA JS (2019). Production and processing Technology of Kutki (Picrorhiza kurrooa).
- 76. BUTOLA JS (2019). Production and processing Technology of Atis (Aconitum heterophyllum).
- 77. BUTOLA JS (2019). Production and processing Technology of Kuth (Saussurea costus).
- 78. BUTOLA, JS (2013) Production technology of some threatened Himalayan medicinal plants. Lambert Academic Publishing. (ISBN: 978-36-59483-17-2).
- 79. DHANAI, CS et al. (2013). Krishi vaniki parvatiya kshetron ke liye bahupyogi padhati. CoFHA (UUHF), Ranichauri, Shiva Offset Printers, Dehradun, page 25.
- 80. BUTOLA, JS, SATI, RC (2013) Parvatiya falon ki parsanskaran and mulya samvardhan taknik. Shiva Offset Printers, Dehradun, p. 39.
- 81. BUTOLA, JS et al (2010) Agrotechniques of Amla (Phyllanthus emblica).

- 82. BUTOLA, JS et al (2010) Agrotechniques of Satavar (Asparagus racemosus).
- 83. BUTOLA, JS et al (2010) Agrotechniques of Sarpgandha (Raouwlfia serpentina) and Aloe vera.
- 84. SAMANT, SS, BUTOLA, JS, LAL, M (2009) Agrotechniques of Commercially Viable Medicinal Plants in the Indian Himalayan Region. Published by GBPIHED, Mohal-Kullu-175 126, H.P. p. 44.

POPULAR ARTICLES (23) Recent only

- 85. **Butola JS** (2022). Ausadhiya fasal Kuth, Prakriti ka uphar. Vigyan Pragati, March 42-48.
- 86. Gusain Himshikha, **Butola JS**, Dobhal S and Poonia PK (2021). Farm-based income through agroforestry in north india. NESA E-version_July_2021, 7-11.

Signature

Dr. J. S. Butola Assistant Professor (EC 3330) Dept. of Forestry & Natural Resources HNBGU, Srinagar Garhwal (U.K.)

Date: Place