

Department of Agril. Biochemistry
N. D. University of Agriculture and Technology, Kumarganj, Faizabad

A. Faculty Positions

1. Dr.R.P.Singh, Assoc. Prof. & Head
2. Dr.Pratibha Singh, Assoc. Prof.
3. Dr.R.N.Kewat, Asstt. Prof.
4. Dr.Ramesh Pratap Singh, Asstt. Prof.

Other Staff Positions

1. Sri G.B.Singh, Lab. Asstt.
2. Sri Krishna Kumar, Lab. Asstt.
3. Sri Milind Kumar Gautam, Lab. Asstt.
4. Sri Amar Jeet Singh, Jr. Steno/Computer Asstt.
5. Sri R.B.Tiwari, Jr. Clerk
6. Sri Madan Lal, Attendant

B. Achievements**I-Teaching:**

The courses of Biochemistry at under graduate level have been taught to the students of B.Sc. (Ag.), B.Sc. (Hort.), B.Sc. (Home Science) and B.Sc. (Fisheries). Twelve students of M.Sc. (Ag.) previous and final and two students of Ph.D. were awarded degree in the session 2015-16. Five Ph.D. Thesis were submitted in second semester session 2015-16. Each post graduate students have been allotted their thesis work related to recent topics in discipline of Biochemistry. Following are some achievements in the teaching:

❖ Fellowship Awarded:

1. Km.Chetna Gangwar, Id.No. A-6288/11/13, Ph.D. student awarded INSPIRE Fellowship funded by Department of Science & Technology, Govt. of India, New Mehrauli Road, New Delhi.
2. Mr.Radhey Shyam, Id.No. A-7671/13, Ph.D. student awarded Rajiv Gandhi National Fellowship by Ministry of Human Resource Development, New Delhi.
3. Mr. Satya Prakash Gautam Id.No. A-5546/10/14 student awarded Rajiv Gandhi National Fellowship by Ministry of Human Resource Development, New Delhi.

❖ Placement in Govt./Private Sectors**✓ Ph.D. Students-**

1. Harendra Singh, Id. No.A-4120/07/10, Manager Development Officer, Karnataka Agro-Chemicals Padrauna, Kushi Nagar (U.P.)

2. Km.Shilpa Singh, Id. No. A-6357/11, Research Associate, Biochemistry, ICAR Funded Project, Central Institute of Sub-tropical Horticulture, Lucknow.
3. Mr.Radhey Shyam, Id.No. A-7671/13, Selected for Technical Assistant Agriculture, Uttar Pradesh Public Service Commission, Allahabad
4. Ms. Preet Kumar, Id.No. A- 7671/13, Food Safety Officer (Under Training), Uttar Pradesh Public Service Commission, Allahabad.
4. Km. Sunita Kumar, Id.No.-A-4549/08/10,Research Associate, Biochemistry, ICAR Funded Project, Central Institute of Sub-tropical Horticulture, Lucknow.

✓ **M.Sc. Students-**

1. Km. Anamika Kisore, Id. No. A-6912/12, S.R.F., Network Project Biochemistry, Indian Institute of Natural Resins & Gums, Ranchi, Jharkhand.
2. Mr. Ajay Kumar Singh Id. No.A-7600/13 Selected for Technical Assistant Agriculture, Uttar Pradesh Public Service Commission, Allahabad
3. Mr.Dharmendra Kumar Id. No.A-7601/13 Selected for Technical Assistant Agriculture, Uttar Pradesh Public Service Commission, Allahabad
4. Mr.Ramanad Kumar Id. No.A-7605/13 Selected for Technical Assistant Agriculture, Uttar Pradesh Public Service Commission, Allahabad
5. Mr. Maneesh Pal Id. No.A-7602/13 Chemist in Cipla Pvt.Ltd. Mumbai, Maharastra.
6. Mr. Upendra Kumari, Id.No. A-8231/14, Dhanuka Doctor, Dhanuka Pesticides, Meh Nagar, Azamgarh (U.P.).

❖ **Honours & Awards:**

1. Two faculty namely **Dr. Raj Narayan Kewat, Dr. Ramesh Pratap Singh, Asstt. Professor** have got **Young Scientist Award (AFBSAH-2016)** for contribution in the field of Biochemistry on the Occasion of International Conference on Advancing Frontiers in Biotechnology for Sustainable Agriculture & Health (AFBSAH-2016) organized by Department of MCE in Collaboration with Society of Biotechnology during 25-26th February, 2016 held at SHIATS, Allahabad.
2. Two faculty namely **Dr. Raj Narayan Kewat, Dr. Ramesh Pratap Singh, Asstt. Professor** have got **Outstanding Achievement Award** for outstanding contribution in the field of Biochemistry on the occasion of National Conference on Agricultural and Rural Innovations for Sustainable Empowerment (ARISE-2016) during 21-22 May, 2016 held at Kakaitya University & Bala Vikasa, Warangal, Telangana.
3. **Dr. Raj Narayan Kewat, Asstt. Professor Awarded Excellence in Teaching Award**, National Conference on Science for Rural India 2016, Organized by - Vijanana Bharati (S.V.S.) U.P. Chapter-III Co-organizer & Venue-B.R.D.P.G. College Deoria, U.P.-274001.

II-Research:

Title of the Project : Identification of suitable varieties and strains for saline sodic soils having more nutritional quality and less anti-nutritional factors of sawan and kodo millets using biochemical traits

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| Principal Investigator | : R.P.Singh, Assoc. Prof., Biochemistry |
| Co-Principal Investigator | : K.N.Singh, HOD, PMB&GE |
| Location | : Biochemistry Laboratory |
| Year of Commencement | : 2012 |
| Time Schedule | : Four years |
| Project Cost | : Rs. 17,54,400 (Rupees seventeen lacs fifty four thousand four hundred only) |
| Source of Finance | : Department of Biotechnology Govt. of India, Block-2, 7th Floor, C.G.O Complex, Lodi Road, New Delhi-110003 |

❖ **Salient Research Achievements of Project:**

Total 95 germplasm of sawan and kodo millet were collected from various locations of Eastern Uttar Pradesh and eleven germplasm were finally selected on the basis of nutritional and anti-nutritional constituents. On the basis of overall analysis regarding nutritional composition and anti-nutritional factors, tolerant to salinity and alkalinity and protein profiling ten germplasm of sawan and kodo millet were selected. These germplasm will be utilized for future research work related to the development of high yielding varieties of these millets. The cultivation of these germplasm will be helpful in over coming the problem of mal nutrition in large population of eastern U.P. Because they are cheaper source of proteins, vitamins and minerals.

C. Publications:

❖ **Review Article:**

1. Vikram, N.; Kewat, R.N.; Singh R.P., Singh, Ramesh P. and Singh Pratibha (2015). Natural edible colours and flavours natural edible colours and flavours. International J. Of Pharmaceutical Science & Research. Vol. 6, Issue 11.pp-4622-4628.
2. Singh, Ramesh Pratap; Singh, R.P.; Singh, P.; Sengar, R.S. and Singh, S. (2015). National food security through neglected millets promotion and production in India. Biotech Today. Vol. 5. (1): 37-41.

❖ **Research Papers:**

1. Rizvi, S.K.Z., Singh, R.P. and Singh, P. (2015). Nutritional and physico-chemical characteristics of sawan millet germplasm. (*Echinochloa frumentacea* L.). Annals of Plant and Soil Research. Vol. 17 (Special Issue): 555-557.

2. Yadav, A.K. & Kewat, R.N. (2015). Nutritional and anti-nutritional evaluation of sawan millet (*Echinochloa frumentacea* L.). Res. Environ. Life Sci. 8(2):341-342.
3. Vikram, N. and Kewat, R.N. (2015). Physiological and Biochemical screening of hybrid and traditional rice varieties. Trends in Biosciences 8(10): 2689-2692. ISSN-0974-8.
4. Vikram, N. and Kewat, R.N. (2015). Grain quality evaluation and organoleptic analysis of different varieties of rice. Annals of Plant and Soil Research. Vol. 17 (Special Issue): 539-541.
5. Kumari, S.; Kewat, R.N. & Singh, P. (2015). Biochemical screening of short grain scented rice (*Oriza sativa* L.) varieties/strains grown in eastern U.P. Green Farming Vol. 6 (4): 842-844).
6. Vishwakarma S.K.; Singh, R.P.; Kewat, R.N. (2015). Enzymatic and physico chemical evaluation of mango varieties during storage in card board carton by post harvest application of salicylic acid. Res. Environ. Life Sci. 8(2): 347-350.
7. Sagar, A.; Singh, Pratibha, Singh, R.P.; and Singh, Shilpa (2015). Physiochemical screening of basmati rice cultivated in Eastern Uttar Pradesh. Progressive Research-An International Journal Vol. 10 Issue 4. Pg. 388-390.
8. Singh, A.; Kewat, R.N.; Singh, R.P.; Singh, Pratibha and Singh, Ramesh Pratap (2015). Biochemical evaluation of desi and kabuli chickpea germplasm. Progressive Research-An International Journal Vol. 10 (Special-VI): 3332-3334.
9. Gupta, S.D.; Kewat, R.N.; Singh, P. And Manjari (2015). Study of physical and biochemical attributes of hybrid rice grown in Eastern Uttar Pradesh. Annals of Plant and Soil Research. Vol.17 (Special Issue) : 218-220.
10. Gangwar, C. and Kewat, R.N. (2016). Biochemical of Local and improved finger millet (*Eleusine coracana*) varieties collected from different state of India. Progressive-An International Journal. Vol. 11 (Special-II): 1413-1414.
11. Kewat, R.N.; Vikram, N. and Singh, Ramesh, P. (2016). Biochemical screening of neem germplasm (*Azadirachta indica*). National Conference on Science for Rural India. 356-359.
12. Kewat, R.N.; Vikram, N. And Singh, Ramesh P. (2016). Biochemical study of neem germplasm (*Azadirachta indica*) in Eastern U.P. Research in Environment and Life Science. Vol. 9.
13. Gangwar, C. and Kewat, R.N. (2016). Variation of nutritional content in finger millet (*Eleusine coracana* L.). Progressive Research Journal-An International Journal-11.
14. Kumar, A.; Singh, R.P.; Singh, P. and Kewat, R.N. (2016). Protein fractionation and amino acid composition of some new germplasm of chickpea (*Cicer arietinum* L.). (Accepted)

D. Training Programme/Symposia/Seminar/Conference: The faculties of this department have attended following Conferences.

1. NAAC Sponsored National Seminar on “Quality enhancement through Innovative Practices in Teaching, Learning & Evaluation” organized by Dolphin (PG) Institute of Biomedical & Natural Sciences, Manduwala, Dehradun, (U.K.) held on 23 & 24th November, 2015.
2. National Conference on Global Research Initiatives for Sustainable Agriculture & Allied Science (GRISAAS-2015) held on December 12-15, 2015, RVSKVV, Gwalior, M.P. The

abstract and full research paper entitled “Biochemical evaluation of desi and kabuli chickpea germplasm was published

3. International Conference on Advancing Frontiers in Biotechnology for Sustainable Agriculture & Health (AFBSAH-2016) organized by SHIAST, Allahabad during 25-26th February, 2016. Two full length of research paper have been accepted

1. Biochemical and anti-nutritional factors of kodo millet (*Paspalum scrobiculatum* L.).
2. Evaluation of physical traits in kodo millet (*Paspalum scrobiculatum* L.).

E. Courses Offered in I Semester

| Course No. | Course Title | Credits | Instructor's Name |
|-----------------------|--|---------|---|
| Under Graduate | | | |
| HBIOCHEM-311 | General Biochemistry | 4 (3+1) | Dr.Pratibha Singh Dr.R.N.Kewat Dr.R.P.Singh |
| Post Graduate | | | |
| BIOCHEM 511 | Basic Biochemistry | 3(2+1) | Dr.R.P.Singh Dr.Ramesh Pratap Singh |
| BIOCHEM 513 | Soil Biochemistry | 3(2+1) | Dr.Ramesh Pratap Singh Dr.Pratibha Singh |
| BIOCHEM 517 | Biochemistry of food grains, fruits & vegetables | 3(2+1) | Dr.Pratibha Singh Dr.R.N.Kewat |
| BIOCHEM 519 | Animal Biochemistry | 3(2+1) | Dr.R.N.Kewat Dr.R.P.Singh |
| BIOCHEM 591 | M.Sc. (Ag.) Seminar | 1(0+1) | Dr.Pratibha Singh |
| BIOCHEM 600 | M.Sc. (Ag.) Research | | Variable Major Advisors |
| BIOCHEM 611 | Enzymology | 3(2+1) | Dr.R.P.Singh Dr.Pratibha Singh |
| BIOCHEM 613 | Biochemistry of Nucleic Acid | 2(1+1) | Dr.R.P.Singh Dr.Pratibha Singh |
| BIOCHEM 614 | Molecular Biochemistry | 3(3+0) | Dr.Pratibha Singh Dr.R.P.Singh |
| BIOCHEM 700 | Ph.D. Research | | Variable major Advisors |

Courses Offered in II Semester

| Course No. | Course Title | Credits | Instructors Name |
|-----------------------|--------------|---------|--|
| UNDER GRADUATE | | | |
| BIOCHEM-321(N) | Biochemistry | 3 (2+1) | Dr.Ramesh Pratap Singh Dr.R.N.Kewat |

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| | | | Dr.R.P.Singh |
| FGB-121 | Food Chemistry & Fish in Nutrition | 3 (2+1) | Dr.Pratibha Singh Dr.Laxmi Prasad |
| FGB-122 | Biochemical Techniques and Instrumentation | 3 (2+1) | Dr.N.A.Khan Dr.Ramesh Pratap Singh |
| HBIOCHEM-121 | Biochemistry | 3 (2+1) | Dr.Pratibha Singh Dr.R.N.Kewat Dr.R.P.Singh |
| BIOCHEM/FT-121 (H)N | Fundamental of Food Technology | 2(1+1) | Dr.Pratibha Singh Dr.R.P.Singh |
| POST GRADUATE | | | |
| BIOCHEM-521 | Techniques in Biochemistry | 3 (2+1) | Dr.R.P.Singh, Dr.Ramesh Pratap Singh |
| BIOCHEM-522 | Seed Biochemistry | 3 (2+1) | Dr.Pratibha Singh Dr.R.N.Kewat |
| BIOCHEM-523 | Plant Biochemistry | 3 (2+1) | Dr.R.P.Singh Dr.Ramesh Pratap Singh |
| BIOCHEM-524 | Human Nutrition | 3 (2+1) | Dr.Pratibha Singh Dr.R.N.Kewat |
| BIOCHEM-600 | M.Sc. (Ag.) Research | - | Variable Major Advisors |
| BIOCHEM-621 | Biochemistry of Pesticide | 3 (2+1) | Dr.Pratibha Singh Dr.R.P.Singh |
| BIOCHEM-622 | Biochemistry of Crop Quality | 2 (2+0) | Dr.R.P.Singh Dr.Pratibha Singh |
| BIOCHEM-691 | Ph.D. Seminar | 1 (0+1) | Dr.R.P.Singh |
| BIOCHEM-700 | Ph.D. Research | | Variable Major Advisors |

R.P.Singh

Head of Department

