



**CENTRE OF ADVANCED FACULTY TRAINING
IN
AGRONOMY,
G. B. P. UNIVERSITY OF AGRICULTURE AND TECHNOLOGY,
PANTNANAGAR**

Introduction :

The department of Agronomy is one of the oldest department established with the establishment of College of Agriculture/ University in 1960. In the initial stages only U.G. course programme existed, however, with need of time Masters and Ph.D. degree programmes were started in 1963 and 1965 respectively. Though, the UG & PG. degree curriculum remained under change/up gradation from time to time as per need but since 1960 UG degree programme and since 2010-11 PG degree programme have been upgraded as per ICAR guidelines. This department serves as a core facility for running the teaching programme for UG & PG students. The department has largest faculty and was served by the stalwarts known nationally and internationally. The faculty has contributed in various professional disciplines in the field of Agronomy. The department also programmed problem based research work with mandate to develop cost effective and adoptable production technology for precise use of resources to maintain sustainability. The department has well planned transfer of technology for the use of farmers and other agencies outside and in the area of jurisdiction of the University. Human resource development activity of the department is also one of the unique features in training the UG students by offering courses like Practical Crop Production, (PCP) and Rural Agriculture Work Experience (RAWEX). These courses are unique of its kind and the department of Agronomy at this University is the leader in the country in organizing these courses much effectively.

Considering the significant contribution made by the department, ICAR recognized and entrusted the responsibility for development of human resource in the field of Agronomy. For this ICAR provided Centre of Advanced Studies in 1994-95 and Centre of Advanced Faculty Training from 2010-11. Since then department has contributed immensely in training faculty from different parts of the country to strengthen human resource in the field of Agronomy.

Objective of the CAFT :

- a. Human Resource Development.
- b. Site specific interactive learning: Issues, problems and possible solutions.
- c. Infra-structural and research competence development.

Faculty : Name and Designation (as on 30.09.2011)

Sl. No.	Name of faculty	Designation
1.	Dr. D. S. Pandey	Professor& Head
2.	Dr. S.K. Saini	Emeritus Scientist
3.	Dr. O. P. S. Bana	Professor
4.	Dr. Virendra P. Singh	Professor
5.	Dr. M.S. Pal	Professor
6.	Dr. Subhash Chandra	Chief Scientist
7.	Dr. Rohitashav Singh	Professor
8.	Dr. Y.P. Joshi	Professor
9.	Dr. Kewalanand	Professor
10.	Dr. P.C. Pandey	Professor
11.	Dr. A.K. Bhardwaj	Professor
12.	Dr. P.S. Bisht	Professor
13.	Dr. Dheer Singh	Professor
14.	Dr. Vijay Pal Singh	Professor
15.	Dr. S.C. Saxena	Professor
16.	Dr. Sunita T. Pandey	Professor
17.	Dr. V.K. Singh	Assoc. Professor
18.	Dr. Dhananjay Kumar Singh	SRO
19.	Dr. Chandra Bhushan	SRO
20.	Dr. Tej Pratap Singh	SRO
21.	Dr. J.P. Singh	SRO
22.	Dr. Anil Shukla	Assistant Prof.
23.	Dr. Omvati Verma	JRO
24.	Dr. Sumit Chaturvedi	Asstt. Prof.
25.	Dr. Vipin Chandra Dhyani	Asstt. Prof.
26.	Dr. Rajeew Kumar	JRO
27.	Dr. Gurvinder Singh	JRO
28.	Dr. S.P. Singh	JRO
29.	Dr. Amit Bhatnagar	JRO
30.	Dr. Kranti Kumar	Asstt. Prof.

Human Resource Development (Particulars of Short Courses/Training programme for HRD conducted during XI Plan Period)

Sl. No.	Name of the Program	Period	No. of Participants		
			Internal	External	Total
1.	Resource Conservation Technology for Sustainable Crop Production	15.11.2007 to 05.12.2007	01	19	20
2.	Farming system an approach towards sustainable Agriculture	28.3.2008 to 17.3.2008	05	17	22
3.	Water Conservation and Utilization for Improving Agriculture Production	05.11.2008 to 25.11.2008	04	16	20
4.	Advances in Commercial Agriculture	18.3.2009 to 07.4.2009	08	12	20
5.	Advances in Crop Production Under Fragile Ecosystems	15.03.2010 to 04.04.2010	10	11	21
6.	Cropping System Approach for Food Security and Soil Quality	07.12.2010-27.12.2010	07	18	25
7.	<i>Enhancing Water Productivity in Agriculture</i>	07-27 Dec.2011			25

Infrastructure development (equipments etc.)

☞ Modern Teaching Aids: LCD and Accessories purchased

☞ The following equipments were procured

- ◆ Flame photometer
- ◆ Lux meter
- ◆ Chlorophyll meter
- ◆ Spectrophotometer
- ◆ Microscope

Renovation of lecture Room/Laboratories :

Renovation of Conference Hall

Library upgraded :

Library was upgraded by purchasing book on various aspects. The expenditure on books is given in financial statement.

Awards/Recognitions:

Excellent response of various SAUs and ICAR Institutions by nominating their faculty for training of CAS/CAFT, Agronomy of this University. ICAR also reorganized the activities of the department by awarding **Best Centre Award** to Centre of Advanced Studies, AICARP on Weed Control and Wheat Agronomy.

Publication

a. Research Papers

Bharadwaj, A.K., Bakshi, Arun and Mahapatra, B.S. (2007). Nitrogen management studies under different crop establishment methods of wheat in mollisol. The J. Rural and Agril. Res. 7(1&2)57-60.

Bharadwaj,A.K., Singh, S.P., Singh, R.K. and Pandey, D.S. (2007). Alternating cropping system to rice wheat for north -western Indo Gangatic Plains of UP and Uttaranchal . The J. Rural and Agril. Res. 7(1&2)21-24.

Bhardwaj, A.K., Mahapatra,B.S. and Nipandra Kumar (2008) . Site specific nutrient management in rice wheat cropping system under molisol. *Journal of Farming System and Devlopment*

Bhushan, K.B.; Jadli. Sandeep; Verma, Omvati & Goswami, A. K. (2008). Pant Characters and Path Coefficient Analysis of Seed Yield in Exotic French Bean (*Phaseolus Vulgaris* L). Germplasm:Internat.J.agric.Sci.4 (2) : 667-669

Bisht, B.S., R.Puniya, P.C. Pandey and D.K. Singh (2007) Grain yield and yield component of rice as influenced by different crop establishment methods. *International Rice Research Notes*. 32.2:33-34

Chaturvedi, Sumit; Lal, Pyare; Pandey, M.P.; Verma, S. and Singh, A.P. (2008). Component analysis for grain yield in hybrid rice under *tarai* condition. *Oryza* (45)1, 1-6.

- Dhyani V.C. and Mishra R.D. (2007) Dynamics of weeds and their management through herbicides in zero tilled wheat. *Indian Journal of Agricultural sciences* 77 (5) : 314-316
- Gupta, A. and Saxena, S.C. (2008). Weed management in soybean (*Glycine max*) in *Tarai* region of Uttarakhand to sustain productivity. *Pantnagar J. of Research* . 6 (1) : 1-5.
- Jaipal, A.K. Bhardwaj, Singh, Y. and Negi, M.S. (2008). Integrated nutrient management for sustainability of rice-wheat cropping system Extended Summaries – National Seminar INNEM 2008 April 10-11 Palampur HP. Pp41-43.
- Jaipal, Bhardwaj, A.K. and Negi, M.S. (2008). CO₂ Evaluation: Effect of integrated nutrient management on CO₂. Evaluation Extended Summaries– National Seminar INNEM 2008 April 10-11 Palampur HP. Pp43-45.
- Kaushal, Rajesh,; Salil K. Tewari,; Rajput, P. R.; Sumit Chaturvedi and Chand, Satish (2008) Vegetative Propagation in Bamboo. In-International Conference on Improvement of Bamboo Productivity and Marketing for Sustainable Livelihood. 15-17 April, 2008, New Delhi, India
- Kaushal, Rajesh; Kumar, Nandapanda; Tewari, Salil and Chaturvedi, Sumit (2008) Carbon Sequestration estimates in diff. agroforestry system in *tarai* region of Uttarakhand. In: National Symposium on Agroforestry knowledge for sustainability, climate moderation and challenges ahead, Dec. 15-17.
- Kaushal, Rajesh; Tewari, Salil and Chaturvedi, Sumit (2009) Agroforestry as an alternate land use system. In : Proceeding of 22nd CAS on Advances in Commercial Agriculture at G.B.P.U.A.&T., Pantnagar April, 18-07 pp
- Kumar, Abnish ; Singh, V. Pratap; Singh, S.P; Tripathi, Neeta and Singh, Manoj Kumar. (2007). Pramukh Kharif Fasalaon me Shaknashi Upyog avam Kharpatwar Niyanttran. *Kisan Bharti*, No. 8, pp. 17-18.
- Kumar, Abnish ; Singh, V. Pratap; Singh, S.P; Tripathi, Neeta and Singh, Manoj Kumar. (2007). Dhan ke Pramukh Shaknashi avam Kharpatwar Prabandhan. *Kisan Bharti*, No. 11, 23-26.
- Kumar, V; Tripathi, S.S.; Sachan, H.K. and Singh, V.P. (2008). Weed dynamics and green fodder yield of sorghum as influenced by various weed management practices. *Indian J. Weed Sci.* 40 (1 & 2): 72-74.
- Nainwal, R.C. and Saxena, S.C. (2008). Conservation Agriculture : A need of Era. In Golden Jubilee National Seminar on “Second green revolution necessity of compulsion” held at ARS (ANGRAU) Adilabad (AP) October 19-21, 2008.

- Nainwal, R.C.; Saxena, S.C. and Pathak, V. (2008). Resource conservation technology in Rice-wheat cropping system. *In* Golden Jubilee National Seminar on “Second green revolution necessity of compulsion” held at ARS (ANGRAU) Adilabad (AP) October 19-21, 2008.
- Nainwal, R.C.; Verma Omvati and Verma, R.S. (2008). Effect of sowing dates on quality and vigour parameters of bread wheat varieties. Presented In National Symposium on New Paradigms in Agronomy Research held at Navrasri Agriculture University, Navasari, Gujrat w.e.f. November 19-21, 2008
- Omvati Verma.; Neeta Tripathi and R.S.Verma (2008). Maintenance of Seed Longevity While Keeping in Store House. *Indian Farmer Digest* 41 (11):42-44
- Sachan, H.K.; Singh , V.P.; Tripathi, S.S. and Krishna, D. (2008). Studies on harvest time residue of isoprotron in soil, wheat grain and straw. *Indian J. Weed Sci.* (1 & 2): 106-107.
- Saini S.K.; Tyagi, Shashank and Singh, Dheer (2007). Effect of integrated Nutrient management on soil fertility and productivity in sugarcane and its ratoon in sugarcane based cropping system: An economic study. *Cooperative Sugar* Vol.38,5. Page 57-62
- Saini, S.K. (2009). Cultural management of crop diseases with special reference to sugarcane. *Indian sugar*. pp. 25-32
- Saini. S.K. and Singh, Dheer (2007). Management of irrigation water in sugarcane. Paper presented in National Seminar “Comparative Advantages to different methods of Sugarcane Planting” held at IISR, Lucknow on January 23-24, 2007, and page 57-62.
- Saxena, S.C. and Nainwal, R.C. (2008). Agronomic and environmental implications of organic farming systems. *In* Golden Jubilee National Seminar on “Second green revolution necessity of compulsion” held at ARS (ANGRAU) Adilabad (AP) October 19-21, 2008.
- Saxena, S.C. and Nainwal, R.C. (2009). Evaluation of new molecules of herbicides in soybean (*Glycine max*). *In* international conference on grain legumes, held at IIPR, Kanpur, February 14-16, 2009 pp. 176. pp. 248.
- Saxena, S.C. and Nainwal, R.C. (2009). Influence of integrated weed management practices on yield attributing characters and weed growth in soybean. *In* 4th world congress on conservation Agriculture, held at NASC, New Delhi, February 4-7, 2009.

- Saxena, S.C. and Nainwal, R.C. (2009). Influence of new molecules of herbicides on source sink relationship in soybean. *In* international conference on grain legumes, held at IIPR, Kanpur, February 14-16, 2009 pp. 176.
- Saxena, S.C. and Nainwal, R.C. (2009). Residue recycling in rice-wheat cropping system : A sustainable approach. *In* 4th world congress on conservation Agriculture, held at NASC, New Delhi, February 4-7, 2009.
- Saxena, S.C.; Singh, Rajnesh and Singh, Kuldeep (2009). Effect of nutrient management on yield attributes, yield, harvest index, seed quality and economics of soybean (*Glycine max*) under *Tarai* conditions of Uttaranchal. (Paper accepted for publication in Pantnagar J. of Research).
- Shweta; Saini, S.K.; Bhardwaj, A.K. and R.K.Singh. (2008). Resource conservation technologies in Indo Gangatic Plains for growing of rice crop. Submitted paper in National Symposium on “ New paradigms in agronomic research” 19-21 Nov, 2008
- Singh, D.K. and Khurshid Ahmed. (2008). Nitrogen mineralization by organic, inorganic and bio-fertilizer (BGA) with their combinations under anaerobic conditions of Kashmir valley soil *Environment and Ecology* 26(3A):1346-1348.
- Singh, D.K. and Khurshid Ahmed. (2007). Production potential of rice (*Oryza sativa*) based cropping system at different nutrient management under temperate ecosystem of Kashmir. *Journal of Farming System Research & Development* 13 (2):204-208.
- Singh, D.K., Singh, K.N., Lal Singh and J.K. Singh (2007). Real time nitrogen management to increase the N-use efficiency of transplanted rice (*Oryza sativa*) under temperate Kashmir conditions. (Accepted for publication in *Indian Journal of Agronomy*).
- Singh, Manoj Kumar; Singh, V.Pratap; Singh, S.P; Kumar, Abnish and Tripathi, Neeta. (2007). Kharpatwarnashi – Vargikaran, Fasalaon me Prayog avam Savdhaniyan. *Kisan Bharti*, No. 8, pp 3-9.
- Singh, R.; Shyam, R.; Tripahti, S.S. and Kumar, S. (2008) Integrated weed management studies in spring planted sugarcane. *Indian J. Weed Sci.* 40 (1 & 2): 85-87.
- Singh, Rajneesh and Saxena, S.C. (2009). Response to nutrient management on availability and uptake of NPK, PEI, fertility balance and apparent nutrient recovery in soybean (*Glycine max*). (Paper accepted for publication in Pantnagar J. of Research).

Singh, S.P.; Singh, V.P.; Singh, M.K.; Tripathi, Neeta and Kumar, Abnish. (2008). Weed management and rice establishment methods in sequence. Biennial Conference on weed management in modern Agriculture: Emerging Challenges and Opportunities held at Bihar Veterinary College, Patna (Rajendra Agricultural University, Pusa, Bihar) February, 27-28. 177p.

Singh, S.P; Singh,V.P; Tripathi, Neeta; Kumar, Abnish and Singh, M.K (2007). Bioefficacy of penoxsulam on weed control spectrum in transplanted rice. Biennial Conference of Indian Society of weed science held at CCS Haryana Agriculture University, Hisar, November, 2-3. pp 85.

Singh, S.P; Singh,V.P; Tripathi, Neeta; Singh, M.K and Kumar, Abnish (2007). Azimsulfuron: an emerging herbicides for direct seeded rice. Biennial Conference of Indian Society of weed science held at CCS Haryana Agriculture University, Hisar, November, 2-3. pp 86.

Singh,V.P; Singh, S.P; Tripathi, Neeta; Kumar, Abnish and Singh, M.K. (2007).

Weed management in direct seeded rice-zero tillage wheat system a step toward sustainable agriculture in Indo-Gangetic plains. Biennial Conference of Indian Society of weed science held at CCS Haryana Agriculture University, Hisar, November, 2-3. pp 50

Singh,V.P; Singh, S.P; Tripathi, Neeta; Kumar, Abnish and Singh, M.K (2007). Economic disparity in direct seeded vs transplanted rice: a case study. Biennial Conference of Indian Society of weed science held at CCS Haryana Agriculture University, Hisar, November, 2-3. pp 48.

Sumit Chaturvedi, Rajesh Kaushal, Salil Tewari, and P.R. Rajput (2008) Prospect of Bamboo cultivation under agroforestry in *tarai* region of Uttarakhand. In-International Conference on Improvement of Bamboo Productivity and Marketing for Sustainable Livelihood. 15-17 April, 2008, New Delhi, India

Sumit Chaturvedi, V.C. Dhyani, A.P. Singh, Rajeev Kumar, Gurvinder Singh and D.S. Mishra. (2007). Biological control of weeds In: Ecofriendly Management of Plant Diseases/edited by Shahid Ahamad and Udit Narain. Delhi, Daya Publications New Delhi, , xvi, 477 p

Tripathi, Neeta and Verma, R. S. (2007). Influence of late planting on physiological parameters in wheat (*Triticum aestivum* L.) varieties. *Pantnagar Journal of Research*. 5(1):6-8

- Tripathi, Neeta and Verma, R. S. (2008). Assessment of grain quality attributes of basmati rice produced by organic system. *Pantnagar Journal of Research*. 6 (2):192-195
- Tripathi, Neeta and Verma, R. S. (2008). Performance of basmati rice under organic sources of nutrition. *Internat. J. Agric. Sci.* 4(1); 301-305
- Tripathi, Neeta; Singh, V. Pratap; Singh, S.P; Singh, Manoj Kumar and Kumar, Abnish. (2007). Baghwani, Vriksharopan, Charagan avam Doobstahal hetu Shagnashi avam Kharpatwar Niyantran. *Kisan Bharti*, No. 8, 19-21.
- Tripathi, Neeta; Verma, R. S.; Verma Omvati (2007). Effect of Stress Treatment s on Seed Quality of Wheat (*Triticum aestivum*) Varieties Sown on Two Dates. Presented In 2nd Uttarakhand state Science Congress held at Nainital w.e.f. Nov.15-17, 2007
- Tripathi, Neeta; Verma, R.S. and Omvati Verma. (2007). Effect of organic fertilization on grain quality of basmati rice. Presented In 94th Indian Science congress held at Annamalainagar, Chidambaram w.e.f. Jan. 3-7, 2007
- Tripathi, Neeta; Verma, R.S.; Verma Omvati and Kavindra Singh (2007). Effect of Organic Sources of Nutrition on Productivity and Quality of Rice-Wheat System. Presented In International Symposium on Organic Farming and renewable sources of Energy for Sustainable Agriculture held at MPAU&T, Udaipur w.e.f. November 19-21, 2007
- Tripathi, S.S. and Singh, V.P. (2008). Efficacy of herbicides on weeds and seed yield of fenugreek. *Indian J. Weed Sci.* (1 & 2): 115-117.
- Tripathi, S.S.; Singh, R. and Singh, V.P. (2008). Bio-efficacy of SYN-8424 against grassy weeds in wheat. *Indian J. Weed Sci.* 40 (1 & 2): 98-99.
- Singh, V. Pratap, Singh, G., Pandey, P.C., Singh, R.K., Dhyani, V.C., Singh, S.P. Sharma, A. Kumar and M.K. Singh. (2007). Efficacy of different herbicides alone and with follow up application of 2, 4-D with regard to weeds and yield of zero tillage direct seeded rice. *Pantnagar Journal of Research* 5 (1) : 1-5
- V.C. Dhyani and Sumit Chaturvedi (2008). Rice+Fish+Azolla Farming System: Patterns and Technology. In: Proceedings of Training Course on Farming System: An Approach Towards Sustainable Agriculture held at Pantnagar during March 28-April 17, 2008, pp 122-127.
- Verma, Omvati and Pandey, J.P. (2007). Effect of Poly Ethylene Packaging on Germination of soybean seed. *Journal of Rural and Agricultural Research*. 7 No 1& 2 : 66-68

b. Training Manuals.

1. Saini, S.K. and Rajput, P.R. (2007). Precision Agronomy for Sustainable Crop Production, CAS Training, 27 March to 16 April, 2007.
2. Saini, S.K. and Rajput, P.R. (2007). Resource Conservation Technology for Sustainable Crop Production. CAS training, 15 Nov. to 05 Dec., 2007.
3. Saini, S.K. and Rajput, P.R. (2008). Farming System an Approach towards Sustainable Agriculture, CAS Training, 28 March to 17 April, 2008.
4. Saini, S.K. and Rajput, P.R. (2008). Water Conservation and Utilization for Improving Agriculture Production, CAS Training, 5 Nov. to 25 Nov. 2008.
5. Saini, S.K. and Rajput, P.R. (2009). Advances in Commercial Agriculture, CAS Training, 18 March to 7 April, 2009.
6. Saini, S.K. and Bana, O.P.S. (2010). Advances in Crop Production Under Fragile Ecosystems, CAFT Training, 15 March to 04 April, 2010.
7. Saini, S.K. and Bana, O.P.S. (2010). Cropping System Approach for Food Security and Soil Quality, CAFT Training, 7 Dec. to 27 Dec. 2010.

c. Laboratory manuals

- Principles of Agronomy
- Silviculture and Agroforestry
- Crop Production I
- Irrigation Water Management and Rainfed Agriculture
- Soil Fertility Management
- Ecological Studies of Field Crops

d. Books :

Saini, S.K. and **Kewalanand** (2006). Good Agriculture Practices for Sugarcane Production and Processing, G.B.P.U.A.&T., Pantnagar.

Kewalanand (2008) Aushadhiya Phasalen: Kheti evam Prabandhan . G.B.P.U.A.&T., Pantnagar.

Saini, S.K. and **Chandra Subhash** (2010). Water Conservation and Utilization in Agriculture Production. Satish Serial Publishing House, Delhi.

Singh D.K. and **Rawerkar K.P.** (2010). *Jevik Fasolotpadan Takniki*. Directorate Experiment Station, G.B.P.U.A.&T., Pantnagar.

Financial Statement:

Expenditure under CAFT during XI Plan

Head	2007-08	2008-09	2009-10	2010-11	2011-12
Operating cost of training	3,52,207.00	3,53,448.00	1,70,733.00	3,74,869.00	Training will be conducted during Dec. 07-27, 2011 and expenditure will be available after 31 st March
Recurring contingency	1,99,871.00	1,99,584.00	1,49,642.00	1,98,799.00	
Non-recurring contingency	-	-	-	-	
T.A.	68,870.00	82,896.00	25,604.00	29,762.00	
Library	48,658.00	50,000.00	30,000.00	29,364.00	
Staff salary	83,037.00	98,950.00	95,761.00	97,607.00	
Total	752643.00	784878.00	471740.00	730401.00	