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CENTRE OF ADVANCED FACULTY TRAINING IN AGRONOMY
College of Agriculture, G.B. Pant University of Agriculture and Technology
PANTNAGAR-263 145, UTTARAKHAND

No.CA/Agro./ 23
Dated: 25.11.2017

Dr. D.S. Pandey
Professor & Head
and
Director, CAFT Agronomy

Subject: Nominations for the training programme on **"Precision Agriculture in Intensive Farming"** From **February 09 to March 01, 2018** under CAFT Agronomy

Dear Sir,

Department of Agronomy, G.B. Pant University of Agriculture & Technology, Pantnagar-263145, Uttarakhand is organizing 21 days training course on **"Precision Agriculture in Intensive Farming"** under the aegies of **"Centre of Advanced Faculty Training"** programme ***w.e.f.*** **February 09 to March 01, 2018** for teachers and researchers of various Agricultural Universities and ICAR/State Research Institutes.

You are therefore, requested to kindly nominate one or two persons not below the rank of Assistant Professor/Scientist (S1) from your University/ Institute for the aforesaid training. Separate application form is to be filled by each applicant. The duly completed application form (online copy enclosed) should reach through proper channel to the undersigned latest by **10.01.2018**.The selected participants will be required to deliver a lecture on teaching/research/extension activities in their respective fields during the training period. The TA, boarding and lodging for aforesaid training programme will be borne by the host institute as per rules. The information of the training and performa can also be downloaded from the **website: www.gbpuat.ac.in** and send after getting due approval from the competent authority. **Candidates are also required to apply online through website *: iasri.res.in* which is mandatory.**

With regards,

Yours Faithfully

(D.S. Pandey)

Encl: As above

E-mail:agronomyhead@gmail.com, Phone: 05944-233075, 233034 Mob: 09412438860

CENTRE OF ADVANCED FACULTY TRAINING IN AGRONOMY

Sponsored training

On

"Precision Agriculture in Intensive Farming"

(February 09 to March 01, 2018)

DEPARTMENT OF AGRONOMY

COLLEGE OF AGRICULTURE

G.B. Pant University of Agriculture & Technology,
Pantnagar-263 145, U.S. Nagar (Uttarakhand)

ABOUT THE CAFT

Department of Agronomy is one of the oldest Departments of the College of Agriculture. It came into existence in 1963 with Master's Programme in Agronomy. The Ph.D. programme in Agronomy commenced from 1965. A well-knit U.G., P.G. and Ph.D. programmes with updated syllabi has been operating in the department. The research work has been programmed to cater the needs of the area. The department serves as nodal agency for various extension activities and resource management. The department shares more than 25% of course load of the under graduate teaching. Considering the competence and advance facilities available in the department, ICAR sanctioned Centre of Advanced Studies in Agronomy in 1994 which was upgraded to the Centre of Advanced Faculty Training in 2010. Under the Centre of Advanced Faculty Training, department imparts training to the scientific personnel's working in less privileged/affiliated institutions towards strengthening human resource in the country. Department has conducted 35 trainings under CAS/CAFT till date. The department has also the mandate to develop cost effective technology for efficient and optimal use of resources. It also shares responsibility of transfer of technologies to the farmers and other end users in the state.

ABOUT THE COURSE

Agriculture in the 21st century faces multiple challenges. It has to produce more food feed, fibre, fuel, fish for growing both human and animal population with a smaller availability of land and other inputs. By 2050 the world's population will reach 9.1 billion, 34 percent higher than today, therefore, doubling in global food demand projected for the next 50 years poses huge challenges for the sustainability of both food production and terrestrial as well as aquatic ecosystems.

Agricultural production has witnessed dramatic rise in the last 3 decades or so in the countries world over. In India, green revolution brought about technological breakthrough which led to the use of short duration high yielding varieties helping intensive land use, increasing area under irrigation and prolific use of chemicals such as fertilizers and pesticides. India, being vastly agriculture oriented, historically different policies were used in various phases for the development of agriculture with high expectation for food and nutritional security as well as poverty eradication of the nation. It has been late to understand that the increasing efforts to raise agricultural growth have cost us dearly in the form of land and water degradation. Large scale ecological losses were reported in crop, grass and forest lands, such as soil erosion, soil alkalinity and salinity, micronutrient deficiency, water logging and fast depletion and contamination of ground water. These factors limit future gains from the land and water resources. The specific crops grown and the cropping practices employed also determine the residuals generated by erosion and run-off. Irrigation is considered as the principle means of food production but its loss from the natural system leading to arid condition downstream and ground water depletion.

Intensive farming practices, particularly with wheat and rice in India, have virtually mined nutrients from the soil. Due to heavy use of fertilizers, excess nitrates have leached down into groundwater and contamination of groundwater with nitrates has increased dramatically. As such, the cultivable lands have become sick by over-application of chemicals. Apart from over use of chemicals, equally important issue is imbalance in the application of fertilizers and pesticides. Intensive agriculture has also led to extension of area under irrigation. In India, area irrigated has increased from 19% to 55% of the net sown area. Much of this increase has come from water extracted from the fast depleting ground water resources. Improper use and maintenance of canal irrigation has contributed significantly to the soil degradation. Extension of canal irrigation to arid and semi arid areas has resulted in water logging and salinization and alkalinization.

Now world is focusing on greater efficiency of agricultural systems. Under such circumstances, the technologies like precision farming are expected to become more popular solutions. Precision farming solutions offer increased farm efficiency, better quality production, and improved farm yield. Technological developments in electronics, remote sensing & GIS, instrumentation and nano sensors create the possibilities for more precise measurements. Sensors are used to monitor different aspects, such as monitoring soil, crop and climate in a field. The development of new nanotech-based tools and equipment may help to increase efficiency and overcome challenges faced by present agriculture. The future of agriculture is largely dependent on the acquisition, analysis, and storage of data about plants, machinery and the environment. Precision agriculture/ site-specific management is emerging technology that has the potential to reduce production costs through more efficient and effective application of crop inputs. The real time irrigation scheduling is a growing interest and need for accurate field data coupled with the increased utilization of professional agronomic services to help farmers for proper irrigation management. Telemetry provides a means of collecting data automatically in real time (or close to real time). Due to wider applicability and accessibility of internet, professionals could view data and issue recommendations without visiting the site. All farm researchers need accurate data about their field to make informed, quality decisions water conditions data available in real time from desktop computers presents a major time efficiency and potent management tool. Objectives Integrating sensors, electronics, control, power systems and ICT engineering into agriculture is a key enabler for delivering improved food supply and sustainable crop production without increased burden on the limited fertile land-bank. The CAFT training is to provide hand on experience on various technologies involved in site-specific application of water, chemical and pesticide for precision agriculture and to demonstrate use, benefits and effectiveness of such technologies for accurate field data collection in real time that minimize loss use (maximize the user efficiency). In addition to climate change and overpopulation, the westernization of world diets is producing even greater pressure on agriculture. Many of the benefits of fertilization, irrigation and seed selection have already been realized and a new impetus is required to deliver the necessary yield improvements. Therefore, the present CAFT Training program on topic ***"Precision Agriculture in Intensive Farming***" has been offered to acquaint all stakeholders for modern technologies helping precision agriculture for high input use efficiencies leading to food, nutrition and environmental security of the nation.

NOMINATIONS

The participants should apply online using CBP vortal at **www.iasri.res.in/cbp** or under the link capacity building programme at **www.icar.org.in** latest by **10.01.2018.** User has to create account on the CBP site and then using the login ID enter into system to apply online for the training programme. After filling the online application, take a printout of the application and get it approved by the competent authority of the organization. Upload the scanned copy of application through CBP vortal and send the hardcopy of approved application to undersigned. The selected candidates will be informed by post, fax and/or e-mail.

TRAVEL, BOARDING AND LODGING

Participants will be paid to and fro fare by shortest route restricted to AC-II train or bus on submission of tickets. Free boarding and lodging will be provided to participants during the training programme as per ICAR guidelines.

PARTICIPANTS

Teachers and researchers working in this area in SAUs, ICAR and other institutes are eligible. The number of participants will be limited to twenty (20).

ELIGIBILITY AND ADMISSION

Candidates holding the position of Assistant Professor, Associate Professor or equivalent rank and posses a Post Graduate/Doctoral Degree in Science/Agricultural Sciences/Agronomy preferably below the age of 50 years are eligible.

The application form (enclosed) duly filled and countersigned by the sponsoring authority should reach to the Director, CAFT (Agronomy) by **10.01.2018**, positively. The selected candidates will be informed by post, fax and/or e-mail.

COURSE DIRECTOR

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For details and application, please visit
www.gbpuat.ac.in