

**Department of Crop Physiology**

**Narendra Deva University of Agriculture Technology, Kumarganj, Faizabad**

**Staff Position (Faculty and other staff)**

S. No.	Name of Employee	Designation	Mobile Number
1	Dr. A. H. Khan	Head of Department	9415743932
2	Dr. A. K. Singh	Assistant professor	9415720338
3	Dr. R.K. Yadav	Assistant professor	9415717080
4	Shri Ilyas Mohammud	Steno	9415720217
5	Shri S.N. Panday	Lab assistant	9621279159
6	Shri Rajvanshi Singh	Lab assistant	9451102103
7	Shri Vijay Kumar Yadav	Accounts clerk	9455154219
8	Shri N.N.Singh	Junior clerk	8563868747
9	Shri Arvind Kumar Yadav	Field assistant	9453107631
10	Shri Jag Prasad Maurya	Attendant	
11	Shri Ram Kishun	Attendant	

## Courses offered in Semester

### Ist Semester:

Course No.	Course Title	Credit
CP 511	Principles of Plant Physiology-I Cell organelles, water relation and mineral nutrition	4(3+1)
CP 512	Principles of Plant Physiology-II Metabolism processes and growth regulation	3(2+1)
CP 513	Crop Physiology	2(2+0)
CP 514	Physiological, molecular, ecological aspects of photosynthesis and productivity	3(2+1)
CP 515	Mineral Nutrition: physiological and Molecular Aspects	3(2+1)
CP 591	Seminar	1(0+1)
CP 611	Plant nutrition and metabolism	3(2+1)
CP 612	Advances in Production Physiology	3(2+1)
CP 613	Physiology and biochemistry of growth regulators	3(2+1)
CP 615	Advances in Photosynthesis and Respiration	3(2+1)
CP 691	Seminar	2(0+2)

### IInd Semester:

Course No.	Course Title	Credit
CP 521	Abiotic Stress Responses in Plants	4(3+1)
CP 522	Plant Growth Regulators & Plant Development	3(2+1)
CP 529	Experimental Techniques in Plant Physiology	3(1+2)
CP 591	Seminar	1(0+1)
CP 621	Advances in Stress Physiology	3(2+1)
CP 622	Bioenergetics of Plant Processes	3(3+0)
CP 691	Seminar	2(0+2)

## **Achievements of the Department**

### **1. Training Programme**

Under Centre of Advanced Faculty Training, one training of 21 days was organized to update the knowledge and expertise the teachers and researchers of SAU's and ICAR institutes. The title of the training was on **“Importance of Plant Growth Regulators and Nutrients in Agriculture and Horticulture: Status and Prospective in Present Scenario.”**

About 85 online applications were received from different Agriculture universities and ICAR institutes. However, after screening, 25 scientists/teachers up to the rank of Associate Professor were selected by the committee and name of the trainees were approved through cbp vortal of ICAR (HRD). All the Twenty five candidates confirmed their participation through e-mail which name were approved. After receiving regret from two participants, two candidates were invited from waiting list. Out of this only 22 candidates were turned up finally and rest of the candidates have sent regret letter at last moment mentioning about their personal problems.

During the training period, lectures as well as practicals on relevant topics and field trips were organized. The details are as under:

Thirty four lectures were delivered in all by the twenty one experts engaged in research and teaching on the various aspects of Physiology of field crops and production system. The notable guest speakers were Dr. Vanita Jain, senior scientist, ICAR, New Delhi, Dr.V.K.Singh, chief scientist, CISH, Rehman Khera, Lucknow, Dr.S.K.Jha and Dr.T.Damodaran, senior scientist, CSSRI, Lucknow, Dr.A.H.Khan Director CAFT and Head of Department. The other speakers were Director Research, professor of the university and other senior faculty members of the university.

Practicals related to protein profiling by SDS-PAGE method and isolation of DNA by running PCR were done by participants. Besides this, determination of sodium and potassium were done by flame photometer as well as Zinc, Manganese and Iron analysis by using atomic absorption spectrophotometer were also done by participants. Practical related with antioxidant enzymes such as Superoxide dismutase, Peroxidase and Catalase were also determined by participants in crops grown under normal and water stress condition. Practical on deficiency symptoms of major and minor nutrients through water culture was conducted to show the various deficiency symptoms on maize seedlings. Participants were also given in depth training for recording weather data and equipments used for canopy and soil temperature determination. Trainees were also conducted practicals after understanding the various procedures through demonstration. All the participants co-operated with full zeal and vigour and never hesitated in doing their practicals even in odd hours

### **Lectures delivered by the scientists of the departments in CAFT training programme on following topic:**

1. PGRs in crop production
2. Effects of high night temperature on crop physiology and productivity: Plant growth regulators  
Provide a management option
3. Mechanism of absorption and movement of foliar applied agro-chemicals on crops
4. Polyamines a new group of stress hormone
5. Physiological importance of trace elements in crops

**One laboratory manual and one update prepared for CAFT Programme**

## **2. Teaching:**

No. of students obtained M.Sc. degree: 9  
No. students obtained of Ph.D degree: 3  
No. of Ph.D. students submitted thesis: 3  
No. of students doing Ph.D in present: 7  
Total no. of students in the department; 27

## **3. Research:**

### **Workshop attended:**

Two scientists of the department attended workshop organized under STRASA project by IRRI during 25--28 April 2016 in Bhuneshwar, Orissa

### **Annual Progress Report Prepared:**

Annual Progress Report of BMGF Submergence for the year 2015-16

Annual Progress Report of BMGF Salinity for the year 2015-16

Annual Progress Report of Ec IFAD for the year 2015-16

Annual Progress Report of CAFT 2015-16

Annual Progress Report of the department of Crop Physiology

### **Research Publication:**

#### **Research paper published:**

S.L. Krishnamurthy<sup>1</sup>, S.K. Sharma<sup>1</sup>, D.K. Sharma<sup>1</sup>, P.C. Sharma<sup>1</sup>, Y.P. Singh<sup>2</sup>, V.K. Mishra<sup>2</sup>, D. Burman<sup>3</sup>, B. Maji<sup>3</sup>, B.K. Bandyopadhyay<sup>3</sup>, S. Mandal<sup>3</sup>, S.K. Sarangi<sup>3</sup>, R.K. Gautam<sup>4</sup>, P.K. Singh<sup>4</sup>, K.K. Manohara<sup>5</sup>, B.C. Marandi<sup>6</sup>, D.P. Singh<sup>6</sup>, G. Padmavathi<sup>7</sup>, P.B. Vanve<sup>8</sup>, K.D. Patil<sup>8</sup>, S. Thirumeni<sup>9</sup>, O.P. Verma<sup>10</sup>, A.H. Khan<sup>10</sup>, S. Tiwari<sup>11</sup>, M. Shakila<sup>12</sup>, A.M. Ismail<sup>13</sup>, G.B. Gregorio<sup>13</sup> and R.K. Singh<sup>13</sup> (2015) Analysis of Stability and G × E interaction of Rice Genotypes across Saline and Alkaline Environments in India *Cereal Research Communications* 1-12

A.H.Khan<sup>1</sup>, A.K.Singh<sup>2</sup>, Mubeen<sup>3</sup>, Uma Singh<sup>4</sup>, R.K.Yadav<sup>5</sup>, A.K.Pandey<sup>6</sup>, A. K. Srivastava<sup>7</sup>, SudhanshuSingh<sup>8</sup>, U.S.Singh<sup>9</sup>, S.P.Singh<sup>10</sup> and A. M. Ismail<sup>11</sup> (2016) Approaches for Boosting Rice Yield Under Sodic Soil Condition in Gangetic Alluvium of Eastern Uttar Pradesh. *IJAPSA* 89-103

A.K. Singh, A. K. Mall, P. K. Singh, S. Singh, A.K. Singh and O.P. Verma (2015). Genetic architecture, heterosis, and inbreeding depression for yield and yield associated physiological traits in rice (*Oryza sativa* L.) under drought condition.

Shishir Kant Singh, O.P. Rai, V.N. Singh, G. Singh and A.K. Singh (2015). Effect of nutrient management on nursery growth and survival of Sub-1 and Non-Sub-1 varieties.

Kalpana<sup>1</sup>, A. H. Khan<sup>2</sup>, A. K. Singh<sup>3</sup>, K. N. Maurya<sup>4</sup>, Mubeen<sup>5</sup>, R. K. Yadava<sup>6</sup>, Uma Singh<sup>7</sup>, A.R.Gautam<sup>8</sup> (2015). Effect of Different Seed Priming Treatments on Germination, Growth, Biochemical Changes and Yield of Wheat Varieties under Sodic Soil. *International Journal of Science and Research (IJSR)* (4), 306-310.

### **Extension:**

**T.V. talk:** Delivered two TV talks from Door Darshan, Kendra Lucknow

**Radio talk:** Delivered one radio talk from AIR Faizabad