

BIO-DATA/RESUME

Name	Dr. Manju Netwal
Designation	Assistant Professor (Horticulture)
Institute	College of Agriculture (SKN Agriculture University, Jobner, Jaipur) Lalsot, Rajasthan-303511
Date of Birth	21/01/1995
Profile link	https://aeis.icar.gov.in/Manju3461
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Academic Qualification

	Degree	Year	Subject	University/Institution	% of marks
1.	Secondary	2010	All Essential Subjects	RBSE, AJMER	79.50
2.	Higher Secondary/10+2 Board	2012	Biology	RBSE, AJMER	79.80
3.	Graduation	2016	Agriculture	SKNAU, JOBNER	74.50
4.	Post Graduation	2018	Horticulture	SKNAU, JOBNER	82.30
5.	ASRB-NET	2018	Vegetable Science	ASRB, ICAR NEW DELHI	54.44
6.	Ph.D.	2021	Horticulture	SKNAU, JOBNER	80.30
7.	Other RS-CIT	2017	Computer	VMOU, KOTA	66.00

Ph.D Thesis Title:- Effect of Micronutrients and Organics on Growth, Yield and Quality of Sprouting Broccoli [*Brassica oleracea* (L.) Plenck var. *italica*)].

I have specialized in vegetable science which is a major part of horticulture. During my M.Sc. and Ph.D. degrees, research has been done on various parameters of Indian beans and sprouted broccoli.

I have done research on onion and garlic crops while working as a Young Professional-II in All India Networking Research Project on Onion and Garlic.

Work experience (in chronological order)

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1.	YP-II	DEPTT. OF HORTICULTURE SKN COA JOBNER, JAIPUR	9 TH NOVEMBER, 2020	30 MARCH, 2022)	35000/-
2.	Assistant Professor	College of Agriculture, Lalsot, Dausa	08.07.2023	Continuous	57700/-

PUBLICATION:**Research Paper(s) and Review Paper(s)**

S. No.	Title	NAAS Rating
1.	NETWAL, M., SINGH, S. P., YADAV, D. K., FAGODIYA, R. K., CHOYAL, P., & CHOUDHARY, G. 2025. Synergistic effects of micronutrients and organics on yield, quality and economics of sprouting broccoli (<i>Brassica oleracea</i>). <i>The Indian Journal of Agricultural Sciences</i> , 95(10), 1211–1217.	6.30/2026
2.	GULAB CHOUDHARY, O P GARHWAL, L N BAIRWA, K K MEENA and MANJU NETWAL 2024. Productivity and economics of carrot (<i>Daucus carota</i>) as influenced by interactive effect of potassium and micronutrients. <i>Indian Journal of Agricultural Sciences</i> , 94 (8): 904-907.	6.23/2024
3.	M Netwal , S P Singh, O P Garhwal, R K Jakhar, P Choyal, G Choudhary, A Nehra 2023. Impact of micronutrients and organics on performance of Sprouting Broccoli (<i>Brassica oleracea</i>). <i>Indian Journal of Agricultural Sciences</i> , 93 (4): 376–381.	6.23/2023
4.	Gulab Choudhary, L N Bairwa, O P Garhwal, P K Kaswan, Rajesh Choudhary, M L Chopra and M Netwal 2023. Impact of transplanting dates, cultivars and zinc on performance of onion (<i>Allium cepa</i>). <i>Indian Journal of Agricultural Sciences</i> , 93 (10): 1086–1090.	6.23/2023
5.	Gulab Choudhary, L. N. Bairwa, O.P. Garhwal, S. K. Bairwa, M. Netwal , P. K. Kaswan, M. L. Chopra and Rajesh Choudhary 2023. Effect of transplanting dates, cultivars and zinc on yield and economics of onion in semi-arid conditions in Rajasthan. <i>Indian Journal of Horticulture</i> , 14 (8): 725-728.	6.16/2023
6.	M Netwal , R K Jakhar, K Choudhary, O P Garhwal, M R Choudhary, S P Singh, B Didal and R Choudhary. Yield and Quality Improvement Through Micronutrients an Organics in Sprouting Broccoli [<i>Brassica oleracea</i> (L.) Plenck var. <i>italica</i>)] in Semi-Arid Conditions of Rajasthan. <i>Agricultural Mechanization in Asia, Africa and Latin America</i> , 53 (02):5357-5363.	6.14/2022
7.	A Nehra, D K Gothwal, R C Jeeterwal, S S Punia, M Ram, D gupta, M Netwal and R Khan. Effect of different environmental Condition on Seed Yield and Its Attributes in Sesame (<i>Sesamum Indicum</i> L.). <i>Agricultural Mechanization in Asia, Africa and Latin America</i> , 53(02): 5599-5606.	6.14/2022.
8.	M Netwal , M R Choudhary, R K Jakhar, O P Garhwal and G Choudhary. Growth attributes of Indian bean (<i>Lablab purpureus</i> L. var. <i>typicus</i>) as influenced by bio-regulators and plant growth promoting bacteria. <i>The Pharma Innovation Journal</i> , 11(1): 1882-1185.	5.23/2022.
9.	K. Choudhary, M Netwal , R Paliwal, R K Jakhar, M L Jakhar and O P Garhwal 2022. Yield Improvement in Ridge Gourd Through Integrated Nutrient Management Practices in Semi Arid Conditions of Rajasthan. <i>Agricultural Mechanization in Asia, Africa and Latin America</i> , 11(2): 1092-1094.	5.23/2022.
10.	M Netwal , S P Singh, O P Garhwal, M R Choudhary, L N Bairwa, D K Yadav, B Didal and K Choudhary 2022. Changes in biochemical properties of	5.23/2022

	sprouting broccoli [<i>Brassica oleracea</i> (L.) Plenck var. <i>italica</i>]] curd by micronutrients and organics. The Pharma Innovation Journal, 10(8): 560-563.	
11.	P Choyal, M Netwal and R S Kherwa 2022. Effect of Sulphur Levels and Different Micronutrients on Growth Attributes of Garlic (<i>Allium sativum</i> L.). Biological Forum – An International Journal, 14(1): 000-000.	5.11/2022
12.	Praveen Choyal, O P Garhwal, M R Choudhary, M Netwal and Kamal Mahala 2022. Application of Sulphur Levels and Different Micronutrients on Yield and its Attributing Traits of Garlic (<i>Allium sativum</i> L.). International Journal of Plant & Soil Science, 34(5): 1-6.	5.04/2022
13.	M. Anil Kumar, G Choudhary, M. Netwal and B Didal 2022. Principal component analysis and variability in coriander genotypes. Journal of Eco-friendly Agriculture,	5.36/2022
14.	Anil Kumar M., G Choudhary, O P Garhwal and M Netwal 2022. Correlation coefficient and path analysis for yield traits in coriander (<i>Coriandrum sativum</i> L.) genotypes. Electronic Journal of Plant Breeding, 13(1):253-257.	5.14/2022
15.	C S Choudhary, M Netwal , R K Jakhar and D Prabha 2022. Effect of seed inoculants on growth, germination percentage and seed vigour of okra [<i>Abelmoschus esculentus</i> (L.) Moench]. The Pharma Innovation Journal, 11(3): 389-392.	5.23/2022
16.	K Choudhary, M Netwal , O P Garhwal and P Dhaka 2021. Effect of integrated nutrient management on NPK availability in soil and their uptake by ridge gourd [<i>Luffa acutangula</i> L. (Roxb.)]. The Pharma Innovation Journal, 53(02): 5338-5342.	5.23/2021
17.	Netwal M. , Choudhary M R, Jakhar R K, Yadav B and Choudhary G 2021. Interactive Effect of Bio-regulators and Plant Growth Promoting Bacteria on Yield attributes and Economics of Indian bean (<i>Lablab purpureus</i> L. var. <i>typicus</i>). International Journal of Current Microbiology and Applied Science, 9(2): xx-xx.	5.38/2021
18.	M Netwal , M R Choudhary, R K Jakhar, S Devi and S Choudhary 2021. Exogenous application of Brassinoide and salicylic acid enhances on growth, yield and nutritional quality of Indian bean L. var. <i>typicus</i>). Journal of Pharmacognosy and phytochemistry, 7(6): 2093-2096.	5.21/2021
19.	B Didal, G Lal, P K Kaswan, G Choudhary, D Gupta and M Netwal 2021. Genetic variability, heritability, genetic advance and coefficient of variance analysis in coriander (<i>Coriandrum sativum</i> L.). The Pharma Innovation Journal, 10(7): 1531-1534.	5.23/2021
20.	D K.Yadav, P. Deewan, Y Meena, D Gupta, S M Yadav and M Netwal 2021. Weed Management in Vegetalbe Cluster Bean (<i>Cyamopsis tetragonoloba</i>) International. Journal of Current Microbiology and Applied Sciences, 10(02):xx-xx.	5.38/2021
21.	Jakhar R.K., Singh S.P., Netwal M. , Ola A.L. and Yadav, B 2020. Effect of NAA and Boron levels on yield and economics of sprouting broccoli. International Journal of Current Microbiology and Applied Sciences, 9(10):xx-xx.	5.38/2020

22.	Devi, S, Garhwal, O P, Netwal, M , Choudhary, G and Yadav, B 2020. Effect of foliar spray of bioregulators and npk on growth attributes of Ber (<i>Zizyphus mauritiana</i> L.). <i>Journal of Pharmacognosy and phytochemistry</i> , 9 (5):2226-2228.	5.21/2020.
23.	Choudhary, G., Garhwal, O.P., Yadav, S., Netwal, M. and Devi, S 2020 . Effect of Potassium and micronutrients on growth and quality of carrot (<i>Daucus carota</i> L.). <i>International Journal of Chemical Studies</i> , 8(5):1967-1969.	5.31/2020.
24.	Yadav B., Soni A.K., Garhwal O.P. and Netwal M 2020. Integration effect of npk with vermicompost & boron on yield and economics of brinjal (<i>Solanum melongena</i> L.). <i>Journal of Pharmacognosy and phytochemistry</i> , 9(1): 1637-1640.	5.21/2020.
25.	S. Verma, L.N. Bairwa and M. Netwal 2019. Effect of thiourea on growth, yield and quality of vegetable cowpea. <i>Indian Journal of Arid Horticulture</i> , 1(2), 59-62.	2.74/2019.
26.	Jakhar R.K., Singh S.P., Ola A.L., Jat H.R. and Netwal M 2018. Effect of NAA and boron levels on growth and quality of sprouting broccoli [<i>Brassica oleracea</i> (L.) var. <i>italic</i> Plenck]. <i>Journal of Pharmacognosy and phytochemistry</i> , 7 (5):3402-3405.	5.21/2018.

Book(s):

National:

1. **M Netwal**, R K Jakhar and G Choudhary 2021. Wrote a book on Role of Bio- regulators and Growth Promoting Bacteria on Indian Bean. This book published by Lambert Academic Publishing, 978-620-4-19023-5.
2. Book entitled on Effect of Potassium and Micronutrients on Growth, Yield & Quality of Carrot (*Daucus Carota* L.) has been written by G. Choudhary, P K Kaswan and **M Netwal** (2021) and published in Lambert Academic Publishing, 978-620-4-18427-2.
3. R C Choudhary, **M Netwal**, R K Jakhar, V Bhateshwar and R S Jakhar. Edited book entitled on Worldwide Trends in Sustainable Agriculture. This book published by the Agriculture Publication.

Book Chapter(s):

1. Choudhary, D. R., Kumar, R., Kumar, V., Saini, K. S. & **Netwal, M.** 2025. Leafy Alliums: Potential Herb. Edited book: *Ethnobotany and Biodiversity of Medicinal Plants* by Sinha, Mantosh K. pp: 79-98 published by Helmand Books, Delhi-110085 (**ISBN: 978-93-93992-72-7**).
2. Jakhar R.K., Ola A.L., Shivran S. and **Netwal M** 2020. Hydroponics as an Advanced Technique for Vegetable Production: Challenges and Possibilities Climate Smart Agriculture/ Biotech, New Delhi (ISBN: 978-81-7622.474-1).

Popular article

1. **Netwal M.**, Choudhary R., Yadav S., Choudhary G. and Boori S.L. 2020. Khajur Ki Unnat Kheti, Haldhar Times, 15/27.

2. **Netwal M.**, Choudhary R., Yadav K., Boori S.L. and Bhateshwar B.L. 2020. Javik Kheti Tikau Kheti Ka Aadhar, Haldhar Times, 15/25.
3. **Netwal M.**, Choudhary G., Yadav S. Boori S.L. and Choudhary R. 2020. Fal Sabjiyon Ka Bhandaran, Haldhar Times, 15/24.
4. **Netwal M.**, Choyal P., Choudhary G., Yadav S. and Jakhar R. 2020. Mirch Ki Kheti, Haldhar Times, 15/22.
5. Choudhary R., **Netwal M.** and Gate S. 2021. Vermicompost, Best Alternative to Native Compost, Krishisewa, 1316.
6. Choudhary G., Yadav S., **Netwal M.**, Choudhary S. and Yadav J. 2020. Gajar Ki Kheti Aur Phaayade, Hamara Samachar, 216/09.
7. Gupta D., **Netwal M.**, Yadav D.K., Choudhary M.R., Sharma P. and Sharma M. 2021. Unnat Pyaj Beej Utpadan Ki Rajasthan Me Vipul Sambhavna, Morden Kheti, 19/05.
8. Choudhary R., **Netwal M.** and Gate S. 2021. Varsha Jal Sanchayan Pranali Banane Ki Vidhi, Krishisewa, 1322.
9. Choudhary S., Yadav S., Choudhary G. and **Netwal M.** 2021. Organic Weed Management in Crop Production, Agriculture & Food: e- Newsletter, 3/12.
10. Gupta D., **Netwal M.**, Sharma P., Sharma M., Yadav D.K. and Choudhary M.R. 2021. Pyaj Ki Gantiya Banane Ki Unnat Vidhi. Krishi Smaarika.

Technical article:

1. **Netwal M.**, Choudhary G., Yadav S., Jakhar R. and Choudhary S. 2020. Anar Me Keet Rog Parbandhan, Haldhar Times, 15/19.
2. Boori S.L., Jakhar R. and **Netwal M.** 2020. Kaise Kare Til Ki Unnat Kheti, Krishak Aradhna, 7/11.
3. Boori S.L., Jakhar R. and **Netwal M.** 2020. Garmiyon Me Pashuyon Ke Aaahar Aur Pani Ke Prabandhan Se Badhega Utpadan aur Aamdani, Krishak Aradhna, 7/07.
4. Boori S.L. and **Netwal M.** 2020. Baby Corn Ka Postik Mahatva Aur Kheti, Krishak Aradhna, 7/06.
5. Yadav K., Yadav S., **Netwal M.** 2020. and Kumari A. Suchna Takniki Se Kheti Kisani Me Badlav, Haldhar Times, 15/24.
6. Jakhar K.C., Bhateshwar B.L. and **Netwal M.** 2017. Zero Budget Me Prakirtik Kheti, Krishak Aradhna, 4/23.
7. Bhateshwar B.L., Jat H., Jakhar K.C., **Netwal M.** and Boori S.L. 2017. Maweshiyo Ki Nasle Aur Unka Chunav, Krishak Aradhna, 4/29.
8. **Netwal M.**, Choudhary R., Yadav K., Boori S.L. and Yadav B. 2020. Pashuon Ki Prajanan Samasyaen Aur Bachav, Haldhar Times, 15/21.
9. **Netwal M.**, Choudhary R., Yadav K., Boori S.L. and Choudhary S. 2020. Khire Me Rog Keet Prabandhan, Haldhar Times, 15/26.
10. Bhateshwar B.L., **Netwal M.** Boori S.L., and Jat H. 2017. Pashuon Me Banjhpan Karan Aur Upchar, Krishak Aradhna, 5.
11. Choyal P., Bayadwal R.K., **Netwal M.** and Sharma A. 2019. Pashuon Ka Dugdh Utpadan Kaise Badhaye, Fasal Kranti, 06/01.
12. Choudhary G., Garhwal O.P., **Netwal M.**, Yadav S and Yadav J. 2020. Desi freez me fal sabji ka bhandaran, Haldhar Times, 15/28.

13. Choudhary R., **Netwal M.** and Choudhary S. 2021. Aanwale Ki Kheti, Haldhar Times, 16/21.
14. Choudhary R., **Netwal M.** and Gate S. 2021. Pyaj Cold Storage (Sheet Bandaran), Krishak Aradhna.
15. Choudhary R., **Netwal M.** and Gate S. 2021. Kitchan Garden (Sabji Udyan), Krishak Aradhna, 8/13.
16. Choudhary R., **Netwal M.** and Choudhary S. 2021. Atirikat Aay Prapti Ke Liye Kare Kukkut Palan, Haldhar Times, 16/24.
17. Yadav S., Choudhary G., Choudhary S., Yadav J. and **Netwal M.** 2021. Farm Laws and their Impact on Indian Agriculture, Agriculture & Food e-Newsletter, 3/12.
18. Yadav S., Choudhary S., Choudhary G. and **Netwal M.** 2022. Vertical Farming; A Building that Grows, Agriculture & Food: e-Newsletter, 4/02.
19. Choudhary G., Yadav S., **Netwal M.**, Choudhary S. and Yadav J. 2020. Aanwale ka prasanskaran tatha Laabh, Unnati Express, 9/149.
20. Kudi V.K., Boori S. and **Netwal M.** 2020. Jeivik Pashudhan Utpadan evan Pashu Swasthya Prabandhan Se Adhik Utpadan, Jobner Krishi, 5/2.
21. S. Choudhary, S. Yadav, G. Choudhary, **M. Netwal.** 2022. Effect of Herbicide on Environment Agriculture & Food: e-Newsletter, 4/2.
22. R. K. Jakhar, **M. Netwal**, C. Jakhar, B. K. Dadrwal, Y. Meena and A. Dudhwal. 2022. Landscaping of Public Places, The Agriculture Magazine, 1/5.

Any other (Technical Folder)

1. डॉ. एम. पी. यादव और डॉ. मंजू नेटवाल. 2024. गंधियों द्वारा अगेती खरीफ़ प्याज़ की उत्पाद तकनीक, कृषि महाविद्यालय, किशनगढ़बास, खैरथल-तिजारा.
2. डॉ. एम. पी. यादव, डॉ. सुमन खंडेलवाल और डॉ. मंजू नेटवाल. 2024. पोषण वाटिका का खाद्य सुरक्षा का विकल्प, कृषि महाविद्यालय, किशनगढ़बास, खैरथल-तिजारा.

PG Accreditation:

1. Accredited for Teaching and Guiding Master's Degree (R-2) 51/2024-07-02-10

List of conferences/seminars/symposiums:

S.No.	Title of Event	Organized by	Duration
1.	"1 th Vegetable Science Congress on "Emerging Challenges in Vegetable Research & Education (VEGCON-2019)"	ICAR and Indian Society of Vegetable Science Agriculture University, Jodhpur.	1 Feb., 2019 to 3 Feb., 2019
2.	"Technological Advancement in Horticulture for 21 st century"	NAHEP-IG, ICAR, New Delhi, India at college of Horticulture and forestry, Jhalawar (Agriculture University, Kota) Rajasthan, India.	18 Februray, 2019 to 19 Februray, 2019

3.	“Horticulture: A Boon For Indian Economy”	RKVY project “Creation of training facilities for capacity building of scientists, students and rural youth” at Lucknow	31 October, 2019
4.	“Medicinal and Underutilized Plant Species for Health and Nutritional Security”	Krishi Vigyan Kendra, Anta-325202 Baran, Rajasthan in collaboration with National Bank of Agriculture & Rural Development (NABARD), Jaipur	3 th March, 2018 to 4 th March, 2018
5.	Global Approaches in Natural Resource Management for Climate Smart Agriculture	Agricultural Technology Development Society (ATDS), Ghaziabad, Uttar Pradesh, India held at Shobhit Deemed University, Modipuram, Meerut U.P.	26 th February, 2021 to 28 th February, 2021
6.	Advances in Smart Agriculture and Biodiversity Conservation for Sustainable Development (SABCD – 2022)	Agricultural Technology Development Society (ATDS), Ghaziabad, Uttar Pradesh, India held at Conference Hall, Jaipur National University, Jaipur	4 th March, 2022 to 6 th March, 2022
7.	“Current Trends in Agriculture Research and Extension Services: Shaping the Future of Sustainable Agriculture and Food Security”	Jointly organized by STAR Society, Jaipur and SKNAU, Jobner at RARI, Durgapura,	February 23-25, 2025

Details of Professional Recognitions:

S. N.	Type of Membership	Joined (Year)	Name of Professional Society/Journal	Place
1.	Life Member	2022	Agricultural Technology Development Society (ATDS)	Ghaziabad, Uttar Pradesh, India.
1.	Reviewer Board Member	2024	Agriman e-magazine	Bhateshwaro Ki Dhani, Jorpura, Jobner, Jaipur, Rajasthan-303328
2.	Editorial Board Member	2024	Jobner Green e-Newsletter	Bhateshwaro Ki Dhani, Jorpura, Jobner, Jaipur, Rajasthan-303328

Trainings:-

S. No.	Title of training	Organized by	Duration	
			From	To
1.	Vermi composting, organic farming and green house & polyhouse technology	Agro Environmental Education & Farmers Welfare	11 January, 2021	25 January, 2021
2.	Integrated Pest Management	UAS Raichur, Karnataka, Indian Institute of Technology Kanpur and Commonwealth of Learning, Canada	1 May, 2020	30 June, 2020
3.	Off Season/Protected Cultivation of Vegetable Crops	NAHEP-CAAST, ICAR-IARI, New Delhi-12 and CSAUAT, Kanpur (U.P.)	7 February, 2022	21 February, 2022
4.	Role of Science and Technology in Sustainable Agriculture, Horticulture, Animal Husbandry and Allied Sectors: A Retrospective and Prospective Approach	ICAR- Indian Grassland and Fodder Research Institute, Himachal Pasturelands, Palampur, H.P. and NADCL Baramulla, UT of J & K	9 November, 2022	29 November, 2022
5.	6 th Orientation Programme on “Agricultural Education, Research and Extension Management”.	Directorate of Human Resource Development, SKNAU, Jobner, Jaipur	February 22, 2024	March 13, 2024.

Award/ Prize/ Certificate, Fellowship received;

- I honoured with **Young Horticulturist Award-2021** Agricultural Technology Development Society (ATDS), Ghaziabad, Uttar Pradesh, India.
- My M.Sc. thesis rewarded as **“Best Thesis Award in 2021”** by the Agricultural Technology Development Society (ATDS), Ghaziabad, Uttar Pradesh, India for outstanding research contribution regarding application of integrated nutrient management in Indian bean.
- I achieved **Best Poster Presentation** award by Agricultural Technology Development Society (ATDS), Ghaziabad, Uttar Pradesh, India held at Conference Hall, Jaipur National University, Jaipur in 2022.
- I got **Appreciation Certificate** by Agricultural Technology Development Society (ATDS), Ghaziabad, Uttar Pradesh, India held at Conference Hall, Jaipur National University, Jaipur in 2022 for Outstanding Contribution and Recognition in the Field of Horticulture.
- I honored with **Best Article Award** by Agriculture & Food e-Newsletter in 2022.
- I have got the **University Merit Scholarship in M. Sc.** During July 2016 to June 2018; **University Merit Scholarship** in Ph. D. degree during July 2018 to January 2021 and **“Girl Encouragement Award”** in Senior Secondary Exam 2012.

I hereby declare that the above details are found to be correct.

Dr. Manju Netwal