COLLEGE OF HORTICULTURE AND FORESTRY

Dr. V. P. Pandey, Dean

College of Horticulture and Forestry has six departments:

1. Fruit Science
2. Post Harvest Technology of Horticultural Crops
3. Medicinal and Aromatic Plants
4. Floriculture and Landscape
5. Vegetable Science
6. Agro-forestry

Presently the above departments are restructured by Hon'ble Vice Chancellor as under

1. Fruit Science & Agro-forestry
2. Vegetable Science
3. Floriculture and Landscape

Student Strength

The College offers degree in B.Sc. (Hons.) Horticulture, M.Sc.(Ag) Horticulture, M.Sc.(Ag)-Vegetable Science and Ph.D. in Horticulture and Vegetable Science separately. Presently, 38 students of B.Sc., 18 Students of M.Sc. and 8 students of Ph.D. are studying in the College. Newly admitted students in B.Sc.(Hons.) Horticulture, M.Sc. Horticulture and Ph.D. are 37, 18 and 7 respectively.

Placement of Students

- Mr. Umesh Kumar appointed as Field Officer in Bank of Baroda.
- Mr. Rajesh Kumar appointed as Field Officer in Union Bank
- Dr. K.K. Mishra appointed as Ass. Prof. Horticulture in Rama University, Kanpur.
- Gyanendra Pratap Gautam B.Sc. (Hort.) joined as Agriculture Field Officer in Bank of Baroda in 2017.
- Ranjan Rao B.Sc. (Hort.) joined as Agriculture Field Officer in Bank of Baroda in 2017.
- Abhisek Gupta B.Sc. (Hort.) joined as Agriculture Field Officer in Central Bank of India in 2017.
- Deepanshu Verma B.Sc. (Hort.) joined as Agriculture Field Officer in Punjab National Bank in 2017.
- Anuj Kumar B.Sc. (Hort.) joined as Agriculture Field Officer in Bank of Baroda in 2017.

- Suneel Kumar B.Sc. (Hort.) joined as Agriculture Field Officer in Bank of Baroda in 2017.
- Suraj Upadhay B.Sc. (Hort.) joined as Agriculture Field Officer in Punjab National Bank in 2017.
- Shailendra Pratap Singh M. Sc. (Ag.) Horticulture joined as Agriculture Associate in Bank of Maharashtra in 2017.
- Mudit Mishra student of M. Sc. Horticulture (PHT) selected as Farm Manager in Goodwyn Tea, Guwahati in 2017.

Achievements

Eleven students of this college qualified for ICAR National Eligibility Test (NET), 2018

Hon'bleVice-Chancellor with the ICAR-NET qualified students

Projects Running in the College

- State: Non Plan (100% Funded by UP State Govt.): 02

1. Production & Processing of Fruits in Usar Waste Land Scheme
2. Vegetable Research

- National Level (ICAR) PLAN: (75% Funded by ICAR): 06

1. All India Coordinated Research Project on Medicinal, Aromatic Plant & Beetle Vine
2. All India CoordinatedResearch Project on Arid Zone Fruits
3. All India coordinatedResearch Project on Agro forestry
4. All India Coordinated Research Project on Potato
5. All India Coordinated Research Projecton Spices
6. All India Coordinated Research Project on Vegetable Crops

- National Level(ICAR) PLAN (100% Funded by ICAR) MIDH (Mission for Integrated Development of Horticulture) 100% funded by ICAR
- ADHOC Projects: 02

1. Collection, Characterization, Evaluation, Maintenance and registration of minor seed spices grown in farmers field sanctioned for two years (2017-19) by Protection of Plant Varieties and Farmers Rights Authority, Ministry of Agriculture & Farmers Welfare, Govt. of India.
2. Capacity building and technology demonstration on processing of local fruits and vegetables for alternate livelihood of 'Tharu' tribe women. Funded by DST Govt. of India

- ADHOC Projects Proposal Submitted: 05

1. Upgradation of Existing Fruits and Vegetables Processing Laboratory to Training Centre
2. Establishment of elite nursery of mahua (*Bassialatifolia*) for higher productivity and quality of oils.
3. Enhancement of flower production in Eastern Uttar Pradesh.

4. Integrated Disease Management of Fusarium wilt of Banana
5. Development of vegetable crops module for enhancing seed and honey production round the year towards doubling farmers income of Eastern U.P.

Varieties Developed/ Advance Lines:

- Narendra Saryu (NDH-8)- Late maturing variety having good percentage of Curcumin 5-6%, Oleoresin 12-14%, Essential oil 6-7%, and average yield 350-370 q/ha. Identified by AICRP on Spices for Eastern U.P. and Southern part of India in 2017.Collected from Sonbhadra U.P.
- **Germplasm Maintained Vegetable Crops:** Bottle Gourd, Pumpkin, Brinjal, Tomato, Chilli, Vegtable Mustard, Broccoli, Turmeric, Ginger, Coriander, Fenugreek, Fennel, Black Cumin, Bishops Weed, Garlic
- **Germplasm Maintained Fruit Crops:** Ber, Bael, Aonla, Jamun, Jack fruit

Technologies developed

- For weed management in potato metribuzin @ 0.75 kg/ha as pre emergence or post emergence at 10% germination is recommended for effective management of weeds & maximum profit from potato crop
- Tuber treatment with *Trichodermaviride* @ 10 g/kg at planting is the most effective measure to control the infection of black scarf disease.
- For management of common scab disease of potato 3% Boric acid spray before storage alone is the best measure closely followed by Biofumigation (Mustered should be sown at list one month before potato planting and should be used as green manure)
- Prophylactic spray (just at the time canopy closer) with mancozeb followed by Dimethomorph + mancozeb @ 0.25% followed by mancozeb was recommended to manage late blight of potato.
- FYM 15 t/ha (M1) revealed the maximum fresh and dry biomass yield (70.14 q/ha and 26.03 q/ ha, respectively) as compared to other organic manures. Among the biofertilizers tried, S4 (Azatobacter + PSB) (seedling treatment) + Jivamrit (3 spray at 25, 50 and 75 DAP) was recorded for maximum fresh and dry biomass yield (77.44 q/ha and 27.54 q/ha) followed by S2 and S3 treatments in kalmegh.
- Vermicompost @ 4 ton/ha+40 kg N + 20 kg P_2O_5 + 20 kg K_2O (T7) revealed the maximum fresh and dry leaf yield (62.69 q/ha and 11.86 q/ ha, respectively) as compared to other organic manures along with inorganic fertilizers on growth, yield and quality of

Mandookparni (*Centellaasiatica* Var. –Vallabh Medha).

- Soil respiration under *D. sissoo* based agri-silvi system the CO_2 output was maximum during September, 2017 (44.45 $gm^{-2}month^{-1}$), while CO_2 output was minimum in the month of April, 2017 (16.03 $gm^{-2}month^{-1}$).
- In the silvi-pastoral system, the maximum annual green fodder yield was found for *Pennisetumpurpureum* (44.51 ha^{-1}), followed by *Brachiariamutica* (31.91 t ha^{-1}). The higher uptake of K, Ca and Mg nutrients were observed in *Pennisetumpurpureum* grass. The same grass i.e. *Pennisetum purpureum* also improving soil through contribution (addition) of K, Ca and Mg nutrients in the soil.
- Higher grain yield of mustard have been achieved with mustard variety NDR-8501 (1.37 t ha^{-1}) as compared to Kranti (1.28 t ha^{-1}) and Varuna (0.96 t ha^{-1}) with provided normal recommendation of fertilizer 120:60:60 NPK kg ha^{-1} under *Dalbergia sissoo* based agri-silviculture system with paddy-mustard sequence.
- The variety Narendra Urd-1 showed significantly higher grain yield (0.84 t ha^{-1}) as compared to Pant Urd-35 (0.78 t ha^{-1}) and Pant Urd-19 (0.75 t ha^{-1}) under *Casuarina equisetifolia* based agri-silviculture system.
- Amongst 4 systems of Agroforestry adopted at our centre, the maximum total carbon in the system (Vegetation+soil pool) was found under *C. equisetifolia-P. guajava*based agri-silvi-horticulture system followed by *C. Equisetifolia* based agri-silviculture system. Net carbon accumulation was also highest for *C.equisetifolia- P. Guajava* based agri-silvi-horticulture system. The nutrient uptake of NPK were also found higher under this system i.e. *C. equisetifolia-P. Guajava* based agri-silvi-horticulture system.
- Nitrogen, phosphorus and potassium can be saved with the application of dual inoculation of *Azotobactor* and PSB besides obtaining higher flower yield of German chamomile . The use of 50% RDF (N:P:K-60:40:30kg/ha)+5.0kg Azotobactor +5.0kg PSB helped in realizing better plant growth, higher quality flower yield and above all, in the economic production of German chamomile (*Matricariach amomilla* L.) for eastern Uttar Pradesh.
- Azo + PSB + VC + 50% RDF (180:120:60 kg, N: P_2O_5: K_2O ha^{-1}) helped in realizing better plant highest, higher quality of flower yield of china aster (*Callistephus chinensis* L. Nees) cv. Prince in eastern Uttar Pradesh.
- 3. Dipping of bulb in GA_3 200 ppm 24 hrs before planting, spraying of 0.50% $ZnSO_4$ at 30 and 60 DAP found most effective in vegetative growth and flower yield of tuberose.
- Maximum 11.33 days vase life with maximum opening of florets (97.61%), increase in spike length (2.64%), vase solution absorption (4.92%) and minimum drooping of florets (55.20%) was reported when the gladiolus spikes are pulsed with 24hrs. pulsing solution containing 20% sucrose.
- 20% sucrose pulsing for 24hrs resulted maximum vase life of 10.33 days with maximum opening of florets (94.99), increase in spike length (3.22%), vase solution absorption (1.53%) and minimum drooping of florets (60.65%).
- In bael, result reveals that application of 50kg FYM +100% NPK+200g each (Azotobacter + PSB) gave excellent performance regarding plant growth and fruit quality continuously two year of experimentation
- In baer on the basis of plant growth, fruit set, fruit retention, fruit yield per tree and quality attribute the application of

40kgFYM+800gN+400gP+400gK+200g each(Azotobacter + PSB) per tree every year recommended for commercial application in 8 year or above 8 year old ber orchard under sodic soil condition for better growth, optimum fruit yield and quality fruits.

Activities

- 4375 teak plants were planted in the campus at different locations on the occasion of Independence Day.
- 100 Ashok and Gulachin plants were planted on the road side from gate number 1 to Administrative Block.
- More than 2500 students of Sultanpur, Faizabad and some other district visited college of Horticulture & forestry and know about different aspects of agriculture education, through their study tour programme conducted by U.P. Govt.
- Approximate 1500 farmers visited Horticulture & vegetable fields. Professor and scientists aware him about scientific cultivation of different horticultural crops.
- Scientists/Teachers of the College delivered several lectures on Aakashvani, Doordarshan, Kisan mela and Kisan gosthi and provide information about horticultural and vegetable crops.
- Teachers of the college delivered lecture in the different block of Faizabad Commissionary on the occasion of Kisan Kalyan Divas on 02/05/2018 in collaboration with Deptt. of Agriculture U.P.
- Haldi Divas was organized at College of Horticulture & Forestry on 31/05/2018. During the programme Turmeric seeds were distributed among 50 participating Farmers.

  At least five programmes in Swachh Bharat Abhiyan were organized by Department of Fruit Science, Vegetable Science and B.Sc. Horticulture students under RAWE programme

Turmeric Seed Distribution during Haldi Divas

Dr. S.K. Dwivedi, Director, DRDO, Haldwani delivering lecture to PG students of Horticulture

Hon'ble Vice Chancellor visiting the Turmeric Field at the time of Sowing

Hon'ble Vice Chancellor visiting the Nursery of Bael

Field visit by Monitoring Team of AICRP on Spices

Hon'ble Vice Chancellor observing the trial of M.Sc. Horticulture Student's.

P.I. PPV & FRA with DG ICAR during visit on 27th Feb. 2018

School students visited the college during study tour sponsored by U.P. Govt.