Self - Study Report

for Accreditation

2015-16 to 2019-20

College of Horticulture, Kanpur

Chandra Shekhar Azad
University of Agriculture & Technology, Kanpur - 208002

Self Study Report

2015-16 to 2019-20

Submitted to

ICAR- National Agricultural Education Accreditation Board, New Delhi

By

College of Horticulture

Chandra Shekhar Azad University of Agriculture & Technology, Kanpur - 208002

Foreword

College of Horticulture, Kanpur is one of the constituent colleges of Chandra Shekhar Azad University of Agriculture & Technology and came into existence by the order of Chancellor/ Governor of UP vide his letter no. E-7773/G.S. dated- 22.09.2010 under the provision of the University Acts Chapter-V, 28 (i) and Chapter-VI, 17(i) (2) & (3), Section 28(b) and subsequently by the notification of University Registrar no. CSUR/2314/2010 dated- 26.10.2010.

Later on through amendement in the statutes section 28(F) for B.Sc. (Hons.) Horticulture and post graduate programme as M.Sc. (Horticulture) Fruit Science and Vegetable science was included and notified through Registrar office letter No- CSAU/R-546/2012 dated- 20-06-2014. From the academic year 2014-15 the UG Programme was initiated with the registration of 31 students. The major activity of the college is educating students about the courses related to fruit and vegetable production, floriculture and post-harvest management, protected cultivation of vegetable to the B.Sc.(Honours) Horticulture students, B.Sc. (Honours) Agriculture, M.Sc. Horticulture and Ph.D. Horticulture and also conduct researches to improve production, productivity and quality of different vegetable and fruit crops.

The first batch admitted in the undergraduate (UG) programme, B.Sc. (Hons.) of Horticulture in academic session 2015-16 with total intake of 30 students. The admission procedure follows a state level entrance examination, “UPCATET” for all degree programmes running under College of Horticulture. The course curriculum adopted for teaching was as per the V Deans' Committee recommendations of ICAR and is currently in continuation. At present, the intake capacity of undergraduate is 40 students. The post graduate degree (M.Sc. Horticulture) and Ph.D.programme were started in two subjects viz., Fruit Science and Vegetable Science.

In fiscal year 2019, the total production of vegetables was estimated to be at approximately 185 million metric tons. These vegetables include potatoes, tomatoes, onions, eggplants and cabbages among others. As a leading producer of low-cost fruits and vegetables, the country had an enormous export market.

According to the State-wise horticulture production data released by Agriculture Ministry vegetable production in UP, which held the numero uno position earlier, came down to 27.71 mt in 2018-19 from 28.32 mt the previous year whereas in case of fruit production Uttar Pradesh ranks third with 10.65 mt production after Andhra Pradesh and Maharashtra. The major vegetable producing states in the countries are West Bengal accounted for 15.9 per cent of the country’s total vegetable production in 2018-19 while UP produced 14.9 per cent followed by Madhya Pradesh (9.6 per cent), Bihar (9 per cent) and Gujarat (6.8 per cent) were the other major vegetable producers.

The area under vegetable cultivation increased from 6.74 million hectare (mh) in 2004-05 to 10.10 mh in 2018-19. Vegetable production increased from 101.25 mt in 2004-05 to 185.88 tonnes in 2018-19, with an average productivity of 18.4 tonnes per hectare. The major

vegetable crops grown in India, which accounts for 11.2 per cent of global vegetable production, are potato, tomato, onion, brinjal, cabbage, cauliflower, peas, and okra.With a production of 98.58 mt, fruits account for about 31.4 per cent of the total production of horticulture crops in the country. The area under fruit crops cultivation during 2018-19 was 6.65 mh, which is 26.1 per cent of the total area under horticulture cultivation in India.

The University has taken lead by adopting V Deans Committee's recommended course curricula in letter and spirit for UG horticulture programme. Apart from this, the Student READY (Rural Entrepreneurship Awareness Development Yojana) and Experiential Learning Programmes, which are important modules to infuse high quality professional competence and practical work experience in real life situation of graduates, are successfully been implemented by the college. The University has made convincing progress in a very short span to construct the building of the College of Horticulture with state-of the-art facilities for teaching, research and extension. The university has also constructed hostels for boys and girls equipped with good facilities and amenities. Considering the immediate requirements of horticulture the college has established Vegetable Cafeteria, Instructional Farms, Nursery, and Poly Houses. Continuous learning is a process surrounded by one's attitude towards learning and sharing of knowledge, academic curiosity, reading and practicing, creativity, thinking ability and extension of knowledge levels- all essential components in the mentoring of a perfect human resource. I am extremely confident that this seat of learning will train the students in the field of Horticulture and equip them with proficiency, to serve the science and society.

I greatly appreciate the different committees and their members for significantly contributing to the compilation of this report and giving it a presentable shape.

Date: 10 Jan, 2021
Place: Kanpur

(Dharm Raj Singh)
Dean,
College of Horticulture, Kanpur

Self Study Committee

College of Horticulture, Kanpur

Chairman : Dean, College of Horticulture

Co-ordinator/ Member Secretary: Dr. P. K. Singh, Professor and Sectional Head, Department of Vegetable Science

Coordinator: Dr. Ajay Kumar Dubey, Professor & Head, Department of Horticulture and Fruit Science

TASK FORCE COMMITTEE

Task	Committee	Designation
History and Development of College Mission, Goals & Objectives	Dr. V.K. Tripathi	Professor, Department of Horticulture and Fruit Science
	Dr. J.P. Singh	Asstt. Prof., Horticulture
Organization & Governance Academic Programme and Curricula	Dr. Ram Batuk Singh	Assoc. Prof., Vegetable Science
	Dr. A.K. Dwivedi	Asstt. Prof., Horticulture
Faculty and other Human Resource Students and Students Development	Dr. D.P. Singh	In-charge/ Assoc. Professor, Vegetable Science
	Dr. K.P. Singh	Asstt. Prof., Vegetable Science
Research Extension Education	Dr. A.K. Dubey	Professor/JDR
	Dr. M.R. Dabas	Asstt. Prof., Vegetable Science
	Dr. Sanjeev Kumar	Asstt. Prof., Vegetable Science
Library and other learning resource	Dr. Rajiv	Asstt.Prof., Vegetable Science
	Dr. I.N. Shukla	Asstt. Prof., Vegetable Science
Physical facilities	Dr. V.K. Yadav	Professor, GPB
Finance Resource	Sri Girja Shankar Katiyar	Asstt. Comptroller
SWOT analysis and summary	Dr. Jitendra Yadav	Professor, Directorate of Extension
	Dr. I.N. Shukla	Asstt. Prof., Vegetable Science
Editorial Board	Dr. V.K. Tripathi	Professor, Department of Horticulture and Fruit Science
	Dr. D.P. Singh	Assoc. Prof., Horticulture
	Dr. Sanjiv Kumar	Asstt. Prof., Vegetable Science
	Dr. Arvind Kumar Singh	Additional Director, Extension

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Self Study Report for
Undergraduate Programme
B.Sc. (Hons.) Horticulture

College of Horticulture

Chandra Shekhar Azad University of Agriculture & Technology,
Kanpur - 208002

6.4. Self Study Report for the Undergraduate Programme:

B.Sc. (Hons.) Horticulture

6.4.1. Brief History of the Degree Programme:

Clearly mention in which year the degree program was initiated along with its objective and accomplishments.

The announcement for the establishment of College of Horticulture was made by The Chief Minister of Uttar Pradesh on dated- 02-01-2006 at the time of his visit to C. S. Azad University of Agriculture & Technology, Kanpur. The main building of College of Horticulture was inaugurated by Honorable Governor of U.P. Sri B.L. Joshi ji on dated 26.04.2011 in the presence of then Vice Chancellor Dr. G.C. Tewari. College of Horticulture came into existence by the permission of Honorable Chancellor/ Governor of UP vide his letter no. E-7773/G.S. dated- 22.09.2010 during the University Acts Chapter-V, 28 (i) and Chapter-VI, 17(i) (2) & (3), Section 28(b) and subsequently by the notification of University Registrar's no. CSUR/2314/2010 dated- 26.10.2010. In the academic year 2007-08; 12 students; in year 2011-12; 35 students were registered in U.G. Programme, with two major departments *viz.*, Department of Fruit Science and Department of Vegetable Science.

The major activity of the department is teaching courses related to fruits and vegetable production, floriculture and post-harvest management, protected cultivation of vegetables to the B.Sc. (Hons.) students of Horticulture and Agriculture. M.Sc. Horticulture, Ph.D. Horticulture and also conduct researches to improve production, productivity and quality of different vegetables and fruit crops. The Board of Management has approved B.Sc. (Hons.) Horticulture in its 149th meeting held on dated- 28.07.2011.

Finally the proper inclusion of all UG and PG Programmes was amended by Honb'le Chancellor of the University vide letter No. E-5103/G.S. dated 18.06.2014 in the statutes section 28(f) for B.Sc. (Hons.) Horticulture and post graduate programme as M.Sc. (Horticulture) Fruit Science and Vegetable Science and Ph.D. in Fruit Science and vegetable science respectively, the same was notified through Registrar's office letter No- CSAU/R-546/2012 dated- 20-06-2014. From the academic year 2014-15 the UG and from Academic year 2015-16 the PG and Ph.D. Programme were initiated with the inclusion of 31 students in UG, 11 Students in M.Sc. (Horticulture) Fruit Science and 03 in Ph.D. Fruit Science same numbers of students were also admitted in M.Sc. (Horticulture) - Vegetable Science and Ph.D. in Vegetable Science.

Degree Programme	Years in which degree started
B.Sc. (Hons.) Horticulture	2014

6.4.2. Faculty Strength:

The faculty strength of the Degree Programme need to be given cadre-wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

Department of Fruit Science

S.No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	02	0	01
2.	Associate Professor	NIL	0	01
3.	Assistant Professor	03	1	05
4.	Teaching Associate for the academic year 2020-21	01	-	-

Department of Vegetable Science

S. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1	Professor	0	NIL	1
2	Associate Professor	2	NIL	1
3	Assistant Professor	13	06	5

6.4.3. Technical and Supporting staff:

The position of the technical and supporting staff of the Degree Programme including farm and field workers need to be mentioned for both sanctioned and in- place.
**The technical and supporting staff assigned the responsibilities for the multiple programmes need to be clearly marked.*
***Clearly mention the deviation in the staff position with respect to the recommendations of V Deans' Committee/VCI/BSMA/ other regulatory bodies.*
**** In case of Private Universities/affiliated colleges list of technical and supporting staff, their name, specialization, date of appointment in the college, period of contract, salary account summary for last three years with the reference to Form 16 (income tax) shall be provided.*

Department of Fruit Science

S.No.	Name of Post	Sanctioned Post	Name of Employee	Vacant position
1.	Garden Overseer	01	-	01
2.	Nursery Supervisor	01	-	01
3.	Stenographer	01	-	01
4.	Senior Assistant	02	1. Sri Gaya Prasad 2. Sri Brij Bhushan Singh	-
5.	Junior Assistant	01	1. Sri Sanjay Kumar Tiwari	-
6.	Ordaly	01	-	01
7.	Lab Attendant	02	1. Sri Ram Sewak 2. Sri Puttilal	-
8.	Attendant	01	Sri Shankar Singh	-
9.	Class Attendant	01	Sri Sanjeev Kumar	-
10.	Head Chaudhary	01	Sri Dhaniram Yadav	-
11.	Cooli	02	1. Sri Bhimbahadur	-

			2. Sri Ramsewak	
12.	Mali	19	1. Sri Ramjeet 2. Sri Mohan 3. Sri Ram Kishor 4. Sri Rajju 5. Smt. Khalikunnisha 6. Smt. Ramjanki 7. Sri Ramnarayan 8. Sri Balbir 9. Sri Tulasiram 10. Sri Pawan Kumar 11. Sri Chhuttan 12. Sri Vijai Kumar 13. Sri Rajkumar 14. Sri Munnalal 15. Sri Hariram 16. Sri Bhagatram 17. Sri Shivram 18. Sri Shrinath 19. Sri Ramnaresh	-

Department of Vegetable Science

S. N.	Name of the sanctioned post	No. of the sanctioned post	Name of the incumbent
1	Field Man	1	Dr. V. K. Yadav
2	Assistant Statistician	1	Sri. S. D. Dutta
	Field Assistant	1	--
	Senior Technical Assistant	1	Smt. Shashi Prabha Chauhan
	Driver	1	Sri Rakesh Kumar Sharma
3	Senior Assistant	2	Sri. Santram Yadav
			Sri. R.S. Rawat
4	Junior Assistant		Sri. Ashish Kumar
6	Field Attendant		Sri. Ranveer Singh
7	Lab Attendant	2	Sri. Daya Shankar
			Smt. Chuttan
8	Ordely	4	Sri. Dev Raj Pal
			Smt. Laxmi
			Sri. Lallan
			Smt. Vidyavati
9	Gardener	4	Sri. Mohan Lal Yadav
			Smt. Suhana
			Smt. Ram Pati
			Smt. Ram Shree
11	Electric Mechanic	1	Sri. Santosh Kr. Ashthana

12	Peon	4	Sri. Rajdev
16			Shri Ramesh Chandra
17			Shri Sanjay
18			Shri Shitala Prasad

6.4.4. Classrooms and Laboratories:

Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme.

For undergraduate students there are two classroom and one class room fully equipped with smart class, two committee room, two laboratories, nursery garden, four poly houses and other essential facilities are available as mentioned below with their size.

Department of Fruit Science

Sl. No.	Descriptions	Number	Size (mm)
1.	Total Area utilized under the buildin	-	3905.5 sqm
2.	Ground floor	-	55130x42230 mm
3.	Committee Room	1	12000x6000 mm
4.	Dean Chamber	1	4500x6000 mm
5.	HOD Chamber	1	4500x6000 mm
6.	Office Room	2	4500x3600 mm
7.	Professor Room	2	4500x4500 mm
8.	Associate Professor Room	6	3600x4500 mm
9.	Associate Professor Room	2	3600x4500 mm
10.	Assistant Professor Room	2	3600x3600 mm
11.	Assistant Professor Room	2	3600x4500 mm
12.	Assistant Professor Room	8	3600x3600 mm
13.	Class Room	2	6000x6000 mm
14.	Smart Class Room	1	12000x6000 mm
15.	Committee Room	1	12000x6000 mm
16.	UG Lab	1	7200x15000 mm
17.	Processing Lab	1	7200x15000 mm
18.	Toilets	4	3000x3600 mm
19.	Varanda	1	7400x1270 mm
20.	Main Porch	1	9250x6370 mm
21.	Side Porch	2	

Same set of class rooms, committee room, Office rooms, and chambers for Professor, Associate Professor and Assistant Professor were built at first floor. Separate toilets are also available on the first floor of the building under the total covered area of 55130X42230 mm.


Smart Class Room of College of Horticulture

List of Equipments of Processing Lab

Sl. No.	Name of Equipments	No. of Equipments
1.	Microwave Oven	One
2.	Automatic slide projector	One
3.	Refrigerator	One
4.	VCR	One
5.	Perfect make 4 KVA Stabilizer	Four
6.	Refracto meter	Two
7.	PH meter EM-36 make TEKNIK	One
8.	G.L.C Set	One
9.	Freeze- Dryer	One
10.	Temperature Controller	One
11.	Deep Freezer	One
12.	Spectro photometer	One
13.	Bottle Washing machine	One
14.	Retaurt	Two
15.	Canning Retaurt	One
16.	Steam jacked Kettle	One
17.	Screw Type juice extractor	One
18.	Seamar	One
19.	Hydraulic juice pressure	One
20.	Cooling Unit	One
21.	Crown Corcking machine	Two
22.	Cain Sealer	Five
23.	Vacuum Filling Machine	One
24.	Lid Embossing Machine	One
25.	Dabble Seamar	One
26.	Body Reformer Plain	One
27.	Body Reformer stripped	One

28.	Play Jar	One
29.	Exhausting Machine	One
30.	12.5 KVA Generator	One




UG Practical Class in processing Lab

Accessories in committee room

1.	Committee Room Accessories	One
2.	Cordless Mike	Two
3.	Mike with accessories	Nineteen
4.	Mike Box	One
5.	Speaker	Four

Department of Vegetable Science:

List of equipment's in laboratories

- Thermo hygrograph
- Kjeldhal distillation set
- Spectrophotometer
- Flame photometer
- Digital balance

- Plastic crates
- Generator set
- Auto clean machine
- Hot Plate
- Glass ware dryer
- Mechanical shaker
- Electronic balance
- pH meter
- Leminar Flow
- Air purifier
- Microscope

Details of farm facilities

i. 24 ha. Total Land area
ii. 15.6 ha cultivated Land
iii. 1.36 ha nursery & Garden
iv. 1.0 ha Polyhouse
v. 01 Tractor
vi. 02 Tube bell (15HP)
vii. One Harrow
viii. Two Cultivator
ix. One Rotavetor
x. Threshing Floor- 14 m radius

Details of workshop facilities

i. NA

Details of instructional facilities

i. Poly house- 04 units (440 sq. meter each)
ii. Net house- 01 unit (20 X 13.5 meter)
iii. Godown- 01 (13 X 8.5 meter)
iv. Pre-cool chamber-01 unit (200 sq. meter)
v. Onion garlic storage- 01 unit (10.5 X 4.5 meter)
vi. Laboratory and classroom - 01 each (6.50 X 8.30 meter)

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on –practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

The Students admitted in B.Sc. (Hon's.) Horticulture are being trained through practical classes in the departmental garden having area more than 19 acres with nursery

(2.15 acres). The necessary propagation and gardening techniques with tools are being practiced and taught through learned faculty of college.

In addition to practical's classes, hands on training are also provided to the students for the protective cultivation of Vegetables in poly houses and the storage of Onion and Garlic.

While conducting Practical classes, the students are instructed about the procedures first and practices they have to follow, while accomplishing the exercise. Thereafter, the students are guided for hands on practice for performimg practical exercise at their own to build up confidence in the students for independent accomplishment of the exercise.

Hands-on training on nursery, production, protected cultivation, value addition, chemical analysis of soil samples, use of different types of sprayers for plant protection, farm machineries, water pumps, recording of weather variables, selfing, crossing etc are practiced in breeding programmes, quality seed production, seed grading etc.

Name of Degree	Batches (A or B or C)	Name of the course	Credit of the course	Practical hour(s)	Place of practical (Field/Laboratories/Glasshouse other)
UG	A & B	ELP-427, Organic crop production technology	10(0+10)	10	Field
	A & B	HEL-422, Protective cultivation of high value horticultural crop	10(0+10)	10	Field

Protected cultivation

6.4.6. Supervision of students in PG/PhD Programmes:

Number of students being supervised by Faculty in case of Masters/ PhD Programme (as per ICAR/ UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Not applicable for undergraduates.

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc:

Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

The pass out under graduates can experience the facilities available in the College of Horticulture. Infrastructure needed for the undergraduate students to come and sharpen their skill, are sufficient with regular well ventilated class rooms, sectional library, garden class rooms with proper propagating tools, processing laboratory and smart class room are the nice and healthy environment for the coming students.

Since the college is very new feed back facilities from all the stake holders are not possible in well manner but we use to take feedback from our most important stakeholders *viz.* students and farmers at the end of each semester. We asked UG students to write their response about the courses taught in the given format. We are also in practice to have feedback from our end users i.e. the farmer regarding the performance of improved technologies of vegetable production to make further refinement. Through Students Ready Programme we also obtain feed back from Industry about theory and Practical expertise of our students and accordingly make modification in the planning of classes. Studets are also asked to give their feed back and opinion regarding any new skill they want to learn and accordingly extra classes and lecture are conducted by faculty of College or other associated faculty of university. Speakers from out side the university are also called and practical experience is provided to entrepreneurial skills to the students.

6.4.8. Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	**Actual student admitted in last five years**					**Attrition (%)**				
	Y1	**Y2**	**Y3**	**Y4**	**Y5 (Current Year)**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5 (Current Year)**
	2015 -16	2016 -17	2017-18	2018-19	2019-20	2015 -16	2016 -17	2017 -18	2018 -19	2019-20
B.Sc.(Hons.) Horticulture	30	30	40	31	35	-	-	-	6.67	10.00

6.4.9. ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

ICT tools like video conferencing, whatsapp call, skype, zoom, webex, multimedia and LCD projectors and other applications are being used in imparting classroom teaching for the students as enumerated below in table.

Name of the scientist	**Methods of ICT used**	**Teaching/ Practical**	**Degree Programme**	**Any short fall for the same, if yes mention clearly**
Dr. D.P. Singh	Whatsapp group, webinar, online seminar, online exam, online training	Teaching	P.G. and Ph.D.	
Dr. R.B. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	
Dr. M.R. Dabbas	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	
Dr. Sanjiv Kr. Singh	Whatsapp group, online thesis evaluation, online quiz, online exam, online seminar	Teaching	P.G. and Ph.D.	
Dr. I.N. Shukla	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	
Dr. K.P. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	
Dr. P.K. Tiwari	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	
Dr. R.K. Pal	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	
Sri Niranjan Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	
Dr. Rajiv	Whatsapp group, webinar, online exam, online seminar	Teaching	P.G. and Ph.D.	

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12. Certificate (Applicable when SSR is submitted for Programme)

I, **Dharm Raj Singh** the **Dean**, College of Horticulture, Kanpur hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

Date: 10 Jan, 2021
Place: Kanpur

(Dharm Raj Singh)
Dean,
College of Horticulture, Kanpur

Self Study Report for

PG Programme in Fruit Science

College of Horticulture

Chandra Shekhar Azad University of Agriculture & Technology, Kanpur - 208002

6.4. Self Study Report for PG Programme :

M.Sc.(Horticulture) Fruit Science

6.4.1. Brief History of the Degree Programme:

Clearly mention in which year the degree program was initiated along with its objective and accomplishments.

The announcement for the establishment of College of Horticulture was made by The Chief Minister of Uttar Pradesh on dated- 02-01-2006 at the time of his visit to C. S. Azad University of Agriculture & Technology, Kanpur. The main building of College of Horticulture was inaugurated by Honorable Governor of U.P. Sri B.L. Joshi ji on dated 26.04.2011 in the presence of then Vice Chancellor Dr. G.C. Tewari. College of Horticulture came into existence by the permission of Honorable Chancellor/ Governor of UP vide his letter no. E-7773/G.S. dated- 22.09.2010 during the University Acts Chapter-V, 28 (i) and Chapter-VI, 17(i) (2) & (3), Section 28(b) and subsequently by the notification of University Registrar no. CSUR/2314/2010 dated- 26.10.2010. In the academic year 2007-08; 12 students and in year 2011-12 35 students were registered in U.G. Programme, with two major departments *viz.,* Department of Fruit Science and Department of Vegetable Science.

The major activity of the department is teaching of courses related to fruit and vegetable production, floriculture and post-harvest management, protected cultivation of vegetable to the B.Sc.(Hons.) Horticulture students, B.Sc. (Hons.) Agriculture, M.Sc. Horticulture and Ph.D. Horticulture and conduct research to improve production, productivity and quality of different vegetable and fruit crops. The Board of Management has approved B.Sc. (Hons.) Horticulture in its 149th meeting held on dated- 28.07.2011.

Finally the proper inclusion of all UG and PG Programmes was amended by Honb'le Chancellor of the University vide letter No. E-5103/G.S. dated 18.06.2014 in the statutes section 28(F) for B.Sc. (Hons.) Horticulture and post graduate programme as M.Sc. (Horticulture) Fruit Science and Vegetable Science the same was notified through Registrar office letter No- CSAU/R-546/2012 dated- 20-06-2014. From the academic year 2015-16 the PG Programme was initiated with the intake of 10 students to impart the advance knowledge and techniques in the field of fruit science.

Degree Programme	Years in which degree started
M.Sc.(Horticulture) Fruit Science	2015-16

6.4.2. Faculty Strength:

The faculty strength of the Degree Programme need to be given cadre-wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

Department of Fruit Science

S.No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	02	00	01
2.	Associate Professor	Nil	00	01
3.	Assistant Professor	03	01	04
4.	Teaching Associate for the academic year 2020-21	01	-	-

6.4.3. Technical and Supporting staff:

The position of the technical and supporting staff of the Degree Programme including farm and field workers need to be mentioned for both sanctioned and in- place. The technical and supporting staff assigned the responsibilities for the multiple programmes need to be clearly marked.Clearly mention the deviation in the staff position with respect to the recommendations of V Deans' Committee/VCI/BSMA/ other regulatory bodies. In case of Private Universities/affiliated colleges list of technical and supporting staff, their name, specialization, date of appointment in the college, period of contract, salary account summary for last three years with the reference to Form 16 (income tax) shall be provided.

S.No.	Name of Post	Sanctioned Post	Name of Employee	Vacant position
1.	Garden Overseer	01	-	01
2.	Nursery Supervisor	01	-	01
3.	Stenographer	01	-	01
4.	Senior Assistant	02	3. Sri Gaya Prasad 4. Sri Brij Bhushan Singh	-
5.	Junior Assistant	01	1. Sri Sanjay Kumar Tiwari	-
6.	Ordaly	01	-	01
7.	Lab Attendant	02	3. Sri Ram Sewak 4. Sri Puttilal	-
8.	Attendant	01	Sri Shankar Singh	-
9.	Class Attendant	01	Sri Sanjeev Kumar	-
10.	Head Chaudhary	01	Sri Dhaniram Yadav	-
11.	Cooli	02	3. Sri Bhimbahadur 4. Sri Ramsewak	-
12.	Mali	19	20. Sri Ramjeet 21. Sri Mohan 22. Sri Ram Kishor 23. Sri Rajju 24. Smt. Khalikunnisha 25. Smt. Ramjanki 26. Sri Ramnarayan 27. Sri Balbir 28. Sri Tulasiram 29. Sri Pawan Kumar 30. Sri Chhuttan	-

			31. Sri Vijai Kumar 32. Sri Rajkumar 33. Sri Munnalal 34. Sri Hariram 35. Sri Bhagatram 36. Sri Shivram 37. Sri Shrinath 38. Sri Ramnaresh	

6.4.4. Classrooms and Laboratories:

Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme.

For post graduate programme the class room, smart class room, committee room and laboratories existing for UG programme are utilized. The details are as under

Sl.No.	Descriptions	Number	Size (mm)
1.	Total Area utilized under the building	-	3905.5 sqm
2.	Ground floor	-	55130x42230 mm
3.	Committee Room	1	12000x6000 mm
4.	Dean Chamber	1	4500x6000 mm
5.	HOD Chamber	1	4500x6000 mm
6.	Office Room	2	4500x3600 mm
7.	Professor Room	2	4500x4500 mm
8.	Associate Professor Room	6	3600x4500 mm
9.	Associate Professor Room	2	3600x4500 mm
10.	Assistant Professor Room	2	3600x3600 mm
11.	Assistant Professor Room	2	3600x4500 mm
12.	Assistant Professor Room	8	3600x3600 mm
13.	Class Room	2	6000x6000 mm
14.	Smart Class Room	1	12000x6000 mm
15.	Committee Room	1	12000x6000 mm
16.	UG Lab	1	7200x15000 mm
17.	Processing Lab	1	7200x15000 mm
18.	Toilets	4	3000x3600 mm
19.	Varanda	1	7400x1270 mm
20.	Main Porch	1	9250x6370 mm
21.	Side Porch	2	

Same set of class rooms, committee room, Office rooms, and chambers for Professor, Associate Professor, and Assistant Professor were built at first floor. Separate

toilets are also available on the first floor of the building under the total covered area of 55130X42230 mm.

List of Equipments used in Processing Lab

Sl. No.	Name of Equipments	No. of Equipments
1.	Microwave Oven	One
2.	Automatic slide projector	One
3.	Refrigerator	One
4.	VCR	One
5.	Perfect make 4 KVA Stabilizer	Four
6.	Refracto meter	Two
7.	PH meter EM-36 make TEKNIK	One
8.	G.L.C Set	One
9.	Freeze- Dryer	One
10.	Temperature Controller	One
11.	Deep Freezer	One
12.	Spectro photometer	One
13.	Bottle Washing machine	One
14.	Retaurt	Two
15.	Canning Retaurt	One
16.	Steam jacked Kettle	One
17.	Screw Type juice extractor	One
18.	Sea mar	One
19.	Hydraulic juice pressure	One
20.	Cooling Unit	One
21.	Crown Corcking machine	Two
22.	Cain Sealer	Five
23.	Vacuum Filling Machine	One
24.	Lid Embossing Machine	One
25.	Dabble Seamar	One
26.	Body Reformer Plain	One
27.	Body Reformer stripped	One
28.	Play Jar	One
29.	Exhausting Machine	One
30.	12.5 KVA Generator	One

Accessories in committee room

1.	Committee Room Accessories	One
2.	Cordless Mike	Two
3.	Mike with accessories	Nineteen
4.	Mike Box	One
5.	Speaker	Four

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

The students admitted under post graduate degree programme [M.Sc (Horticulture) Fruit Science] are being trained through practical classes in the departmental garden in the area of more than 19 acres with nursery (2.15 acres). The necessary propagation and gardening techniques with tools were practiced and taught through learned faculty members. In addition to practical's, hands on training are also provided to students for the protective cultivation of fruits in poly houses and Post harvest management to minimize losses and processing. While conducting the Practical's first the students are instructed about the procedures and practices they have to follow, while accomplishing the exercise. Thereafter, the students are guided for hands on practice for doing the practical exercise at their own to build up confidence in the students for independent accomplishment of the exercise.

Hands-on training on nursery, production, protected cultivation, value addition, chemical analysis of soil samples, use of different types of sprayers for plant protection, farm machineries, water pumps, recording of weather variables, selfing, crossing practices in breeding programmes, quality seed production, seed grading etc.

6.4.6. Supervision of students in PG Programmes:

Number of students being supervised by Faculty in case of Masters/PhD Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Six highly qualified teachers are their in the department of fruit science to guid the PG students for their thesis research works and the students are alloted on turn basis. No of PG students being supervised by the qualified faculty of fruit science during the last five years is given below in tabular form-

Supervision of the student in post graduate programme M.Sc (Horticulture) Fruit Science by the faculty

Year	Name of the students Guided	Topic of thesis	Major Supervisor
2018	Sri Ankit Singh Bhadauria HR-0141/16	Influence of foliar application of Boron, Zinc and Gibberellic Acid on fruit drop, yield and quality attributes of aonla cv. NA-7	Dr.V.K. Tripathi
	Sri Ashutosh Singh HR-0147/16	Effect of GA_3 and Naphthalene acetic acid alone and in combination on fruit drop, yield and quality of Mango cv. Amrapali"	Dr.V.K. Tripathi
	Sri Rajneesh Kumar HR-0142/16	Influence of IBA and PHB on Regeneration of Kagzi Lime (Citrus aurantifolia Swingle) Through Stem Cutting	Dr.J.P.Singh
	Sri Gangadhar HR-0148/16	Influence of foliar application GA_3 with and without NAA on fruit drop, growth, yield and	Dr.J.P.Singh

		quality of ber (Zizyphus mauritiana Lamk.) cv. Banarasi Karaka.	
	Sri Mahesh Kumar Gupta HR-0144/16	Rapid Production of Banana (Musa paradisiaca L.) Plantlets Through Tissue Culture	Dr. A.K. Dwivedi
	Sri Durga Prasad Singh HR-0140/16	Influence of foliar application of zinc, calcium and gibberellic acid on fruit drop, yield and quality attributes of aonla cv. NA-7	Dr.S.S. Yadav
	Sri Suneel Kumar HR-0146/16	Effect of foliar application of NAA, Boron and Zinc Sulphate on fruit drop, growth and quality attributes of ber cv. Banarasi karaka.	Dr.S.S. Yadav
2019	Sri Yogesh Kumar HR-0211/17	Effect of GA_3 and $ZnSo_4$ alone and in combination on fruit drop, yield and quality of Mango cv. Dashehari	Dr.V.K. Tripathi
	Sri Vivekanand HR-0214/17	Influence of foliar application of zinc, boron and NAA on fruit drop, yield and quality attribute of Aonla cv. NA-7	Dr.V.K. Tripathi
	Sri Abhay Kumar Yadav HR-0213/17	Studies of the foliar nutrition of boron with and without GA_3 on growth, flowering, fruiting and yield of Phalsa (Grewia subinaequalis D.C.)	Dr.J.P.Singh
	Sri Sunil Kumar Patel HR-0220/17	Influence of IBA and NAA levels and their combinations on regeneration of Kagzi Lime (Citrus aurantifolia Swingle)	Dr.J.P.Singh
	Sri Trivendra Kumar HR-0216/17	Influence of foliar application of plant growth regulators and urea on fruit drop, fruit retention, growth and quality of Ber (Ziziphus mauritiana Lamk.) cv. Banarasi Karaka	Dr.R.K.S. Gautam
	Sri Pushpendra Kumar HR-0218/17	Effect of NAA and GA_3 on quality, yield and yield attributary traits in Phalsa (Grewia subinaequalis D.C.)	Dr. A.K. Dwivedi
	Tanushri Pandey HR-0210/17	Effect of different IBA doses, mechanical wounding and growing media on regeneration of stem cutting in lemon (Citrus limon Burm) in UP East conditions	Dr.S.S. Yadav
	Sri Pawan Kumar HR-0217/17	Effect of different doses of IBA and NAA on rooting of stem cutting of Sweet lime (Citrus limettoides Tanaka)	Sri R.K. Sachan
	Neha Sinha HR-0219/17	Impact of Changing Climate on Flowering, Fruiting and Physico-chemical Attributes of Mango in Central Plain Zone of Uttar Pradesh	Dr.S.S. Yadav
	Sri Ajey Pratap Singh HR-0212/17	Effect of GA_3 zinc Sulphate and borax on fruit drop, fruit cracking and quality of Litchi (Litchi chinensis Sonn.) cv. Dehradun	Dr.S.M. Tripathi
	Sri Avineet Kumar Katiyar HR-0215/17	Effect of foliar application of GA_3, NAA and Boron on fruit drop, growth and quality of ber (Ziziphus mauritiana Lamk.) cv. Banarasi Karaka	Dr.S.M. Tripathi
2020	Sri Pawan Kumar Maurya HR-0258/18	Effect of pre-harvest application of plant bio-regulators and micronutrient on fruit retention, yield and quality of Mango (*Mangifera indica* L.) cv. Amrapali.	Dr.V.K. Tripathi
	Sri Anurag Kumar HR-0263/18	Effect of Azotobacter, PSB and vermicompost on vegetative growth, yield and	Dr.V.K. Tripathi

		quality of strawberry (*Fragaria x annanasa* duch.) cv. chandler.	
	Sri Vivek Kumar HR-0264/18	Influence of $GA_{3,}$ borax and zinc sulphate on fruit drop, fruit cracking, yield and quality attributes of litchi (*Litchi chinensis* Sonn.) cv. Dehradun.	Dr.J.P.Singh
	Sri Nitin Kumar Chouhan HR-0260/18	Effect of foliar application of $GA_{3,}$ NAA and urea on fruit drop, fruit retention, growth and quality of ber (*Zizyphus mauritiana* Lamk.) cv. banarasi karaka.	Dr.R.K.S. Gautam
	Sri Ravi Pratap HR-0265/18	Influence of foliar feeding of Ca, Zn and Cu with and without borax on fruit set, yield and quality of winter season guava (*Psidium guajava* L.) cv. L-49.	Dr.R.K.S. Gautam
	Sri Vishal Gangwar HR-0266/18	The response of organic manaure and bio-fertilizer applicartion on vegetative growth, yield and quality parameters of strawberry (*Fragaria x ananassa* duch.) cv. chandler.	Dr. A.K. Dwivedi
	Sri Abhilash Kumar Tiwari HR-0261/18	Effect of foliar spray of nutrients and plant growth regulators on yield and quality of winter season guava (*Psidium guajava* L.) fruit cv. Allahabad safeda.	Dr. A.K. Dwivedi
	Sri Sumit Kumar Tripathi HR-0262/18	Effect of foliar application of $GA_{3,}$ NAA and $ZnSo_4$ on fruit drop, fruit retention, growth and quality of ber (*Zizyphus mauritiana* Lamk.) cv. banarasi karaka.	Dr.S.M. Tripathi

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc:

Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

The pass out under graduates have experienced about the facilities available in the department of Fruit Science are sufficient with regular well ventilated class rooms, sectional library, garden class rooms with proper propagating tools, processing laboratory and smart class room are the nice and healthy environment for the coming students.

We use to take feedback from our most important stakeholders *viz.* students and farmers at the end of each semester, we asked PG students to write their response about the courses taught in the given format. We are also in practice to have feedback from our end users i.e. the farmer regarding the performance of improved technologies of vegetable production to make further refinement.

6.4.8. Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Post Graduate- Fruit Science Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	Y1	Y2	Y3	Y4	Y5 (Current Year)	Y1	Y2	Y3	Y4	Y5 (Current Year)
	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
M.Sc.(Hort.) Fruit Science	-	11	11	09	10	-	36.36	NIL	11.11	NIL

6.4.9. ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

ICT tools like video conferencing, whatapp call, skype, zoom, webex and other applications are being used in imparting classroom teaching for the students as enumerated below in tabular form.

Name of the Teachers	Methods of ICT used	Teaching/ Practical	Degree Programme	Any short fall for the same, if yes mention clearly
Dr. A.K. Dubey	Whatsapp group, webinar, online seminar, online exam, online training	Teaching	PG and Ph.D.	
Dr. V.K. Tripathi	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. J.P. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. R.K. S. Gautam	Whatsapp group, online thesis evaluation, online quiz, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. A.K. Dwivedi	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage**.**

6.4.12. Certificate (Applicable when SSR is submitted for Programme)

I**, Dharm Raj Singh** the Dean, College of Horticulture , Kanpur hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

Date: 10 Jan, 2021
Place: Kanpur

(Dharm Raj Singh)
Dean,
College of Horticulture, Kanpur

Self Study Report for

PG Programme in Vegetable Science

College of Horticulture

Chandra Shekhar Azad University of Agriculture & Technology, Kanpur - 208002

6.4. Self-Study Report for the PG Programme: M. Sc. Horticulture-Vegetable Science

6.4.1. Brief History of the Degree Programme:

Clearly mention in which year the degree programme was initiated along with its objective and accomplishments.

The Vegetable Research Center at Kalyanpur, Kanpur was upgraded as department of Vegetable Science, during 2002-03 and started giving degree in M.Sc.(Ag)- Horticulture (Vegetable Science) and Ph.D.(Horticulture) in Vegetable Science and this continued till 2011-12. Afterward from academic session 2016-17, admission of M.Sc. and Ph.D. students were again initiated and now the degree is being awarded as M.Sc. (Horticulture) Vegetable Science and Ph.D. Vegetable Science under the College of Horticulture.

Finally the proper inclusion of all UG and PG Programmes was amended by Honb'le Chancellor of the University vide letter No. E-5103/G.S. dated 18.06.2014 in the statutes section 28(f) for B.Sc. (Hons.) Horticulture and post graduate programme as M.Sc. (Horticulture) Fruit Science and Vegetable Science and Ph.D. in Fruit Science and vegetable Science, respectively. The same was notified through Registrar's office letter No- CSAU/R-546/2012 dated- 20-06-2014. From the academic year 2015-16 the PG Programme was initiated with the inclusion of 11 Students in M.Sc. (Horticulture) Vegetable Science.

This department was recognized as Center of Excellence on vegetable crops in the year 2018 by Department of Agricultural Education and Research U.P.

Name of Department: Vegetable Science

Year of establishment: 2002

Year of Degree programme initiated under College of Horticulture: 2016

Objective:

To impart quality education to PG students on the fundamentals of Vegetable Science and latest technological interventions to enhance the vegetables production and productivity

Achievements of the department:

Twenty Five students have been awarded with degree in M.Sc. (Horticulture) - Vegetable Science and 02 students with Ph.D. (Horticulture) - Vegetable Science.

Degree Programme	Years in which degree started
M.Sc.(Horticulture) Vegetable Science	2015-16

Technology developed:

A total number of 16 technologies encompassing vegetable production and protection have been developed and recommended for adoption as per details given below:

S. No.	Details of Technology recommended
1.	The maximum pod yield (69.68 q/ha) with C:B ratio (1.97) was registered with the application of vermicompost @ 5 t/ha + *VAM* + *Pseudomonas* + *Tricoderma* + *Azotobactor* in organic farming trial on cowpea. Hence, this treatment is recommended for organic cultivation of cowpea under Kalyanpur condition. (33rd Group Meeting of AICRP on Vegetable Crops held at IIVR, Varanasi during 21-24 May, 2015)
2.	Application of vermicompost @ 2.5 t/ha + half recommended NPK through chemical fertilizers recorded significantly higher green pod yield (83.56 q/ha) of garden pea with B:C ratio of 3.07. Hence, it is recommended for cultivation under Agro-climatic Zone- IV. (34th Group Meeting of AICRP on Vegetable Crops held at IARI, New Delhi during 10-13 May, 2016)
3.	The maximum fruit yield as well as net return was recorded in cropping sequence of okra (77.67 q/ha with C:B ratio 1: 2.52), tomato (227.40 q/ha with C:B ratio 1: 2.58) and cowpea (69.54 q/ha with C:B ratio of 1: 2.30) with the application of vermicompost @ 5 t/ha + *VAM* + *Pseudomonas* + *Trichoderma* + *Azaotobactor*. Hence, for the above cropping sequence these organic inputs are recommended for the Agro-climatic Zone- IV. (34th Group Meeting of AICRP on Vegetable Crops held at IARI, New Delhi during 10-13 May, 2016)
4.	The maximum green leaves yield of Amaranths (172.63 q/ha) along with benefit cost ratio 2.86 was noticed with the application of vermicompost @ 5 t/ha + PSB + *Azospirillum* @ 5 kg/ha each. Hence, it is recommended for amaranth production under Agro-climatic Zone- IV. (34th Group Meeting of AICRP on Vegetable Crops held at IARI, New Delhi during 10-13 May, 2016).
5.	The organic package for coriander-radish sequence consists of growing coriander cv. *Pant Haritima* and radish cv. *Japanese White* with the application of 100 % recommended dose of nitrogen through vermicompost + IIHR microbial consortium @ 12.5 kg/ha was found suitable for realizing optimum yield and highest B:C ratio. Hence, it is recommended for agro-climatic condition of Zone- IV. (35th Group Meeting of AICRP on Vegetable Crops held at IIHR, Bangalore during 24-27 June, 2017)
6.	Based on three years experimentation it was concluded that higher seed yield of Okra (15.69 q/ha) was obtained with the application of Azospirillum + Recommended dose of NPK treatment at Kalyanpur condition. (35th Group Meeting of AICRP on Vegetable Crops held at IIHR, Bangalore during 24-27 June, 2017)
7.	In Okra cv. *Arka Anamika*, pre-emergence application of pendimethalin @ 6ml/L + one hand weeding at 35 days after sowing was found suitable for maximum fruit yield (81.26 q/ha) with highest C:B ratio (2.48). Hence, it is recommended for agro-climatic condition of Zone IV. (36th Group Meeting of AICRP on Vegetable Crops held at RARI, Jaipur during 18-21 May, 2018)

8.	Seed coating with carbendazim @ 2 g/kg seed + Imidacloprid @ 2ml/kg seed + micro nutrient mixture @ 20 g/kg seed in tomato cv. T-6 recorded the maximum seed germination (92%), and vigour under Kalyanpur condition. CD and CV of pooled data is 1.05 (at 5%) & 5.78. (36th Group Meeting of AICRP on Vegetable Crops held at RARI, Jaipur during 18-21 May, 2018)
9.	Three hand weeding at 20, 40 and 60 days after sowing in vegetable pea cv. Azad Pea-3 recorded highest seed weight, seed yield (15.95 q/ha)and quality attributes with cost benefit ratio of 1:2.48 under Kanpur condition. (36th Group Meeting of AICRP on Vegetable Crops held at RARI, Jaipur during 18-21 May, 2018)
10.	Integrated Nutrient Management package for French bean cv. Azad Rajmah-1 with the application of 75% NPK through In-organic source + 25% N through vermicompost was found suitable for realizing optimum green pod yield (77.08 q/ha) and highest B:C ratio (2.67). Hence, it was recommended for agro-climatic condition of Zone- IV. (37th Group Meeting of AICRP on Vegetable Crops held at TNAU, Coimbatore, Tamil Nadu during 22-25 June, 2019)
11	Prophylactic spray (at the time of canopy closure) with mancozeb @ 0.25 % followed by cymoxanil + mancozeb @ 0.3% at the time of disease appearance and one more spray with mancozeb @ 0.25 % after 8-10 days of second spray is recommended for the management of potato late blight in Kanpur region of Uttar Pradesh. (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre-2018-19.
12	Application of ZN @ 1.5 kg/ha for Kanpur may be recommended (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre-2016-17.
13	Metribuzin @ 0.75 kg/ha either as pre-emergence or as post–emergence at 10% plant emergence was equally effective and comparable to manual hand weeding to control the weeds in potato across the locations. Hence, application of metribuzin @ 0.75 kg/ha either as pre-emergence or as post–emergence at 10% plant emergence was recommended for effective weed control in potato Kanpur (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre.
14	Prophylactic spray with mancozeb @ 0.2%, followed by second spray of (fenamidone + mancoozeb) 0.3% after seven days and a third spry with mancozeb @ 0.2% after 7 days of the second spray is recommended for the control of late blight in West Bengal and Eastern Uttar Pradesh under moderate disease pressure. (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre.
15	Biofumigation by incorporating one month old Indian Mustard crop (Seed rate 5 kg/ha) just before the planting of potato crop is recommended for management of black scurf and common scab in Central and Eastern Uttar Pradesh. (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Center.

Seed production (Breeder):

Year	Indent (Kg)	Qty. to be produced by the centre (Kg)	Actual Production (Kg)	Production other than DAC indent (Kg)
2015-16	6019.50	6019.50	11442.80	11026.00
2016-17	5557.50	5387.50	17073.50	14017.50
2017-18	8647.05	8647.05	16204.30	9595.55
2018-19	5731.100	5731.100	13064.00	7333.00

Extension Activities

S. No.	Activity/Programme	Achievements (No.) (2015 to 2020)
1	Practicing Farmer & Farm Women training organized	162
2	Rural Youth training organized	32
3	Radio Talks broadcast and T.V. shows telecast	102
4	Farmers Fair & Agriculture Exhibition Organized	16
5	Field days organized	178
6	Exposure visit organized	22
7	FLDs/demonstrations were conducted	460
8	Sight Seeing organized	58
9	Group discussion organized	108
10	Farmers-Scientist interface organized	38
11	Participation as an expert or subject specialist in Training, Goshthi, Conference, Field day, Seminar, Kisan Mela, Exposure visit etc. at various level organized by line department and other agencies.	412
12	Farm advisory services at on and off campus	3242
13	Newspaper coverage	238

6.4.2. Faculty Strength:

The faculty strength of the Degree Programme need to be given cadre-wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report. Deviation in the faculty position with respect to the recommendations of VTh Deans' Committee/VCI/BSMA/other regulatory bodies, if yes, mention clearly

Permanent faculty appointed for degree programme

S. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1	Professor	0	NIL	1
2	Associate Professor	2	NIL	1
3	Assistant Professor	13	06	5

- The Faculty assigned the responsibilities for the multiple programmes need to be clearly marked.
- Clearly mention the deviation in the Faculty position with respect to the recommendations of V Deans' Committee/VCI/BSMA/other regulatory bodies.
- In case of Private Universities/ affiliated colleges the list of faculty cadre wise with name, specialization, date of appointment in the college, period of contract, salary account summary for last three years with the reference to Form 16 (income tax) shall be provided.

If the degree programme is also taking the help of research staff, extension staff, contractual faculty, guest faculty, adjuncet faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report- N.A.

The faculty assigned the responsibilities for the multiple programmes need to be clearly marked.

Faculties holding multiple responsibilities

Name of the teacher/Faculties	Types of responsibility	Name of the office
Dr. R.B. Singh	Jan Soochna, teaching, research, extension activities as resource person	Jan Soochna Office
Dr. I.N. Shukla	Teaching, research, extension activities as resource person	Deptt.of vegetable Science Deptt.of vegetable Science
Dr. S.K. Singh	SPO, NAHEP, teaching, research, extension activities as resource person	Deptt.of vegetable Science
Dr. K.P. Singh	Warden, students amenities, teaching, research, extension activities as resource person	Deptt.of vegetable Science
Dr. Rajiv	NAHEP, teaching, research, extension activities as resource person	

6.4.3. Technical and Supporting staff:

The position of the technical and supporting staff of the Degree Programme including farm and field workers need to be mentioned for both sanctioned and in-place.

S. No.	Name of the sanctioned post	No. of the sanctioned post	Name of the incumbent
1	Field Man	1	Dr. V. K. Yadav
2	Assistant Statistician	1	Sri. S. D. Dutta
	Field Assistant	1	--
	Senior Technical Assistant	1	Smt. Shashi Prabha Chauhan
	Driver	1	Sri Rakesh Kumar Sharma
3	Senior Assistant	2	Sri. Santram Yadav

			Sri. R.S. Rawat
4	Junior Assistant		Sri. Ashish Kumar
6	Field Attendant		Sri. Ranveer Singh
7	Lab Attendant	2	Sri. Daya Shankar
			Smt. Chuttan
8	Ordely	4	Sri. Dev Raj Pal
			Smt. Laxmi
			Sri. Lallan
			Smt. Vidyavati
9	Gardener	4	Sri. Mohan Lal Yadav
			Smt. Suhana
			Smt. Ram Pati
			Smt. Ram Shree
11	Electric Mechanic	1	Sri. Santosh Kr. Ashthana
12	Peon	4	Sri. Rajdev
16			Shri Ramesh Chandra
17			Shri Sanjay
18			Shri Shitala Prasad

The technical and supporting staff assigned the responsibilities for the multiple programmes need to be clearly marked.

Name of The technical and supporting staff	Types of responsibility	Name of the office	Work Details
Sri. Sant Ram Yadav	Multiple official responsibilities i.e. store, cash, salary		

Clearly mention the deviation in the staff position with respect to the recommendations of V Deans' Committee/VCI/BSMA/ other regulatory bodies.

**** In case of Private Universities/affiliated colleges list of technical and supporting staff, their name, specialization, date of appointment in the college, period of contract, salary account summary for last three years with the reference to Form 16 (income tax) shall be provided.*

6.4.4. Classrooms and Laboratories:

Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme.

To impart the class room education to M.Sc. Horticulture- Vegetable science students' one smart class room is available in the department

List of equipment's in laboratories

- Thermo hygrograph
- Kjeldhal distillation set
- Spectrophotometer
- Flame photometer
- Digital balance
- Plastic crates
- Generator set
- Auto clean machine
- Hot Plate
- Glass ware dryer
- Mechanical shaker
- Electronic balance
- pH meter
- Leminar Flow
- Air purifier
- Microscope

Details of farm facilities

1. 24 ha. Total Land
2. 15.6 ha cultivated Land
3. 1.36 ha nursery & Garden
4. 1.0 ha Polyhouse
5. 01 Tractor
6. 02 Tube bell (15HP)
7. One Harrow
8. Two Cultivator
9. One Rotavetor
10. Threshing Floor- 14 m radius

Details of workshop facilities

i. NA

Details of instructional facilities

1. Poly house- 04 units (440 sq. meter each)
2. Net house- 01 unit (20 X 13.5 meter)
3. Go down- 01 (13 X 8.5 meter)
4. Pre-cool chamber-01 unit (200 sq. meter)
5. Onion garlic storage- 01 unit (10.5 X 4.5 meter)
6. Laboratory and classroom - 01 each (6.50 X 8.30 meter)

6.4.5. Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on-practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

In addition to the conductance of practical's classes as per the course curriculum,proper attention id being provided for skill as well enterpreneurship development. Hands on training are provided to all the enrolled students for the protective cultivation of Vegetables in poly houses, nursery raising and its management and the storage of Onion and Garlic,seed production techniques for almost all the vegetable crops including potato.




6.4.6. Supervision of students in PG programmes:

Number of students being supervised by Faculty in case of Masters/PhD Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Fifteen highly qualified teachers are their in the department of vegetable science to guid the PG students for their thesis research works and the students are alloted on turn basis. No of PG students being supervised by the qualified faculty of vegetable science during the last five years is given below in tabular form-

Students guided by the faculty

Year	Name of the students guided	Title of the thesis	Name of Faculty/Scientist
2015	Sri Rahul Maurya	Studies on cercospora leaf spot ofBrinjal *(Solanum melongena L.)*caused by *Cercospora melongena*	Dr. M.R. Dabbas
2016	Km. Supriya Yadav	Studies on cercospora leaf spot of chilli (*capsicum annuum* L.) Caused by *Cercospora capsici*	Dr. M.R. Dabbas
	Mr. Vikram Singh	Studies on effect of integrated weed management on yield and seed quality of vegetable pea (*Pisum sataivum* spp. hortense L.)	Dr. D.P. Singh
	Deepak Kumar	Effect of leaf cutting on seed yield of coriander	Dr. Sanjive Kr. Singh
2017	Jagendra Kumar	Effect of nitrogen and phosphorus level on growth and yield of okra	Dr. Sanjive Kr. Singh
	Sri. Gopesh Kumar	Studies on Anthracnose of Bottle gourd (laginaria siceraria (Molina) standl) caused by colletotrichum or biculare (Pass)" Ell. & Halst.	Dr. M.R. Dabbas
	Mr. Sheshnath Gupta	Effect of Integrated Nutrient Management on Growth and Yield of Table Pea (*Pisum sativum*) cv. AP-3	Dr. D.P. Singh
	Mr. Abhishek	Screening of germ plasm in bottle gourd	Dr. I.N. Shukla
2018	Ravish Kumar	Effect of biofertilizer on growth yield and quality of chilli	Dr. Sanjive Kr. Singh
	Sri. Gajendra Pratap	IDM of phomopsis blight of brinjal caused by Phomopsis vexans".	Dr. M.R. Dabbas
	Mr. Lavish Yadav	Effect of organic manures on growth, yield and economics of radish (*Raphanus sativus* L.) cv. Japanese White	Dr. Rajiv
	Mr. Abhishek Tiwari	Effect of line and boron on yield and quality of tomato	Dr. I.N. Shukla
	Mr. Arun Kr. Verma	Correlation studies of yield and its contributing traits and screening for powdery mildew resistant	Dr. P.K. Tiwari
	Gargi Gautami Padhiary	Effect of biofertilizers on growth and yield of brinjal (*Solunara melongena* L.) cv. Azad B-3	Dr.A.K. Dubey
2019	Mr. Drugesh Kumar	Impact of micronutrients on growth and yield of tomato cv. Azad T-6	Dr. Sanjive Kr. Singh
	Mr. Anoop Kr. Rawat	Genetic diversity and germplasm conservation in bottle gourd [Lagenaria siceraria {Mol.} Standl] using morphologivcal characters	Dr. P.K. Tiwari
	Mr. Yogendra Kr. Yadav	Genetic analysis for yield and its contributing characters on sponge gourd	Dr. I.N. Shukla
	Mr. Pratyaksh Pandey	Influence of different plant growth regulators on growth yield and quality	Dr. I.N. Shukla

		parameter of cucumber	
	Mr. Ram Jeevan	Foliar application of micro-nutrients (Zinc, Boron, Copper, Iron) in tomato.	Dr. D.P. Singh
	Ms. Shreya Awasthi	Genetic variability analysis in okra.	Dr. D.P. Singh
	Mr. Rajiv Lal Soni	Effect of plant growth regulators on growth yield and quality of tomato	Sri. Niranjan Singh
	Mr. Vikash Singh	Influence of plant growth regulators on growth yield and quality of tomato	Sri. Niranjan Singh
	Mr. Virendra Kumar	Effect of INM on productivity and economics of French bean (*Phaseolus vulgaris* L.)	Dr. Rajiv
	Mr. Shubham	Studies on the seasonal incidence of Brinjal shoot and fruit borer (Leucinodes orbonalis) Gurnee and its effective management through sefar insecticides	Dr. R.B. Singh
	Ashutosh Upadhyay	Evaluation of onion (*Allium cepa* L.) accessions for growth yield and quality parameters.	Dr.A.K. Dubey
2020	Mr. Shashwat Sahay	Influence of plant growth regulators on growth yield and quality of bottle gourd	Dr. I.N. Shukla
	Nagendra Kumar	Effect of biofertilizer on growth yield and quality of chilli	Dr. Sanjive Kr. Singh
	Mr. Budhesh Pratap Singh	Genetic divergence and selection parameters in table pea	Dr. K.P. Singh
	Mr. Akash Kumar	To study about genetic attributes and yield of garden pea (P. sativum)	Dr. P.K. Tiwari
	Mr. Jitendra Kumar	Genetic divergence and association of character for fruit yield in spring summer tomato	Sri. Niranjan Singh
	Mr. Pranjal Singh	Response of bitter gourd (*Momordica charantia* L.) to foliar feeding of micronutrients	Dr. Rajiv
	Mr. Mokil Ahmad	Effect of foliar application of Zinc and Boron on growth and yield of tomato (*Solanum lycopersicum* L.) cv. NS-4266 under insect proof net house.	Dr. D.P. Singh

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.):

Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feedback?

We use to take feedback from our most important stakeholders *viz.* students and farmers at the end of each semester, we asked PG students to write their response about the courses taught in the given format. We are also in practice to have feedback from our end users i.e.

the farmer regarding the performance of improved technologies of vegetable production to make further refinement.

Academic progress/Excellency:

Degree programme	Name of the student	Id. No.	Name of the award/medal received
Ph.D.	Mahendra Kumar Yadav	HR-0288/18	Best paper presentation award by SWEFT, New Delhi

Students qualified in SRF/NET/ARS Examination:

Name of the student	Id. No.	Degree	Name of qualified examination	Year
Satyendra Kumar	HR-0236/17	M.Sc.	NET	2016

Students Placement-

S. No.	Name of the students	Id. No-	Degree	Types of job (govt./private)	No. of students in higher study
1.	Abhishek Tiwari	HR-0154/16	M.Sc.	Lecturer Rama University, Kanpur	-
2.	Santosh Kumar	HR-0157/16	M.Sc.	PAS, U.P. Govt.	-
3.	Shreya Awasthi	HR-0201/17	M.Sc.	Ag. Officer PNB	-
4.	Durgesh Kumar	HR-0204/17	M.Sc.	T.A. Deptt. of Ag. U.P.	-
5.	Virendra Kumar	HR-0207/17	M.Sc.	T.A. Deptt. of Ag. U.P.	-
6.	Rishabh Sahu	HR-0208/17	M.Sc.	Ag. Training officer, KRIBHKO	-
7.	Anoop Kumar Rawat	HR-0206/17	M.Sc.	Ag. Officer Bank of India	-
8.	Ram Jivan	HR-0209/17	M.Sc.	Farm in charge, BNR Seed Co.	-
9.	Lalit Yadav	HR-0269/18	M.Sc.	T.A. Deptt. of Ag. U.P.	-
10.	Mokil Ahmad	HR-0270/18	M.Sc.	T.A. Deptt. of Ag. U.P.	-
11.	Nagendra Kumar	HR-0273/18	M.Sc.	T.A. Deptt. of Ag. U.P.	-

6.4.8. Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Student intake and attrition percentage for last five years

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	Y1	Y2	Y3	Y4	Y5 (Current Year)	Y1	Y2	Y3	Y4	Y5 (Current Year)
	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
M. Sc.	NIL	11	10	11	10	NIL	36.36	8.33	18.18	10.00

6.4.9. ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Information and communication technology tools like video conferencing, whatapp call, skype, zoom, webex and other applications are being used in imparting classroom teaching for the students as enumerated below in tabular form.

Name of the scientist	Methods of ICT used	Teaching/ Practical	Degree Programme	Any short fall for the same, if yes mention clearly
Dr. D.P. Singh	Whatsapp group, webinar, online seminar, online exam, online training	Teaching	PG and Ph.D.	
Dr. R.B. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. M.R. Dabbas	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. Sanjiv Kr. Singh	Whatsapp group, online thesis evaluation, online quiz, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. I.N. Shukla	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. K.P. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. P.K. Tiwari	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. R.K. Pal	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Sri Niranjan Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. Rajiv	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12. Certificate (Applicable when SSR is submitted for Programme)

I, **Dharm Raj Singh** the Dean, College of Horticulture, Kanpur hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

Date: 10 Jan, 2021
Place: Kanpur

(Dharm Raj Singh)
Dean,
College of Horticulture, Kanpur**.**

Self Study Report for

Ph.D. Programme in Fruit Science

College of Horticulture

Chandra Shekhar Azad University of Agriculture & Technology, Kanpur - 208002

6.4. Self Study Report for Ph.D. (Hort.) Fruit Science

6.4.1. Brief History of the Degree Programme:

Clearly mention in which year the degree program was initiated along with its objective and accomplishments.

The announcement for the establishment of College of Horticulture was made by The Chief Minister of Uttar Pradesh on dated- 02-01-2006 at the time of his visit to C. S. Azad University of Agriculture & Technology, Kanpur. The main building of College of Horticulture was inaugurated by Honorable Governor of U.P. Sri B.L. Joshi ji on dated 26.04.2011 in the presence of then Vice Chancellor Dr. G.C. Tewari. College of Horticulture came into existence by the permission of Honorable Chancellor/ Governor of UP vide his letter no. E-7773/G.S. dated- 22.09.2010 during the University Acts Chapter-V, 28 (i) and Chapter-VI, 17(i) (2) & (3), Section 28(b) and subsequently by the notification of University Registrar no. CSUR/2314/2010 dated- 26.10.2010. In the academic year 2007-08; 12 students; in year 2011-12; 35 students were registered in U.G. Programme, with two major departments *viz.*, Department of Fruit Science and Department of Vegetable Science.

The major activity of the department is teaching of courses related to fruit and vegetable production, floriculture and post-harvest management, protected cultivation of vegetable to the B.Sc.(Hons.) Horticulture students, B.Sc. (Hons.) Agriculture, M.Sc. Horticulture and Ph.D. Horticulture and conduct research to improve production, productivity and quality of different vegetable and fruit crops. The Board of Management has approved B.Sc. (Hons.) Horticulture in its 149th meeting held on dated- 28.07.2011.

Finally the proper inclusion of all UG and PG Programmes was amended by Honb'le Chancellor of the University vide letter No. E-5103/G.S. dated 18.06.2014 in the statutes section 28(F) for B.Sc. (Hons.) Horticulture and post graduate programme as M.Sc. (Horticulture) Fruit Science and Vegetable Science the same was notified through Registrar office letter No- CSAU/R-546/2012 dated- 20-06-2014. From the academic year 2015-16 the UG Programme was initiated with the inclusion of 31 students.

Degree Programme	Years in which degree started
Ph.D. (Hort.) Fruit Science	**2015-16**

6.4.2. Faculty Strength:

The faculty strength of the Degree Programme need to be given cadre-wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

Department of Fruit Science

S.No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	02	00	01
2.	Associate Professor	Nil	00	01
3.	Assistant Professor	03	01	05
4.	Teaching Associate for the academic year 2020-21	01	-	-

6.4.3. Technical and Supporting staff:

S.No.	Name of Post	Sanctioned Post	Name of Employee	Vacant position
1.	Garden Overseer	01	-	01
2.	Nursery Supervisor	01	-	01
3.	Stenographer	01	-	01
4.	Senior Assistant	02	1. Sri Gaya Prasad 2. Sri Brij Bhushan Singh	-
5.	Junior Assistant	01	Sri Sanjay Kumar Tiwari	-
6.	Ordaly	01	-	01
7.	Lab Attendant	02	1. Sri Ram Sewak 2. Sri Puttilal	-
8.	Attendant	01	Sri Shankar Singh	-
9.	Class Attendant	01	Sri Sanjeev Kumar	-
10.	Head Chaudhary	01	Sri Dhaniram Yadav	-
11.	Cooli	02	1. Sri Bhimbahadur 2. Sri Ramsewak	-
12.	Mali	19	1. Sri Ramjeet 2. Sri Mohan 3. Sri Ram Kishor 4. Sri Rajju 5. Smt. Khalikunnisha 6. Smt. Ramjanki 7. Sri Ramnarayan 8. Sri Balbir 9. Sri Tulasiram 10. Sri Pawan Kumar 11. Sri Chhuttan 12. Sri Vijai Kumar 13. Sri Rajkumar 14. Sri Munnalal 15. Sri Hariram 16. Sri Bhagatram 17. Sri Shivram 18. Sri Shrinath 19. Sri Ramnaresh	-

The position of the technical and supporting staff of the Degree Programme including farm and field workers need to be mentioned for both sanctioned and in- place.

**The technical and supporting staff assigned the responsibilities for the multiple programmes need to be clearly marked.*

***Clearly mention the deviation in the staff position with respect to the recommendations of V Deans' Committee/VCI/BSMA/ other regulatory bodies.*

**** In case of Private Universities/affiliated colleges list of technical and supporting staff, their name, specialization, date of appointment in the college, period of contract, salary account summary for last three years with the reference to Form 16 (income tax) shall be provided.*

6.4.4. Classrooms and Laboratories:

Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme.

For the teaching of students, there are two classroom and one smart class room, two committee room, two laboratories, nursery garden, four poly houses and other facilities are available.

Sl.No.	Descriptions	Number	Size (mm)
1.	Total Area utilized under the building	-	3905.5 sqm
2.	Ground floor	-	55130x42230 mm
3.	Committee Room	1	12000x6000 mm
4.	Dean Chamber	1	4500x6000 mm
5.	HOD Chamber	1	4500x6000 mm
6.	Office Room	2	4500x3600 mm
7.	Professor Room	2	4500x4500 mm
8.	Associate Professor Room	6	3600x4500 mm
9.	Associate Professor Room	2	3600x4500 mm
10.	Assistant Professor Room	2	3600x3600 mm
11.	Assistant Professor Room	2	3600x4500 mm
12.	Assistant Professor Room	8	3600x3600 mm
13.	Class Room	2	6000x6000 mm
14.	Smart Class Room	1	12000x6000 mm
15.	Committee Room	1	12000x6000 mm
16.	UG Lab	1	7200x15000 mm
17.	Processing Lab	1	7200x15000 mm
18.	Toilets	4	3000x3600 mm
19.	Varanda	1	7400x1270 mm
20.	Main Porch	1	9250x6370 mm
21.	Side Porch	2	

Same set of class rooms, committee room, Office rooms, and chambers for Professor, Associate Professor, and Assistant Professor were built at first floor. Separate toilets are also available on the first floor of the building under the total covered area of 55130X42230 mm.

List of Equipments used in Processing Lab

Sl. No.	Name of Equipments	No. of Equipments
1.	Microwave Oven	One
2.	Automatic slide projector	One
3.	Refrigerator	One
4.	VCR	One
5.	Perfect make 4 KVA Stabilizer	Four
6.	Refracto meter	Two
7.	PH meter EM-36 make TEKNIK	One
8.	G.L.C Set	One
9.	Freeze- Dryer	One
10.	Temperature Controller	One
11.	Deep Freezer	One
12.	Spectro photometer	One
13.	Bottle Washing machine	One
14.	Retaurt	Two
15.	Canning Retaurt	One
16.	Steam jacked Kettle	One
17.	Screw Type juice extractor	One
18.	Sea mar	One
19.	Hydraulic juice pressure	One
20.	Cooling Unit	One
21.	Crown Corcking machine	Two
22.	Cain Sealer	Five
23.	Vacuum Filling Machine	One
24.	Lid Embossing Machine	One
25.	Dabble Seamar	One
26.	Body Reformer Plain	One
27.	Body Reformer stripped	One
28.	Play Jar	One
29.	Exhausting Machine	One
30.	12.5 KVA Generator	One

Accessories in committee room

1.	Committee Room Accessories	One
2.	Cordless Mike	Two

3.	Mike with accessories	Nineteen
4.	Mike Box	One
5.	Speaker	Four

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

The students admitted under graduates of B.Sc (Hon's.) Fruit Science are being trained through practical classes in the departmental garden in the area of more than 19 acres with nursery (2.15 acres). The necessary propagation and gardening techniques with tools were practiced and taught through learned faculty members. In addition to practical's, hands on training are also provided to students for the protective cultivation of fruits in poly houses and Post harvest management to minimize losses and processing. While conducting the Practical's first the students are instructed about the procedures and practices they have to follow, while accomplishing the exercise. Thereafter, the students are guided for hands on practice for doing the practical exercise at their own to build up confidence in the students for independent accomplishment of the exercise.

Hands-on training on nursery, production, protected cultivation, value addition, chemical analysis of soil samples, use of different types of sprayers for plant protection, farm machineries, water pumps, recording of weather variables, selfing, crossing practices in breeding programmes, quality seed production, seed grading etc.

6.4.6. Supervision of students in PG/PhD Programmes:

Number of students being supervised by Faculty in case of Masters/PhD Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Six highly qualified teachers are their in the department of fruit science to guid the Ph.D. students for their thesis research works and the students are alloted on turn basis. No of Ph.D. students being supervised by the qualified faculty of fruit science during the last five years is given below in tabular form-

Details of Ph. D. Students guided by the faculty

Year	Name of the students guided	Title of the thesis	Name of Faculty/ Scientist
2019	Ms. Meenakshi Kumari HR-0166/ 16	Study on Inheritance of YVMV Disease yield and quality Related characters in Okra (*Abelmoschus escalates* L Monch)	Dr.A.K. Dubey

	Sri Sopal Singh Id. No. HR-0163/16	Studies on Foliar Sprays of NAA and Boron on Growth, Flowering, Fruiting, Yield and Quality of Litchi (Litchi chinensis Sonn.) cv. Dehradun.	Dr. J.P. Singh
2020	Sri Bankey Lal HR-0234/ 17	Effect of INM on growth, yield and quality traits of sproting Broceli (*Brassiea obracea* L. var. itatic Plank)	Dr. A.K. Dubey
	Poornima Devi Id. No. HR-0231/17	Effect of plant growth regulators and rooting media on growth and survival of air layering of Kagzi lime (Citrus aurantifolia Swingle)	Dr. J.P. Singh

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc:

Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

The pass out under graduates have experienced about the facilities available in the department of Fruit Science are sufficient with regular well ventilated class rooms, sectional library, garden class rooms with proper propagating tools, processing laboratory and smart class room are the nice and healthy environment for the coming students.

We use to take feedback from our most important stakeholders *viz.* students and farmers at the end of each semester, we asked PG students to write their response about the courses taught in the given format. We are also in practice to have feedback from our end users i.e. the farmer regarding the performance of improved technologies of vegetable production to make further refinement.

6.4.8. Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	**Actual student admitted in last five years**					**Attrition (%)**				
	Y1	**Y2**	**Y3**	**Y4**	**Y5 (Current Year)**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5 (Current Year)**
	2015-16	***2016-17***	***2017-18***	***2018-19***	***2019-20***	***2015-16***	***2016-17***	***2017-18***	***2018-19***	***2019-20***
Ph.D. Fruit Science	-	02	04	04	05		50.00	25.00	-	20.00

6.4.9. ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

ICT tools like video conferencing, whatapp call, skype, zoom, webex and other applications are being used in imparting classroom teaching for the students as enumerated below in tabular form.

Name of the Teachers	Methods of ICT used	Teaching/ Practical	Degree Programme	Any short fall for the same, if yes mention clearly
Dr. A.K. Dubey	Whatsapp group, webinar, online seminar, online exam, online training	Teaching	PG and Ph.D.	
Dr. V.K. Tripathi	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. J.P. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. R.K. S. Gautam	Whatsapp group, online thesis evaluation, online quiz, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. A.K. Dwivedi	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage**.**

6.4.12. Certificate (Applicable when SSR is submitted for Programme)

I**, Dharm Raj Singh** the Dean, College of Horticulture , Kanpur hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

Date: 10 Jan, 2021
Place: Kanpur

(Dharm Raj Singh)
Dean,
College of Horticulture, Kanpur

Self Study Report for

Ph.D. Programme in Vegetable Science

College of Horticulture

Chandra Shekhar Azad University of Agriculture & Technology, Kanpur - 208002

6.4. Self-Study Report for the Ph. D. (Hort.) Vegetable Science

The HAEIs should submit the SSR for each Degree Programme to be included in the report of the respective College. The criteria are that the programme must have completed five years and its first batch has been passed out (in case of four year UG degree programme), however in case of veterinary sciences degree programmes the period may be more than five years. For PG/PhD programmes, the SSR should only be submitted, if the Degree Programme is eligible for accreditation, means first batch of the students have passed out. Further, if the programmes are not being implemented as per the guidelines of ICAR, specifically the degree nomenclature and other recommendations including minimum requirements of V Deans' Committee/VCI/BSMA committee reports, these Degree Programmes are not eligible for ICAR accreditation. Only those Degree Programmes which fulfill the ICAR guidelines are eligible for accreditation and the SSR of these Degree Programmes shall be submitted under the following headings:

6.4.1. Brief History of the Degree Programme:

Clearly mention in which year the degree programme was initiated along with its objective and accomplishments.

The Vegetable Research Center at Kalyanpur, Kanpur was upgraded as department of Vegetable Science, during 2002-03 and started giving degree in M.Sc.(Ag)- Horticulture (Vegetable Science) and Ph.D.(Horticulture) in Vegetable Science and this continued till 2011-12. Afterward from academic session 2016-17, admission of M.Sc. and Ph.D. students were again initiated and now the degree is being awarded as M.Sc. (Horticulture) Vegetable Science and Ph.D. Vegetable Science under the College of Horticulture.

Finally the proper inclusion of all UG and PG Programmes was amended by Honb'le Chancellor of the University vide letter No. E-5103/G.S. dated 18.06.2014 in the statutes section 28(f) for B.Sc. (Hons.) Horticulture and post graduate programme as M.Sc. (Horticulture) Fruit Science and Vegetable Science and Ph.D. in Fruit Science and vegetable Science, respectively. The same was notified through Registrar's office letter No- CSAU/R-546/2012 dated- 20-06-2014. From the academic year 2015-16 Ph.D. Programme was initiated with the inclusion of 03 student in Ph.D Vegetable Science.

Degree Programme	Years in which degree started
Ph.D. (Hort.) Vegatable Science	**2015-16**

This department was recognized as Center of Excellence on vegetable crops in the year 2018 by Department of Agricultural Education and Research U.P.

Name of Department: Vegetable Science

Year of establishment: 2002

Year of Degree programme initiated under College of Horticulture : 2015-2016

Objective:

To impart quality education to PG students on the fundamentals of Vegetable Science and latest technological interventions to enhance the vegetables production and productivity

Achievements of the department:

Twenty Five students have been degree awarded with M.Sc. (Horticulture) and two students with Ph.D. (Horticulture) in vegetable science.

Technology developed:

A total number of 15 technologies encompassing vegetable production and protection have been developed and recommended for adoption as per details given below:

S. No.	Details of Technology recommended
1.	The maximum pod yield (69.68 q/ha) with C:B ratio (1.97) was registered with the application of vermicompost @ 5 t/ha + *VAM* + *Pseudomonas* + *Tricoderma* + *Azotobactor* in organic farming trial on cowpea. Hence, this treatment is recommended for organic cultivation of cowpea under Kalyanpur condition. (33rd Group Meeting of AICRP on Vegetable Crops held at IIVR, Varanasi during 21-24 May, 2015)
2.	Application of vermicompost @ 2.5 t/ha + half recommended NPK through chemical fertilizers recorded significantly higher green pod yield (83.56 q/ha) of garden pea with B:C ratio of 3.07. Hence, it is recommended for cultivation under Agro-climatic Zone- IV. (34th Group Meeting of AICRP on Vegetable Crops held at IARI, New Delhi during 10-13 May, 2016)
3.	The maximum fruit yield as well as net return was recorded in cropping sequence of okra (77.67 q/ha with C:B ratio 1: 2.52), tomato (227.40 q/ha with C:B ratio 1: 2.58) and cowpea (69.54 q/ha with C:B ratio of 1: 2.30) with the application of vermicompost @ 5 t/ha + *VAM* + *Pseudomonas* + *Trichoderma* + *Azaotobactor*. Hence, for the above cropping sequence these organic inputs are recommended for the Agro-climatic Zone- IV. (34th Group Meeting of AICRP on Vegetable Crops held at IARI, New Delhi during 10-13 May, 2016)
4.	The maximum green leaves yield of Amaranths (172.63 q/ha) along with benefit cost ratio 2.86 was noticed with the application of vermicompost @ 5 t/ha + PSB + *Azospirillum* @ 5 kg/ha each. Hence, it is recommended for amaranth production under Agro-climatic Zone- IV. (34th Group Meeting of AICRP on Vegetable Crops held at IARI, New Delhi during 10-13 May, 2016).
5.	Application of ZN @ 1.5 kg/ha for Kanpur may be recommended (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre-2016-17.
6.	The organic package for coriander-radish sequence consists of growing coriander cv. *Pant Haritima* and radish cv. *Japanese White* with the application of 100 % recommended dose of nitrogen through vermicompost + IIHR microbial consortium @ 12.5 kg/ha was found suitable for realizing optimum yield and highest B:C ratio. Hence, it is recommended for agro-climatic condition of Zone-IV. (35th Group Meeting of AICRP on Vegetable Crops held at IIHR, Bangalore during 24-27 June, 2017)
7.	Based on three years experimentation it was concluded that higher seed yield of Okra (15.69 q/ha) was obtained with the application of Azospirillum + Recommended dose of NPK treatment at Kalyanpur condition. (35th Group

	Meeting of AICRP on Vegetable Crops held at IIHR, Bangalore during 24-27 June, 2017)
8.	In Okra cv. *Arka Anamika*, pre-emergence application of pendimethalin @ 6ml/L + one hand weeding at 35 days after sowing was found suitable for maximum fruit yield (81.26 q/ha) with highest C:B ratio (2.48). Hence, it is recommended for agro-climatic condition of Zone IV. (36th Group Meeting of AICRP on Vegetable Crops held at RARI, Jaipur during 18-21 May, 2018)
9.	Seed coating with carbendazim @ 2 g/kg seed + Imidacloprid @ 2ml/kg seed + micro nutrient mixture @ 20 g/kg seed in tomato cv. T-6 recorded the maximum seed germination (92%), and vigour under Kalyanpur condition. CD and CV of pooled data is 1.05 (at 5%) & 5.78. (36th Group Meeting of AICRP on Vegetable Crops held at RARI, Jaipur during 18-21 May, 2018)
10.	Three hand weeding at 20, 40 and 60 days after sowing in vegetable pea cv. Azad Pea-3 recorded highest seed weight, seed yield (15.95 q/ha)and quality attributes with cost benefit ratio of 1:2.48 under Kanpur condition. (36th Group Meeting of AICRP on Vegetable Crops held at RARI, Jaipur during 18-21 May, 2018)
11	Integrated Nutrient Management package for French bean cv. Azad Rajmah-1 with the application of 75% NPK through In-organic source + 25% N through vermicompost was found suitable for realizing optimum green pod yield (77.08 q/ha) and highest B:C ratio (2.67). Hence, it was recommended for agro-climatic condition of Zone- IV. (37th Group Meeting of AICRP on Vegetable Crops held at TNAU, Coimbatore, Tamil Nadu during 22-25 June, 2019)
12	Prophylactic spray (at the time of canopy closure) with mancozeb @ 0.25 % followed by cymoxanil + mancozeb @ 0.3% at the time of disease appearance and one more spray with mancozeb @ 0.25 % after 8-10 days of second spray is recommended for the management of potato late blight in Kanpur region of Uttar Pradesh. (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre-2018-19.
13	Metribuzin @ 0.75 kg/ha either as pre-emergence or as post–emergence at 10% plant emergence was equally effective and comparable to manual hand weeding to control the weeds in potato across the locations. Hence, application of metribuzin @ 0.75 kg/ha either as pre-emergence or as post–emergence at 10% plant emergence was recommended for effective weed control in potato Kanpur (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre.
14	Prophylactic spray with mancozeb @ 0.2%, followed by second spray of (fenamidone + mancoozeb) 0.3% after seven days and a third spry with mancozeb @ 0.2% after 7 days of the second spray is recommended for the control of late blight in West Bengal and Eastern Uttar Pradesh under moderate disease pressure. (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Centre.
15	Biofumigation by incorporating one month old Indian Mustard crop (Seed rate 5 kg/ha) just before the planting of potato crop is recommended for management of black scurf and common scab in Central and Eastern Uttar Pradesh. (Department of Agriculture/Horticulture, Govt. of Uttar Pradesh and AICRP (Potato) Kanpur Center.

Seed production (Breeder):

Year	Indent (Kg)	Qty. to be produced by the centre (Kg)	Actual Production (Kg)	Production other than DAC indent (Kg)
2015-16	6019.50	6019.50	11442.80	11026.00
2016-17	5557.50	5387.50	17073.50	14017.50
2017-18	8647.05	8647.05	16204.30	9595.55
2018-19	5731.100	5731.100	13064.00	7333.00

On going research projects

	Title of the project	Year	Funded by	Achievement
Departmental project	1. All India Coordinated Research Project (Vegetable crops) 2. All India Coordinated Research Project on Potato 3. All India Network Research Project on onion & garlic	1971-72 2008-09 2008-09	ICAR ICAR ICAR	Two improved variety Ten recommendations made Five recommendations made
Externally funded ad-hoc projects	Establishment of Potato Research Centre at Kalyanpur	2015-17	RKVY, Department of Agriculture, Govt. of U.P.	Infrastructures have been developed.
	Bio-efficacy on evaluation of poly-4 (polyhalite) in Onion for enhanced yield and potassium use efficiency	2018-19	Sirius Minerals Plc, North Yorkshire, U.K.	Modules for potassium nutrient application in onion have been developed.
	Participatory Vegetable Seed Production to Enhance Vegetable Production in U.P.	2015-2018	RKVY, Department of Agriculture, Govt. of U.P.	5000 quintal of foundation quality seed of different vegetables was produced.
	Organic farming technology dissemination and diffusion on vegetable growers fields	2017-2020	RKVY, Department of Agriculture, Govt. of U.P.	300 vermi production units were established.
	Establishment and popularization of improved varieties /hybrids of vegetable and their agro techniques to enhance vegetable production in U.P.	2017-2018	RKVY, Department of Agriculture, Govt. of U.P.	Farmer's promotional programmes were organized for the purpose.
	Strengthening of vegetable research station, Kalyanpur, Kanpur	2017-2019	RKVY, Department of Agriculture, Govt. of U.P.	Infrastructures have been established.
	Centre of Advanced Agricultural Science & Technology on Nutritional	2017-2020	RKVY, Department of	Renovation work completed and

	Crops		Agriculture, Govt. of U.P.	research & HRD programmes are going on.
	Establishment of Centre of Excellence for Vegetables	2017-2020	RKVY, Department of Agriculture, Govt. of U.P.	Seedling raising and R&D programme is going on.

Extension activities

1. Display of vegetable varieties every year during University Kisan Mela, flower show at Raj Bhawan, Lucknow and IIT Kanpur.
2. FLD on vegetable and seed spices conducted every year at different villages.
3. Farmers training organized in different villages under different running schemes of this section.
4. District level seminar organized on 15.12.2018 under spices scheme.
5. Six farmer's advisory released in newspaper

S. No.	Activity/Programme	Achievements (No.) (2015 to 2020)
1	Practicing Farmer & Farm Women training organized	162
2	Rural Youth training organized	32
3	Radio Talks broadcast and T.V. shows telecast	102
4	Farmers Fair & Agriculture Exhibition Organized	16
5	Field days organized	178
6	Exposure visit organized	22
7	FLDs/demonstrations were conducted	460
8	Sight Seeing organized	58
9	Group discussion organized	108
10	Farmers-Scientist interface organized	38
11	Participation as an expert or subject specialist in Training, Goshthi, Conference, Field day, Seminar, Kisan Mela, Exposure visit etc. at various level organized by line department and other agencies.	412
12	Farm advisory services at on and off campus	3242
13	Newspaper coverage	239

6.4.2. Faculty Strength:

The faculty strength of the Degree Programme need to be given cadre-wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report. Deviation in the faculty position with respect to the recommendations of VTh Deans' Committee/VCI/BSMA/other regulatory bodies, if yes, mention clearly

Permanent faculty appointed for degree programme

S. No.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1	Professor	2	NIL	1
2	Associate Professor	2	NIL	1
3	Assistant Professor	13	06	5

- The Faculty assigned the responsibilities for the multiple programmes need to be clearly marked.
- Clearly mention the deviation in the Faculty position with respect to the recommendations of V Deans' Committee/VCI/BSMA/other regulatory bodies.
- In case of Private Universities/ affiliated colleges the list of faculty cadre wise with name, specialization, date of appointment in the college, period of contract, salary account summary for last three years with the reference to Form 16 (income tax) shall be provided.

If the degree programme is also taking the help of research staff, extension staff, contractual faculty, guest faculty, adjuncet faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report- N.A.

The faculty assigned the responsibilities for the multiple programmes need to be clearly marked.

Faculties holding multiple responsibilities

Name of the teacher/Faculties	Types of responsibility	Name of the office
Dr. R.B. Singh	Jan Soochna, teaching, research, extension activities as resource person	Jan Soochna Office
Dr. I.N. Shukla	Teaching, research, extension activities as resource person	Deptt.of vegetable Science
Dr. S.K. Singh	SPO, NAHEP, teaching, research, extension activities as resource person	Deptt.of vegetable Science
Dr. K.P. Singh	Warden, students amenities, teaching, research, extension activities as resource person	Deptt.of vegetable Science
Dr. Rajiv	NAHEP, teaching, research, extension activities as resource person	Deptt.of vegetable Science

6.4.3. Technical and Supporting staff:

The position of the technical and supporting staff of the Degree Programme including farm and field workers need to be mentioned for both sanctioned and in-place.

S. No.	Name of the sanctioned post	No. of the sanctioned post	Name of the incumbent
1	Field Man	1	Dr. V. K. Yadav
2	Assistant Statistician	1	Sri. S. D. Dutta
	Field Assistant	1	--
	Senior Technical Assistant	1	Smt. Shashi Prabha Chauhan
	Driver	1	Sri Rakesh Kumar Sharma
3	Senior Assistant	2	Sri. Santram Yadav
			Sri. R.S. Rawat
4	Junior Assistant		Sri. Ashish Kumar
6	Field Attendant		Sri. Ranveer Singh
7	Lab Attendant	2	Sri. Daya Shankar
			Smt. Chuttan
8	Ordely	4	Sri. Dev Raj Pal
			Smt. Laxmi
			Sri. Lallan
			Smt. Vidyavati
9	Gardener	4	Sri. Mohan Lal Yadav
			Smt. Suhana
			Smt. Ram Pati
			Smt. Ram Shree
11	Electric Mechanic	1	Sri. Santosh Kr. Ashthana
12	Peon	4	Sri. Rajdev
16			Shri Ramesh Chandra
17			Shri Sanjay
18			Shri Shitala Prasad

The technical and supporting staff assigned the responsibilities for the multiple programmes need to be clearly marked.

Name of The technical and supporting staff	Types of responsibility	Name of the office	Work Details
Sri. Sant Ram Yadav	Multiple official responsibilities i.e. store, cash, salary		

Clearly mention the deviation in the staff position with respect to the recommendations of V Deans' Committee/VCI/BSMA/ other regulatory bodies.

**** In case of Private Universities/affiliated colleges list of technical and supporting staff, their name, specialization, date of appointment in the college, period of contract, salary account summary for last three years with the reference to Form 16 (income tax) shall be provided.*

6.4.4. Classrooms and Laboratories:

Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme.

To impart the class room education to M.Sc. Horticulture- Vegetable science students' one smart class room is available in the department

List of equipment's in laboratories

Sl. No.	Equipment
1.	Thermo hygrograph
2.	Kjeldhal distillation set
3.	Spectrophotometer
4.	Flame photometer
5.	Digital balance
6.	Plastic crates
7.	Generator set
8.	Auto clean machine
9.	Hot Plate
10.	Glass ware dryer
11.	Mechanical shaker
12.	Electronic balance
13.	pH meter
14.	Leminar Flow
15.	Air purifier
16.	Microscope

Details of farm facilities

Sl. No.	Farm facilities
I.	24 ha. Total Land
II.	15.6 ha cultivated Land
III.	1.36 ha nursery & Garden
IV.	1.0 ha Polyhouse
V.	01 Tractor
VI.	02 Tube bell (15HP)
VII.	One Harrow
VIII.	Two Cultivator
IX.	One Rotavetor
X.	Threshing Floor- 14 m radius

Details of workshop facilities

3. NA

Details of instructional facilities

Sl. No.	Instructional facilities
1.	Poly house- 04 units (440 sq. meter each)
2.	Net house- 01 unit (20 X 13.5 meter)
3.	Go down- 01 (13 X 8.5 meter)
4.	Pre-cool chamber-01 unit (200 sq. meter)
5.	Onion garlic storage- 01 unit (10.5 X 4.5 meter)
6.	Laboratory and classroom - 01 each (6.50 X 8.30 meter)

Name of Degree	Batches (Number of students)	Class room		No. of Laboratories	Farm facilities	Work shop facilities	Instructional facilities (Glasshouse, wire house etc.)
Ph.D. (Hort)-Vegetable	4	1	1	1	Available	Not Available	Available

6.4.5. Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on-practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

In addition to the conductance of practical's classes as per the course curriculum,proper attention is being provided for skill as well enterpreneurship development. Hands on training are provided to all the enrolled students for the protective cultivation of Vegetables in poly houses, nursery raising and its management and the storage of Onion and Garlic, seed production techniques for almost all the vegetable crops including potato.

6.4.6. Supervision of students in PG/PhD programmes:

Number of students being supervised by Faculty in case of Masters/PhD Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Fifteen highly qualified teachers are their in the department of vegetable science to guid the Ph.D students for their thesis research works and the students are alloted on turn basis. A teacher having minimum number of 10 research papers published in the journal of repute is eligible for guiding the Ph.D. students. Ph.D students being supervised by the qualified faculty of vegetable science during the last five years is given below in tabular form-

Details of Ph.D. students being guided by qualified faculty

Year of degree award	Name of the students guided	Title of the thesis	Name of Faculty/ Scientist
2018	Mr. Jagendra Pratap Singh	Response of INM on yield and quality of guava	Dr. I.N. Shukla
	Mahendra Chaudhary	Studies on effect of foliar application of PGR & mineral nutrients on fruit growth, drop yield and quality of Aonla (*Emblica officinalis Gaertn*.) cv. NA-7	Dr. D.P. Singh
	Sri. Mohan Lal	Integrated disease management septoria leaf spot of tomato cause d by *Septoria lycopersici* (Speg)	Dr. M.R. Dabbas
2019	Mr. Kuldeep Kumar	Studies on genetic component for metric traits in brinjal (*Solanum melongena* L.)	Dr. D.P. Singh
	Sri. Manish Kumar	Studies on integrated disease management of early blight of tomato (*Solanum lycopersicum* L.) caused by *Alternaria solan* (Ellis and Martin)	Dr. M.R. Dabbas
2020	Mr. Vipul Pratap Singh	Effect of micro-nutrients and PGR on growth, yield and quality of tomato.	Dr. D.P. Singh
	Sri. Vikram Singh	Development of suitable IDM approaches against Anthracnose blight (*colletotrichum lindemuthianum* of French bean (*Phaseolus vulgaris* L.))	Dr. M.R. Dabbas
	Mr. Satyendra Kumar	Linex tester analysis for yield and quality traits in cucumber	Dr. I.N. Shukla
Degree Continued	Mr. Mahendra Kr. Yadav	Hetrosis combining ability, gene action for yield & quality traits in pumpkin.	Dr. D.P. Singh
	Ravish Kumar	Effect of biofertilizer and organic manures on growth yield and quality of tomato	Dr. Sanjive Kr. Singh
	Mr. Arun Kr. Verma	Genetic analysis for yield and quality traits in bottle gourd	Dr. K.P. Singh
	Mr. Pratyaksha	-	Dr. K.P. Singh

	Pandey		
	Mr. Durgesh Kumar		Dr. I.N. Shukla

6.4.7. Feedback of stakeholders (Students, parents, industries, employers, farmers etc.):

Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feedback?

We use to take feedback from our most important stakeholders *viz.* students and farmers at the end of each semester, we asked PG students to write their response about the courses taught in the given format. We are also in practice to have feedback from our end users i.e. the farmer regarding the performance of improved technologies of vegetable production to make further refinement.

Academic progress/Excellency:

Degree programme	Name of the student	Id. No.	Name of the award/medal received
Ph.D.	Mahendra Kumar Yadav	HR-0288/18	Best paper presentation award by SWEFT, New Delhi

Students qualified in SRF/NET/ARS Examination:

Name of the student	Id. No.	Degree	Name of qualified examination	Year
Satyendra Kumar	HR-0236/17	M.Sc.	NET	2016
Banke Lal	HR- 0234/17	Ph.D.	NET	2018
Mahendra Kr. Yadav	HR-0288/18	Ph.D.	NET	2018
Ravish Kumar	HR-0281/18	Ph.D.	NET	2018
Durgesh Kumar	HR0-345/19	Ph.D.	NET	2019
Virendra Kumar	HR0-346/19	Ph.D.	NET	2019
Arun Kr. Verma	HR-0280/18	Ph.D.	NET	2019
Saurabh Dixit	HR-0282/18	Ph.D.	NET	2020

Students Placement-

S.No.	Name of the students	Id. No-	Degree	Types of job (govt./private)	No. of students in higher study
1	Santosh Kumar	HR-0157/16	M.Sc.	PAS, U.P. Govt.	-
2	Abhishek Tiwari	HR-0154/16	M.Sc.	Lecturer Rama Uni., Kanpur	-
3	Ravish Kumar	HR-0152/16	Ph.D.	T.A. Deptt. of Ag. U.P.	-
4	Shreya Awasthi	HR-0201/17	M.Sc.	Ag. Officer PNB	-
5	Durgesh Kumar	HR-0204/17	M.Sc.	T.A. Deptt. of Ag. U.P.	-

6	Virendra Kumar	HR-0207/17	M.Sc.	T.A. Deptt. of Ag. U.P.	-
7	Rishabh Sahu	HR-0208/17	M.Sc.	Ag. Training officer, KRIBHKO	-
8	Anoop Kumar Rawat	HR-0206/17	M.Sc.	Ag. Officer Bank of India	-
9	Ram Jivan	HR-0209/17	M.Sc.	Farm in charge, BNR Seed Co.	-
10	Lalit Yadav	HR-0269/18	M.Sc.	T.A. Deptt. of Ag. U.P.	-
11	Mokil Ahmad	HR-0270/18	M.Sc.	T.A. Deptt. of Ag. U.P.	-
12	Nagendra Kumar	HR-0273/18	M.Sc.	T.A. Deptt. of Ag. U.P.	-

6.4.8. Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	Y1	Y2	Y3	Y4	Y5 (Current Year)	Y1	Y2	Y3	Y4	Y5 (Current Year)
	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
Ph. D.	NIL	4	5	4	4	NIL	50.00	40.00	NIL	NIL

6.4.9. ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Information and communication technology tools like video conferencing, whatapp call, skype, zoom, webex and other applications are being used in imparting classroom teaching for the students as enumerated below in tabular form.

Name of the scientist	Methods of ICT used	Teaching/ Practical	Degree Programme	Any short fall for the same, if yes mention clearly
Dr. D.P. Singh	Whatsapp group, webinar, online seminar, online exam, online training	Teaching	PG and Ph.D.	
Dr. R.B. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. M.R. Dabbas	Whatsapp group, webinar,	Teaching	PG and	

	online exam, online seminar		Ph.D.	
Dr. Sanjiv Kr. Singh	Whatsapp group, online thesis evaluation, online quiz, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. I.N. Shukla	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. K.P. Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. P.K. Tiwari	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. R.K. Pal	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Sri Niranjan Singh	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	
Dr. Rajiv	Whatsapp group, webinar, online exam, online seminar	Teaching	PG and Ph.D.	

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weightage for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12. Certificate (Applicable when SSR is submitted for Programme)

I, **Dharm Raj Singh** the Dean, College of Horticulture, Kanpur hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

Date: 10 Jan, 2021
Place: Kanpur

(Dharm Raj Singh)
Dean,
College of Horticulture, Kanpur**.**

Self Study Report for

The College of Horticulture

College of Horticulture

Chandra Shekhar Azad University of Agriculture & Technology, Kanpur - 208002

6.5. Self Study Report for the Colleges:

College of Horticulture

The Colleges offering degree programmes as per recommendation of Deans Committee/ VCI/BSMA are eligible for ICAR accreditation. The format for SSR of the colleges is Given below:

The announcement for the establishment of College of Horticulture was made by The Chief Minister of Uttar Pradesh on dated- 02-01-2006 at the time of his visit to C. S. Azad University of Agriculture of Technology, Kanpur. The main building of College of Horticulture was inaugurated by Honorable Governor of U.P. Sri B.L. Joshi ji on dated 26.04.2011 in the presence of then Vice Chancellor Dr. G.C. Tewari. College of Horticulture came into existence by the permission of Honorable Chancellor/ Governor of UP vide his letter no. E-7773/G.S. dated- 22.09.2010 under the University Acts Chapter-V, 28 (i) and Chapter-VI, 17(i) (2) & (3), Section 28(b) and subsequently by the notification of University Registrar no. CSUR/2314/2010 dated- 26.10.2010. In the academic year 2007-08; 12 students; in year 2011-12; 35 students have been registered in U.G. Programme, with two major departments *viz.,* Department of Fruit Science and Department of Vegetable Science. Finally Hon'ble Chancellor/Governor, Uttar Pradesh has permitted for UG and PG courses in the year 2014 with two major department *viz.,* ***Department of Fruit Science*** and ***Department of Vegetable Science***.

The major activity of the department is teaching of courses related to fruit and vegetable production, floriculture and post-harvest management to the students of B.Sc.(Honours) Horticulture, B.Sc. (Honours) Agriculture, M.Sc. Horticulture and Ph.D. Horticulture and conduct research to improve production, productivity and quality of different vegetable and fruit crops. The Board of Management has approved B.Sc.(Hons.) Horticulture and Master and Ph.D. Programme in Fruit Science and Vegetable Science respectively in its 149th meeting held on dated- 28.07.2011.

Finally the proper inclusion of all UG and PG Programmes was amended by Honb'le Chancellor of the University vide letter No. E-5103/G.S. dated 18.06.2014 in the statutes section 28(f) for B.Sc.(Hons.) Horticulture and post graduate programme as M.Sc. (Horticulture) Fruit Science, the same was notified through Registrar office letter No-CSAU/R-546/2012 dated- 20-06-2014. From the academic year 2014-15 the UG Programme was initiated with the inclusion of 31 students.

6.5.1. College Administration

6.5.1.1. College Dean's Office Establishment

Whether Dean's post has been sanctioned by the appropriate authority as per ICAR Model Act/UGC guidelines? Date of selection of present Dean, mode of selection, tenure etc. shall be mentioned. Clearly mention the staff and infrastructure/ facilities available in the Dean's Secretariat.

Dean's post has not been sanctioned by the State Government.

Presently, **Dr. Dharm Raj Singh**, Dean, College of Agriculture is the officiating Dean and administrative Head of the College of **Horticulture since 07.07.2020**. He has been nominated for this position till further the order.

College of Horticulture has well-furnished office secretariat with all basic amenities. Staff and infrastructure facilities available in the college of agriculture is being utilized.

6.5.1.2. Monitoring Mechanism for Quality Education (on-line)

Whether the College is having an internal quality assurance system, with appropriate structure and processes, and with enough flexibility to meet the diverse needs of the stakeholders which is required for planning, guiding and monitoring quality assurance and quality enhancement activities of the Colleges. How effectively monitoring of teaching, research and extension across the departments is being conducted, and mention the impact of monitoring on the outcome of the College with reference to students' excelling in academics, research and extracurricular activities.

Yes the internal quality mechanism is prevailing through traditional method of monitoring with the help of concerned Head/In-charges and frequent inspection by higher officials of University and through feedback from the student. However online monitoring is in the process of establishment, but online teaching is encouraged through zoom and google meet platforms as usually being followed by other agricultural universities of Uttar Pradesh. The ongoing mechanism to monitor the academic activities at college level is working well and paying of fruitful results in the form of selection of students in ICAR-JRF placement of students in public and private sector as well as enrolment for higher studies.

Monitoring mechanism has been developed to identify periodically the bottlenecks in implementing the programme and to take the remedial measures to improve the effectiveness of the programme. The college internal quality assessment assurance system includes:

1. Following Course curriculum as per ICAR-V Deans Committee recommendation for undergraduates and ICAR-BSMA recommendations for postgraduates.

2. Frequent visit of Dean and Director Education in classrooms and laboratories to monitor quality of instructions and methods of delivery.

3. Strictly following Academic calendar and is made available to all students and faculty members well before the commencement of the academic session.

4. Timely conduction of mid-term and end-term examination and evaluation.

5. External evaluation system for final theory examinations of UG and PG programmes.

6. External evaluation system in practical examinations of UG programme .

7. Periodic academic progress monitoring is in place by the Dean of the college and the Director Education.

8. The PG research programme is undertaken under the strict supervision of the guide and duly approved advisory committees.

9. The college teaching staff participate as resource person/expert in agricultural extension activities of the Directorate of Extension and U.P. Government. Technology dissemination is being done through extension bulletins, pamphlets, radio and TV talks.

6.5.1.3. CC/Board of Studies:

Whether the CC in the Department level and Board of Studies at the College is in place? The composition of the BoS and date of conduct of meetings for last five years and major recommendations made by the BoS should be given in tabular form.

There exists a combination of bottom up and top-to-bottom approach in the administration of the college with the former being the most prevalent. The issues and progressive ideas generated at the department level are brought to the attention of the Dean. Department Heads meetings are held once a month on an average and more times when any programme is on the anvil. There are three coordinators for each area of significance like Teaching, Research and Extension who are assigned the responsibility of planning the annual programme in consultation with the different department teachers, coordinating and assisting the Dean in relevant aspects under each. Each coordinator works in close collaboration with the Dean.

The Faculty has its Board of Studies called Faculty Board. The Faculty Board is constituted of the Dean as Chairman, Heads of Departments, Professors, Associate Professors and Assistant Professors of the subjects taught in the Faculty, Director of Agriculture Experiment Station and Director of Extension Services. The Board of the Faculty has the powers subject to the jurisdictions of the Academic Council mentioned elsewhere, to have jurisdiction in all matters falling within the scope of its programmes, to determine its curricula, to appoint its own committees and to elect its own Secretary. Number of meeting of Board of faculty organized during the period has been summarized below-

Meetings of the Board of Faculties/ studies organized during the period:

S. N.	Meeting	Date	Members participated	Major recommendations
1.	Board of Faculties	19.07.2016	71	Implementation of the 5th Dean Commettee recomendations
2.	Board of Faculties	15.10.2016	72	5th Dean Commettee recomendations forwarded to Academic Council for adoption

6.5.1.4. Anti Ragging Cell

In pursuance to the Judgment of the Hon'ble Supreme Court of India dated 08.05.2009 in Civil Appeal No. 887/2009, the University Grants Commission has framed "UGC Regulations on curbing the menace of ragging in higher educational institutions, 2009" which have been notified on 4th July, 2009 in the Gazette of India. Does the College follow this regulation and subsequent guidelines issued in the matter in letter and spirit? Give details.

In pursuance to the Judgment of the Hon'ble Supreme Court of India dated 08.05.2009 in Civil Appeal No. 887/2009, University has established a strong anti-ragging cell with Dean Students' Welfare as Chairman and senior faculty as members to curb the menace of ragging related issues of the newly admitted under graduates.

Anti-Ragging Cell	Dr. Ratan Prakash Singh Dean Students' Welfare	Chairman
	Dr. P.K. Upadhyay, Professor	Member
	Dr. P.K. Rathi, Associate Director Ext.	Member
	Dr. Birendra Kumar, Asstt. Professor,	Member
	Dr. Y.K. Singh, Asstt. Professor	Member

Anti-Ragging Squad: Anti-Ragging squad has also been constituted to control the instances of ragging of the newly admitted undergraduate students.

Year	No. of Squad Team members
2015-16	35
2016-17	36
2017-18	31
2018-19	47
2019-20	45

6.5.1.5. Biological waste disposal facility:

Whether wastes (chemical, biological, radioactive, universal, and recyclable) are generated by a variety of research, clinical, service, maintenance, and cleaning operations at the College level? If yes, then mention the disposal mechanism being adopted as per the government guidelines.

The college is not dealing with radioactive material, hence not generating any radioactive waste. The college is also not generating any microbiological waste. Biological and radioactive wastes are not generated in the college campus. Chemical and recyclable wastes are collected by the Estate employees and municipal authorities and accordingly be disposed of by following the prescribed norms.

6.5.1.6. Institutional Ethics Committee for Experiment on animals:

Whether the institute/College is following CPCSEA guidelines and constituted an Institutional Animal Ethics Committee (IAEC), get their animals house facilities inspected and get their project cleared by CPCSEA and IAEC before commencing them? The College should make statement that it is adhering all guidelines in the matter.

As the College of Horticulture does not deal with the animal's related experiments and other activities. Therefore, Institutional Ethics Committee for experiment on animals does not exist in the college.

6.5.1.7. Committee for Prevention of Sexual harassment of Woman at Work Places:

Does the institution is adhering the sexual harassment of women at workplace (Prevention, Prohibition and Redressal Act, 2013) in letter and spirit. Mention the constitution of sexual harassment committees and date of proceedings conducted in last five years in tabular form.

In order to control the sexual harassment of women, committee for prevention of sexual harassment of woman at work place was constituted during January 2016 at the University/College level as given below.

Sexual Harassment Prevention Cell

S.No.	Name & Designation	Post held
1.	Dr. Neelima Kunwar, Associate Professor	Chairman
2.	Dr. Mithlesh Verma, Asstt. Professor	Member
3.	Dr. Asha Yadav, SMS	Member
4.	Dr. Nalini Tiwari, Linseed Breeder	Member
5.	Dr. Seema Sonkar, Asstt. Professor	Member
6.	Dr. Shweta, Asstt. Professor	Member

Details of the meeting held during the last 5 year is given below-

S.No.	Date of meeting held	No. of participants	Remarks
1	22/01/2016	6	Two cases has come under the notice of the committee.
	02/09/2016	7	
	11/09/2019	7	

	25/09/2019	7	
	11/10/2019	7	

6.5.2. Faculty

6.5.2.1. Faculty Strength :

Mention the Faculty position (both in sanctioned and in-position) at the College.

The quality of the faculty is vital to promote academic excellence in teaching, research & extension pursuits.

Department of Fruit Science

SN	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	2	00	01
2.	Associate Professor	0	00	01
3.	Assistant Professor	03	01	05
4.	Teaching Associate for the academic year 2020-21	01	-	-

Department of Vegetable Science

S.N.	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by the ICAR/UGC/VCI/ other regulatory bodies
1.	Professor	0	NIL	01
2.	Associate Professor	2	NIL	01
3.	Assistant Professor	13	06	05

6.5.2.2. Faculty Profile (department wise):

Mention department wise faculty profile in tabular form and mention whether present profile is sufficient to meet the academic requirement of the College.

Department of Fruit Science

The present faculty of Department of Fruit Science/Horticulture is fully competent to conduct theory, practical and research work of the students of U.G., P.G. and Ph.D levels. The detailed profile is given below in tabula form-

S.No.	Name of the Faculty	Designation	Qualification	Experiences in year
1.	Dr. A. K. Dubey	Professor & Head	Ph.D.	32 years

2.	Dr. V. K. Tripathi	Professor	Ph.D.	18 years
3.	Dr. J. P. Singh	Assistant Professor	Ph.D.	21 years
4.	Dr. R. K. S. Gautam	Assistant Professor	Ph.D.	21 years
5.	Dr. A. K. Dwivedi	Assistant Professor	Ph.D.	21 years

Department of Vegetable Science

S.N.	Name	Designation	Highest Qualification	Specialization
1.	Prof. P.K. Singh	Professor	Ph. D.	Vegetable Breeding
2.	Dr. D.P. Singh	Associate Professor	Ph. D.	Breeder Seed Production
3.	Dr. R.B. Singh	Associate Professor	Ph. D.	Onion Breeding
4.	Dr. M.R. Dabbas	Assistant Professor	Ph. D	Vegetable Pathology Virologist
5.	Dr. Sanjiv Kr. Singh	Assistant Professor	Ph. D.	Spice Breeding
6.	Dr. I.N. Shukla	Assistant Professor	Ph. D.	Cucurbits Breeding
7.	Dr. K.P. Singh	Assistant Professor	Ph. D.	Pea Breeding
8.	Dr. P.K. Tiwari	Assistant Professor	Ph. D.	Brinjal Breeding
9.	Dr. R.K. Pal	Assistant Professor	Ph. D.	Vegetable Entomology
10.	Sri Niranjan Singh	Assistant Professor	M. Sc. (Ag.)	Tomato Breeding
11.	Dr. Rajiv	Assistant Professor	Ph. D.	Vegetable Agronomy

6.5.2.3. Credentials of the Faculty

Whether the institution has employed competent faculty members qualified to accomplish the mission and goals of the institution? Give the highest qualification received by each faculty, related work experiences in the field, professional licensure and certifications, honours and awards, continuous documented excellence in teaching, or other demonstrated competencies and achievements that contribute to effective teaching and student learning outcomes.

The faculty available are well competent and qualified to accomplish the mission and goals of institution, however to strengthen the teaching, research and extension, the vacant positions are in the process of recruitment. The credentials of the faculties are given in the tabular form below:

Faculty credential

Faculties members are qualified enough to achieve the Excellency in teaching and research

Department of Fruit Science

S. No.	Name of Faculty Members	Designation	Qualification	Experience
1	Dr. A. K. Dubey	Professor	M.Sc.(Ag.) Horticulture, Ph. D.	32 years of research (crop improvement of vegetable crops), 22 years of teaching of

			Horticulture	UG, PG and Ph.D. students.
2	Dr. V. K. Tripathi	Professor	Ph. D. Horticulture	18 years of teaching of UG, PG and Ph.D. students.
3	Dr. J.P. Singh	Assistant Professor	Ph. D. Horticulture	21 years of teaching of UG, PG and Ph.D. students.
4	Dr. R.K.S. Gautam	Assistant Professor	Ph. D. Horticulture	21 years of teaching of UG, PG and Ph.D. students.
5	Dr. A.K. Dwivedi	Assistant Professor	Ph. D. Horticulture	21 years of teaching of UG, PG and Ph.D. students.

Department of Vegetable Science

S. No.	Name	Designation	Qualification and Specialization	Remarks
1.	Prof. P.K. Singh	Professor	Ph. D.,Vegetable Breeding	27years of working experience. Published more than 75 research papers in the journals of repute, two books and conferred with three prestigious awards and developed for eight varieties of linseed and one sesame variety.
2.	Dr. D.P. Singh	Associate Professor	Ph. D. ,Breeder Seed Production	32years of experience published 79 research papers in the journals of repute, 6 books and conferred with 11 awards.
3.	Dr. R.B. Singh	Associate Professor	Ph. D.,Onion Breeding	20 years of experience, published 23 research papers in the journals of repute, 2 books and conferred with 08 awards.
4.	Dr. M.R. Dabbas	Assistant Professor	Ph. D.,Vegetable Pathology (Virologist)	33years of experience, published 56 research papers in the journals of repute, 1 book and 10 recommendations on plant protection breeders.
5.	Dr. Sanjiv Kr. Singh	Assistant Professor	Ph. D.,Spices Breeding	33years of experience, published 25 research papers in the journals of repute, 4

				books, conferred with 6 awards and 4 varieties (Dhania-1, Chillies-1, Methi-1 and Elephant yam-1)
6.	Dr. I.N. Shukla	Assistant Professor	Ph. D.,Cucurbits Breeding	33years of experience published 15 research papers. As a fallow of the society of the agriculture professional.
7.	Dr. K.P. Singh	Assistant Professor	Ph. D.,Pea Breeding	32years of experience, Developed 3 varieties of brinjal, 1 bottle gourd and 1 spine gourd.
8.	Dr. P.K. Tiwari	Assistant Professor	Ph. D.,Brinjal Breeding	33years of experience published 8 research papers in the journals of repute.
9.	Dr. R.K. Pal	Assistant Professor	Ph.D., Vegetable Entomology	20 years of experience published 37 research papers in the journals of repute and 5 recommendations.
10.	Sri. Niranjan Singh	Assistant Professor	M. Sc. (Ag.), Tomato Breeding	33years of experience published 5 research papers in the journals of repute and 3 varieties of tomato with 2 hybrids.
11.	Dr. Rajiv	Assistant Professor	Ph. D., Vegetable Agronomy	21 years of experience published 23 research papers in the journals of repute, 3 books. and conferred with 8 awards.

Research Papers Publication

Departmennt of Fruit Science

Year	Title	Author	Name of Journal	Page no
2015	Vyavsaik drishtikon se Alo Utpadan taknik	Dr.A.K.Dubey	Khet Khaliyan by Dainik Jagran newspaper, Kanpur	pp. 05 & 12
	Influence of Azotobactor and Vermicompost on growth flowering yield and quality of starwbery cv.Chandler	Tripathi, V.K.; Kumar, S and Gupta, A.K.	Progressive Horticulture	72(2); 201-105
	Influence of integrated nutrient management on yield and physic-chemical of aonla cv.NA-7	Tripathi, V.K.; Bahadur, S.; Dubey, Vishal and Kumar, A	Progressive research-An International journal (Special – VI)	10 : 3493-3496
	Influence of plant geometry	Kumar, Shrawan &	Hort Flora Research	4(4): 356-

	and nutrition on yield altributes and yield of okra	Singh, J.P.;	Spectrum	360
	Effect of plant geometry and nutrition on the phonological traits and chemical composition of pod of okra(*Abelmoschus escluntus L.)cv Pusa Swani*	Singh, J.P. and Kumar Shrawan	International journal of Committee Science & Technology	1(1): 45-52
	Influence of integrated nutrient management on yield and physic-chemical of aonla cv.NA-7	Tripathi, V.K.; Bahadur, S.; Dubey, Vishal and Kumar, A	National Conference on Global Research Initiates for Sustainable Agriculture & Allied Science, RVSKVV, Gwalior (MP)	pp47
	Effect of integrated nutrient management of ruits set, yield and physic-chemicalparameters of winter season guava(Psidium guajava L.) cv. L-49	Kumar, A.;Tripathi, V.K.; Dubey, A.K. & Dubey, Vishal	National Conference on Global Research Initiates for Sustainable Agriculture & Allied Science, RVSKVV, Gwalior (MP)	pp 47-48
2016	Pre-Harvest spray of gibberellic acid , NAA and calcium Nitrate of fruit retention , yield and quality of Kinnow Mandarin	Lal,Deepa;Tripathi, V.K.; Nayyar, M.A.; Kumar, S.; Ahmad, M.; and Siddiqui, M.W.;	Environment and Ecology	34(4C):2288-2292
	Nutritive quality of proceed health food based on cereals and vegetables	Upadhya,Richa; Sonkar S.; Tripathi, V.K. & Jaiswal, A.	Progressive Research-An International Journal	11(2):273-274
	Influence of Azaotobactor, Azospirillum and PSB on vegetable growth, flowering, yield and quality of strawberry cv, Chandler.	Tripathi, V.K.; Kumar, S.;Kumar, K.; Kumar S. & Dubey, V.	Progressive Horticulture	48(1):49-53
	Influence of different level of Azaotobactor, Azospirillum, PSB and black polythene Mulch on growth, yield an quality of strawberry cv. Chandler.	Tripathi, V.K.; Dubey, Vishal; Kumar, A.& Pandey, H	National Conference on Recent advance in Diversified Agricultural System CCR, PG College, Muzafarnagar UP	Pp 33-44
	Influence of different concentration of NAA growth regulators on growth, flowering and yield of Africal marigold.	Kumar, A.;Tripathi, V.K.; Dubey, Vishal & Pandey, H.	National Conference on Recent advance in Diversified Agricultural System CCR, PG College, Muzafarnagar	Pp 34
	Post Harvest management and value addition in Aonla: An overview	Dubey, Vishal; Tripathi, V.K.; Pandey, H. & Kumar A.	National Conference on Recent advance in Diversified Agricultural System CCR, PG College, Muzafarnagar	Pp 35
	Effect of GA3, NAA and 2,4-D on growth and yield of tomato(*Solanum esculentum* Mill.)	Tomar, Saurab; Dubey, A.K.;Tripathi, V.K.; Kumar, A.	CSAUAT, Kanpur	pp-139
	Influence of plant bio-	Dubey,	CSAUAT, Kanpur	pp-141

	regulators and micro-nutrient if vegetative growth, yield and quality of strawberry cv.Chandler.	Vishal;Meena, M.L.; Tripathi, V.K. & Kumar, A.		
	Influence of pre-harvest application of plant bio regulators and micronutrient on fruit set, fruit drop, yield and quality of mango cv.Amrapali	Tripathi, V.K.; Kumar, R; Dubey, Vishal; Kumar, A & Singh R.K.	CSAUAT, Kanpur	pp-142
	Effect of fertility levels and different varieties on isabgol (*Plantago ovate Forsk)* seed production	Kumar, K;Tripathi, V.K.; Kumar, R & Kumar,A	CSAUAT, Kanpur	pp-150
	Promising post harvest technologies for managing fresh horticulture produce.	Asrey, Ram; Sagar, V.R. & Tripathi, V.K.	CSAUAT, Kanpur	pp-277
	Influence of different level of Azaotobactor, Azospirillum, PSB and black polythene Mulch on growth, yield an quality of strawberry cv. Chandler.	Tripathi, V.K.; Dubey, Vishal; Kumar, A.& Pandey, H	National Conference on Recent advance in Diversified Agricultural System CCR, PG College, Muzafarnagar UP	Progressive Research 11(Spical VIII): 5185-5188
	Effect of seedling age on growth and flowering attributes of Tomato (*Lycopersicon esculentum* Mill)	Singh, J.P. and Jaiswal, A.K.(2016)	Hortflora Sepctrum	6(1) 39-42
	Influence of seedling age on yield attributes and yield of Tomato (*Lycopersicon esculentum* Mill)	Singh, J.P.; Dwivedi, A.K. and Jaiswal, A.K.	Hortflora Sepctrum	5(3) 251-254
	Effect of foliar application of plant bio-regulator along with macro and micro nutrients on yield and quality attributes of Aonla cv.NA-7	Tripathi, V.K.; Pandey, S.S.;Kumar, A.; Dubey, V. and Kumar,A.	Rajendranagar, Hyderabad, Telangana	Pp 18
	Effect of foliar application of macro and micro nutrients on yield and quality attributes of Aonla cv.NA-7	Kumar, Ajay;Tripathi, V.K.; Tomar, S.; and Tiwari, P.	Rajendranagar, Hyderabad, Telangana	Pp 116
	Post harvest management of fruits and vegetables	Kumar, S.& Tripathi, V.K.	Rajendranagar, Hyderabad, Telangana	Pp. 65-66
	Development of papaya and Aloe vera blended beverages	Singh, R.; Tripathi, V.K. & Kumari, P.	IIAS Integral Univeristy , Lucknow	Pp. 249
	Effect of GA3, NAA and 2,4-D on growth and yield of Tomato C	Tomar,S.;Dubey,A. K.;Tripathi, .K.&Maurya, J.K.	IIAS Integral Univeristy , Lucknow	Pp. 375
	Processing possibilities for under utilized vegetables in India	Kumar, Ajay; Tripathi, V.K.; Jain,V.K.;Bisen, P. & Varan	IIAS Integral Univeristy , Lucknow	Pp. 516

2017	Gunvatta yukt Aloo ka utpadan avam fasal prabandhan.	Dr. A. K. Dubey	Krishak Bharti Rabi mela visheshank, Krishi suchnan byuro, DE, CSAU&T, Kanpur.	pp. 25-27
	Aloo Utpadan taknik,	Dr. A. K. Dubey	Khet Khaliyan by Dainik Jagran newspaper, Kanpur, October	pp. 0 6
	Efficiency of Bio-fertilizer and mulching on growth, yield and quality of strawberry	Triapthi, V.K. & Other	Indian Journal of Agricultural Sciences	87(9): 1179-83
	Influence of foliar application of calcium, zinc and boron on fruit drop, yield and quality attributes of Aonla	Kumar A & Other	Research on Crops	18(1): 91-97
	Influence of Integrated Nutrient Management in ratoon crop of tissue cultured banana	Triapthi, V.K. & Other	Progressive Research- An International Journal	12(Special –IV) 2577-2580
	Effect of plant bio-regulators and micronutrient on vegetative growth , yield and quality of strawberry cv.chandler	Dubey V & Other	Progressive Research- An International Journal	12(3): 330-332
	Influence of pre-harvest application of plant bio-regulators and micronutrient on fruit retention, yield and quality attributes of mango	Singh T & Other	Progressive Research- An International Journal	12(Special –IV) 2640-2644
	Effect of foliar application of plant bio-regulator and micronutrients on fruit retention, yield and quality attributes of aonla.	Tiwari P & Other	Progressive Research- An International Journal	12(Special –IV) 2 565-2568
	Studies on effect of foliar application of boron and GA3 on groth flowering, fruiting and yield of phalsa	Zeeshan M & Other	Hort Flora Research Spectrum	6(4): 273-277
	Effect of foliar application of plant bio regulators and micronutrients on fruit retention , yield and quality attributes of Aonla	Tiwari, P & Others	MPUAT, Udaipur, Rajashthan	Pp 48-49
	Water conservation through micro irrigation system in Horti. crops.	Meena V.K. & Others	MPUAT, Udaipur, Rajashthan	Pp 90-94
	Influence of different bio-fertilizer on growth , yield ad quality attributes ob banana cv,Grand Naine	Tripathi V.K. & Others	CSAU&T Kanpur	Pp 115
	Efficiency of Integrated Nutrient Management in ratoon crop of tissue	Tripathi V.K. & Others	CSAU&T Kanpur	Pp 13

	cultured banana.			
	Effect of pruning levels and chemicals substances on growth, yield and quality of guava.	Lal D. & Others	CSAU&T Kanpur	Pp 224-225
	A biotic stress tolerance development in veg. crops	Tripathi V.K. & Others	CSAU&T Kanpur	Pp 234
	Effect of boron, calcium and ga3 on fruit drop, yield and quality in aonla.	Tripathi V.K. & Others	CSAU&T Kanpur	Pp 238-239
	Assessment and management of fruit drop in aonla cv.Na-7	Kumar A. & Others	CSAU&T Kanpur	Pp 242
	Accelerated fruit ripening – Advances, safety, quality and shelf life.	Ahrey R. & Others	CSAU&T Kanpur	Pp 257
	Development of papaya and aloe vera blended beverages.	Singh R & Others	CSAU&T Kanpur	Pp 260-261
	Studies on way coating and prepackaging in polythene bag on the storage life of Guava at room temperature.	Yadav S.S. & Others	CSAU&T Kanpur	Pp 260-63
	Studies on the nitrogen and potassium nutrition on growth, yield and quality of tomato.	Singh J.P. & Others	CSAU&T Kanpur	Pp 44-45
	Study of plant growth regulators on vegetative growth and yield of tomato.	Tomar S. & Others	CSAU&T Kanpur	Pp 2 48
	Effect of integrated nitrogen management on fruit yield of tomato (*Lycopersicon esculentum* Mill)	Sachan R.K. & Others	CSAU&T Kanpur	Pp 33
	Breeding of high yielding disease resistance variety of coriander.	Tripathi S.M. & Others	CSAU&T Kanpur	Pp 275
	Role of cutting management in heat resistance on corrinder	Tripathi S.M. & Others	CSAU&T Kanpur	Pp 275
	Breeding of seed spics under rainfed condition-coriander	Tripathi S.M.& Others	CSAU&T Kanpur	Pp 275-76
	Advances in post harvest management of fruits and vegetables	Kumar, S. and Tripathi, V.K.	MPUAT, Udaipur, Rajashthan	Pp. 77-80
	Jaivik Krishi in Fruit Culture	Tripathi, V.K. and Singh , P.	CSAU&T Kanpur	Pp 119-123
2018	Pyaj avam Lahsun ke kharpatwar, Rog, Keet avam Unka Akikrat Nashijiv Prabandhan	Dr.A.K.Dubey	Krishak Bharti Jayad visheshank, Krishi suchnan byuro, DE, CSAU&T, Kanpur.	pp. 25-26
	Studies on genetic variability in growth and flowering magnitude in	Yadav S.S. and Singh, L.	Floriculture Sciences	2(1): 29-33

	Dahlia genotypes			
	Studies on correlation of growth and flower quality parametric in Dahlia genotypes.	Yadav S.S. & Others	Floriculture Science	Pp 110
	Response of inorganic fertilizer and biofertilizer on biological yield and quality of hybrid rice (*Oryza sativa L.)*	Pandey, H.P & Others	Journal of Pharmacognosy and Phytochemistry	7(6) : 1403-1408
	Influence of foliar application of Gibberllic acid, calcium and boron on fruit drop, yield and quality attributes of aonla	Tripathi, V.K. & Others	Indian Journal of Agricultural Sciences	88(11): 1784-88
	Effect of foliar application of plant bio-regulators and micronutrients on fruit retention , yield and quality attributes of aonla	Bhadauria, A.S. & Others	Progressive Research – An International Journal	13(3): 216-219
	Influence of GA3 and Napthalene Acetic Acid alone and in combination on fruit drop , yield and quality of mango cv.Amrapali	Triapthi, V.K. & Others	Progressive Research – An International Journal	14(1):1 0-13
	Stidies on foliar application of boron and GA3 on physic-chemical composition and yield of phalsa (*Grewia subinalqualis D.C)*	Mohd., Jisan & Others	Hort Flora Research Spectrrum	7(1): 52-57
	Response of spray of urea and dipotassium phosphate on floral parameter and floret production of gladius.	Singh, J. & Others	Hort Flora Research Spectrrum	7(2): 168-170
	Influence of Biofertilizer with recommended doses of fertilizer on plant growth, yield, quality and economics of onion.	Bachan, R. & Others	International Journal of Pure and applied Bioscience	6(1): 1434-1441
	Influence of foliar application of Boron, Zinc and Gibberellic acid on fruit drop, yield and quality attributes of aonla cv.NA-7	Tripathi, V.K. & Others	Rajasthan Agriculture Research Institute , Durgapur, Jaipur , Rajasthan	
	Influence of GA3 and Naphthalene acetic acid alone and in combination on fruit drop, yield and quality attributes of Mango cv. Amrapali	Tripathi, V.K. & Others	Rajasthan Agriculture Research Institute , Durgapur, Jaipur , Rajasthan	
	Effect of different bio fertilizer on growth, yield and quality of strawberry	Tripathi, V.K. & Others	Chatrapati Sahuji Shodh Sansthan , Lucknow UP	Pp 130

	cv.Chandler			
	Impact of organic manures and moisture conservation practices on root yield, nutrient uptake ad economics of Ashwagandha (*Withania Sominifera Dunal)*	Kumar, K. & Others	Chatrapati Sahuji Shodh Sansthan , Lucknow UP	Pp 93-94
2019	Effect of NAA and Zinc sulphate on fruiting and yield of litchi (*Litchi chininsis Sonn.)*cv.Calcuta	Singh A.C & Others	International Journal of Current Microbiology and Applied Sciences	8(3): 836-843
	Effect of organic manures and inorganic fertilizers on growth, yield and its attributin traits in farlic (*Allium sativam L.)*	Badal, D.S. & Others	Journal of Pharmacognosy and Phytochemistry	8(3):5 87-590
	Effect of plant growth regulators on yield attributing and quality trait of tomato (*Lycopersicon esculentum* Mill)	Singh, J. & Others	International Journal of Chemical studied	7(1): 1798-1801
	Effect of plant growth regulators on growth and yield attributing of (*Solanum lycopersicom* Mill)	Singh, J. & Others	International Journal of Current Microbiology and Applied Sciences	8(1):
	Effect of 2,4-D, NAA and GA3 on morphological, yield and quality traits in Vegetables crops	Singh, J. & Others	International Journal of Chemical studied	7(2): 1954-1956
	Effects of transplanting schedule and types of mulching on yield and quality of tomato (*Lycopersicon esculentum* Mill.).	A. K. Dubey, Saurabh Tomar and V.K. Tripathi	*Progressive Horticulture*	Pp 177-180
	Effect of NAA and Zinc sulphate on fruiting and yield of litchi (*Litchi chininsis*Sonn.) cv. Calcutia	Singh, A. C., Kumar, K., Saini, P. K., Singh, V. and Singh J.P	International Journal of Current Microbiology and Applied Science, Vol no**8,**issue no.3	Pp 836-843
	Effect of organic manures and inorganic fertilizers on growth, yield and its attributing traits in garlic (*Allium sativam* L.)	Badal, D. S.; Dwivedi, A.K.; K., V., Singh, S.; Prakash, A.; Verma, S. Kumar, J.	*Journal of Pharmacognogy and Phytochemistry*Vol no**8**issue no.3	Pp 587-590
	Effect of plant growth regulators on yield attributing and quality trait of Tomato (*Lycopersicon esculentum* Mill.)	Singh, J.; Dwivedi, A.K. and Devi, P.(	*International Journal of Chemical Studied*Vol no**7**issue no.1	Pp 1798-1801
	Effect of plant growth regulators on growth and yield attributing of Tomato (*Solanum lycopersicom*	Singh, J.; Dwivedi, A.K.; Devi, P., Bajeli, J.; Tripathi, A. and Maurya, S.	*International Journal of Current Microbiology and Applied Science*Vol no**8**issue no.1	

	Mill.).	K.		
	Effect of 2,4-D, NAA and GA_3 on morphological, yield and quality traits in Vegetable Crops (Review article)	Singh, J.; Dwivedi, A.K. and Ramgiry, P.	*International Journal of Chemical Studied*Vol no**7**issue no.2	Pp 1954-1956
	Influence of GA_3 and $ZnSO_4$ alone and in combination on fruit drop, yield and quality of Mango cv. Dashehari	Tripathi, V.K., Kumar, Y, Gupta, S and Vivekanand	In *International Conference on Recent Trends in Agriculture, Environmental Sustainability & Climate Change-2019*, held at University of Malaya, Wisma R&D, Kuala Lumpur, Malaysia	Pp 36
	Effect of foliar application of Boron, Zinc and NAA on fruit drop, yield and quality attributes of aonla cv. NA-7. In National Seminar "Progressive Horticulture Conclave-2019 on Futuristic Technologies in Horticulture"	*Vivekanand,* Tripathi, V. K.*; Kumar, Yogesh and Gupta, Subham*	In National Seminar "Progressive Horticulture Conclave-2019 on Futuristic Technologies in Horticulture", Jointly organized by Indian Society of Horticultural Research and Development,Chaubattia (UK) & ICAR-CISH, Lucknow	Pp 32

Department of Vegetable Science

Year	Title	Author	Name of Journal	Page no
2015	Productivity and economics of potato (*Solanum tuberosum*) + frenchbean (*Phaseolus vulgaris*) intercropping system.	Rajiv	*International Journal of Agricultural Sciences*	11(2) : 282-285.
	Selection parameters for freen pod yield and its component in table pea.	K.P. Singh and Lokendra Singh	Annuals of Horticulture	8 (2): 180-183
	Evaluation of chemical management against Septoria leaf spot of Tomato.	Mohan Lal, M.R.Dabbas, Singh, Sanjive K. and Shrawan Kumar	*Annals of Horticulture*	8(2): 215-218.
	(2015), Studies of standard heterosis for quantitative traits in Egg plant (*Solanum melongena* L.).	Venkata Naresh Boddepalli, A.K.Dubey, P.K.Tiwari, Singh Sanjive K., M.R.Dabbas and I.N.Shukla	*Annals of Horticulture*	8(2): 184-187.
	Studies on general combining ability effects (gca effect) in tomato (*Solanum lycopersicum* L.).	B.K.Yadav and Singh Sanjive K.	*Research in Environment and Life Sciences*	8(4): 651-654.
	Studies on genetic component of variance (graphical and analytical approach) in tomato (*Solanum lycopersicum* L.).	B.K.Yadav and Singh Sanjive K.	*Research in Environment and Life Sciences*	8(4): 786-788.
2016	Efficacy of various bio-agents and plant extract against *Septoria*	Mohan Lal, M.R.Dabbas, Singh, Sanjive K., Shrawan	*Internat J. of Plant Protec.*	9(1): 175-180.

	lycoparsici.	Kumar and Narendra Kumar		
	Effect of different levels of NAA, GA_3 and 2,4-D on growth and yield of Tomato (*Lycopersicon esculentum* Mill.).	Saurabh Tomar, A.K.Dubey, Singh Sanjive K., and Vivek Ujjwal	*Annals of Horticulture*	9(1): 97-100.
	Response of organically grown cauliflower (B. oleraceavar. Botrytis) to different sources and rates of organic manures in Indocangatic plains of Utter Pradesh.	A.K. Tripathi, I.N. Shukla and A.K. Dwidedi	Currant Advances in April Science	8(1):32-35.
	Performance of spices in dry land eco-system.	Rajiv and K.P. Singh	Res. Environ life Sci.	9(2)176-178.
	Performance of spices in dry land eco-system.	Rajiv and Singh, K.P.	*Research in Environment and Life Sciences*	9(2) : 176-178.
2017	Role of plant harmones on vegetative growth of Tomato (*Lycopersicon esculentum* Mill.)	Saurabh Tomar, Singh Sanjive K., A.K.Dubey, Jagendra Pratap Singh and Abhishek	*Int.J.Curr.Microbiol.App.Sci*	6(9): 3319-3323
	Integrated disease management of damping-off and wilt disease of chilli (*Capsicum annuum* L.).	M.R.Dabbas, Shrawan Kumar, Singh, Sanjive K. and Priti Tiwari	*Int.J.of Pl.Prot.*	10(2): 299-302.
	Coriander cultivation at farmers' field for livelihood security.	Singh, Sanjive K., Rajiv, Senjum Jinus Singh and Poonam Kashyap	*Indian Horticulture*	62(5): 52-54.
2018	Effect of organic, inorganic and biofertilizer on physic-chemical properties of fruits of guava (CV-1-49).	Jagendra Pratap Singh, Saurabh Tomar, Mahendra Chaudhary and I.N. Shukla	International journal of chemical studies	6(3):3233-3238
	Assess the effect of integrated nutrient management on growth and yield parameters of guava L-49.	Jagendra Pratap Singh, Saurabh Tomar, Mahendra Chaudhary and I.N. Shukla	International journal of chemical studies	6(3):676-680
	Performance of cucurbits in dry land eco-system of Uttar Pradesh, India.	Khaiwal Rajive, Singh K.P. and Jaiswal V.B.	International Journal of Agriculture Sciences	Val 10, issue 6, PP. 5576-5580.
	Performance of Cucurbits in Dry Land Eco-System of Uttar Pradesh, India.	Rajiv, Singh, K.P. and Jaiswal, V.B.	*International Journal of Agriculture Sciences*	10(6) : 5576-5580.
2019	Productivity and economics of potato grown with organics fertilization in comparison to inorganic fertilizers.	Rajiv	*International Journal of Agricultural Sciences*	15(1) : 32-36
	Comparative performance of coriander (*Coriandrum sativum*)–radish (*Raphanus sativus*) system organic and conventional management practices.	Rajiv	*Indian Journal of Agronomy*	64 (1): 122-127
	Companion cropping of vegetables with ratoon sugarcane: A case study.	Singh, D.P, Rajiv, Jaiswal, V.B., Prakash, H.G. and Solomon, S.	*Sugar tech, Springer* :(https://doi.org/10.1007/s12355-019-00740-x). Published online	10 June 2019.

	Effect of different seed coating on seed quality parameter, leaf emergence and dry matter production of tomato (Solanum lycopersicom).	Singh, D.P, Rajiv, Kumari Meenakshi and Prakash, H.G.	*Annals of Agricultural Research*	40(3): 317-323.
	Efficient integrated weed management practices for higher productivity and profitability in vegetable pea (*Pisum sativum* var. *hortense*). , .	Singh, D.P, Rajiv, Kumari Meenakshi and Prakash, H.G.	*Indian Journal of Agricultural Sciences*	89 (11): 1937–41
	Effect of transplanting dates and mulching on growth and yield of tomato (*Solanum lycopersicum* L.). .	Tomar Saurabh, Rajiv, Beniwal Deepa and Sourabh	*Vegetable Science*	46 (1&2): 39-43
	Path coefficient analysis among different okra (*Abelmoschus esculentus* L. Moench) genotypes. .	Kumari, Meenakshi Tomar, Saurabh, Kumar, Manoj, Singh, D.P. and Kumar, Ashish	International Archive of Applied Sciences and Technology	10(1):187-192
	Assessment of direct and indirect relationships among fruit yield and yield components in okra (*Abelmoschus esculentus* L. Moench).	Kumari, Meenakshi, Dubey, A.K., Kumar, Kuldeep, Singh, D.P. and Tomar, Saurabh	Journal of Plant Development Sciences	11(7):427-430
	Sustainable Management of Physico-Chemical Properties of Sodic Land Through Organic Ammendments, International .	Khan Khalil, Prakash, H.G., Singh, D.P., Kumar, Anil and Singh, B.P.	Journal of Advanced Biological Research	9(4):1-2
	Genetic Variability, heritability and genetic advance estimates for yield and its contributing traits in Brinjal (Solanum melongena L.)	Kuldeep Kumar, D.P. Singh, Minakshi Kumari, Shiv Prakash Shrivastva, P.K. Tiwari, Saurabh Tomar and Kanaiha Lal	Journal of Pharma cognosy and photochemistry	8 (5) 2168-2172
	Performance of different cultivars of wheat on productivity and profitability under irrigated condition of riverine trait of central U.P.. .	Khan Khalil, Prakash, H.G., Singh, D.P., Kumar, Anil and Singh, B.P.	International Journal of Advanced Biological Research	9(4):265-267
	Genetic variability, heritability and genetic advance estimates for yield and its contributing traits in brinjal (*Solanum melongena* L.*).*	Kumar, Kuldeep, Singh, D.P., Kumari, Meenakshi, Shrivastava, Shiv Prakash and Tomar, Saurabh	Journal of Pharmacognosy and Phytochemistry	8(5): 2068-2172
	Exploitation of heterosis for yield and its contributing traits in brinjal (*Solanum melongena* L.).	Kumar, Kuldeep, Singh, D.P., Kumari, Meenakshi, Lal, Kanhaiya and Chaudhary, M.	Intenational Journal of Chemical Studies	7(5):805-816
	Phytochemical and Pharmacological importance of Stevia: A Calorie-Free Natural Sweetener.	Singh, D.P., Kumari, Meenakshi, Prakash, H.G., Rao, G.P. and Solomon, S.	Sugar Tech	21(2):227 –234
2020	Effect of GA_3 and NAA on Growth and Yield of Tomato (*Lycopersicon esculentum* Mill.)	Tomar Saurabh, Rajiv, Singh DP and Kumari M	A Review. *Plant Archives.* 20 Special Issue (AIAAS-2020)	71-72
	Nanopesticides: A New Paradigm in Crop Protection.)	Kumari, Meenakshi, Singh, D.P., Tomar, Saurabh and Solankey, S.S.	Plant Archives. Vol. 20(Spl. Issue	104-109
	Companion cropping of vegetables with ratoon sugarcane: A case study.	Singh, D.P, Rajiv, Jaiswal, V.B., Prakash, H.G. and Solomon, S.	Sugar Tech	22(1):28–31

	Evaluation of Inucers in Systemic Acquired Resistant for Management of Brinjal Phomopsis Blight.	Kumar, Surendra, Biswas, Samir Kumar, Prakash, Hargyan and Singh, Devendra Pratap	Plant Pathol.J	19(1):54-65
	Effect of GA_3 and NAA on growth and yield of Tomato (*Lycopersicon esculentum* Mill.)- A review.	Tomar, Saurabh, Kumari, Meenakshi, Singh, D.P. and Rajiv	Plant archives.	20: 71-72
	Screening of chilli germplasm/varieties against chilli thrips, *Scritothrips dorsalis* (Hood) and aphid	Lavlesh Kumar, Dharmraj Singh, Sanjive Kr. Singh and Awaneesh Chandra	*Myzus, J. of Entomology and zoology studies*	8(2):661-663

Books

Year	Title	Publisher	Author (s)
2016	Paustik Aloo (in Hindi) (ISBN : 978-81-211-0961-1)	C. S. Azad University of Agriculture & Technology, Kanpur-208002 (U.P.), India	Rajiv, Singh D.P, Prakash H.G., Rathi PK and Singh KP
2018	Aloo Utpadan Praudhogiki (in Hindi) (ISBN : 978-81-211-0978-9)	C. S. Azad University of Agriculture & Technology, Kanpur-208002 (U.P.), India	Rajiv

Book Chapter(s)

S. No.	Title, and Publisher	Year	Author (s)
1.	Enriched Potato for Mitigating Hidden Hunger. In: Biofortification of Food Crops (Ummed Singh *et al*., Eds.), Springer India. pp 433-457. DOI: 10.1007/978-81-322-2716-8_32, Print ISBN: 978-81-322-2714-4 & Online ISBN: 978-81-322-2716-8.	2016	Rajiv and P.G. Kawar.
2.	Seed production of self and cross pollinated crops" published in Hand Book of Plant Sciences, Kalyani Publishers.	2019	C.P.Sachan, Poonam Singh and Sanjay Kumar Singh
3.	Abiotic stress and their management for sustainable crop production" published in "Management of abiotic stress in crop plants", Akinik publications.	2020	Singh Sanjive Kr., Shankar Lal, Shephali Sachan and Vandana Mutum

Students Performance in National Examination:

Name of Students and Id.No.	Programme	JRF/SRF/NET/ARS	Year
Sopal Singh, HR-0163/16	Ph.D. Fruit Science	NET	2017-18

Poornima Mishra, HR-0231/17	-do-	NET	2017-18
Deepankar Singh Badal, HR-0232/17	-do-	NET	2017-18
Somendra Verma, HR-0233/17	-do-	NET	2017-18
Sopal Singh, HR-0163/16	-do-	NET	2018-19
Poornima Mishra, HR-0231/17	-do-	NET	2018-19
Deepankar Singh Badal, HR-0232/17	-do-	NET	2018-19
Somendra Verma, HR-0233/17	-do-	NET	2018-19
Akash Shukla, Id.No. HR-0276/18	-do-	NET	2018-19
Akash Shukla, Id.No. HR-0276/18		NET	2019-20
Aneeta Chaudhary, Id.No. HR-0277/18	-do-	NET	2019-20
Shubham Gupta, Id.No. HR-0278/18	-do-	NET	2019-20
Vimal Kumar, Id.No. HR-0279/18	-do-	NET	2019-20
Ankit Singh Bhadauria, Id.No. HR-0342/19	-do-	NET	2019-20
Vivekanand, Id.No. HR-0344/19	-do-	NET	2019-20
Ravi Shankar Singh, Id.No. HR-0350/18	-do-	NET	2019-20
Neha Sinha, Id.No. HR-219/17	M.Sc.(Horti.) Fruit Science	NET	2019-20

Students Placement Profile:

Name of Students & Id.No.	**Name of Organization/ Companies**	**Year**
Durga Prasad Singh, HR-0140/16	National Seed Corporation	2018-19
Mahesh Kumar Gupta, HR-0144/16	National Seed Corporation	2018-19
Rajneesh Kumar, HR-0142/16	National Seed Corporation	2018-19
Sopal Singh, HR-0163/16	Indian Banking Service (Bank of India)	2019-20
Poornima Devi, HR-0231/17	Indian Banking Service (Allahabad Bank)	2019-20

Deepankar Singh Badal, HR-0232/17	Indian Banking Service (Bank of Baroda)	2019-20
TrivendraGangwar, HR-0216/17	Indian Banking Service (Bank of Baroda)	2019-20

6.5.2.4. Technical and Supporting staff:

Whether the College has appointed (in place) sufficient technical/laboratory/farm staff to cater the need of practical and field experiments. Mention department wise distribution of technical, supporting and field staff in the tabular form.

Department of Fruit Science

S.No.	Name of Post	Sanctioned Post	Vacant position
1.	Garden Overseer	01	01
2.	Nursery Supervisor	01	01
3.	Stenographer	01	01
4.	Senior Assistant	02	-
5.	Junior Assistant	01	-
6.	Ordaly	01	01
7.	Lab Attendant	02	-
8.	Attendant	01	-
9.	Class Attendant	01	-
10.	Head Chaudhary	01	-
11.	Cooli	02	-
12.	Mali	19	-

Department of Vegetable Science

S. No.	Name of the sanctioned post	No. of the sanctioned post	Name of the incumbent
1	Field Man	1	Dr. V. K. Yadav
2	Assistant Statistician	1	Sri. S. D. Dutta
	Field Assistant	1	--
	Senior Technical Assistant	1	Smt. Shashi Prabha Chauhan
	Driver	1	Sri Rakesh Kumar Sharma
3	Senior Assistant	2	Sri. Santram Yadav
			Sri. R.S. Rawat
4	Junior Assistant		Sri. Ashish Kumar
6	Field Attendant		Sri. Ranveer Singh

7	Lab Attendant	2	Sri. Daya Shankar
			Smt. Chuttan
8	Ordely	4	Sri. Dev Raj Pal
			Smt. Laxmi
			Sri. Lallan
			Smt. Vidyavati
9	Gardener	4	Sri. Mohan Lal Yadav
			Smt. Suhana
			Smt. Ram Pati
			Smt. Ram Shree
11	Electric Mechanic	1	Sri. Santosh Kr. Ashthana
12	Peon	4	Sri. Rajdev
16			Shri Ramesh Chandra
17			Shri Sanjay
18			Shri Shitala Prasad

6.5.3. Learning resources:

Learning resources are texts, videos, software, and other ICT enabled materials that teachers use to assist students to meet the expectations for learning defined by ICAR recommended curricula. Information on the following shall be submitted.

The department is fully equipped with digital classroom facilities since 2015-16 for U.G. and P.G. students through power point presentation and by internet facilities. Sometime the interrupted internet connectivity appeared. Technology enabled learning resources have been embedded in imparting quality education in the college. The main aim of technology-enabled learning is to emphasize the accessibility to quality teaching and learning with the help of the innovative application of information and communication technologies (ICTs). Use of ICT tools provided a transformative effect on teaching and learning by focusing on Policy/Technology-Capacity as a triangle and to base practice on research evidence.

- The Technology-Enabled Learning was emphasized on the following initiatives: · Development and implementation of the ICT tools and techniques in education and open educational resources (OER) policies to strengthen policy implementation ·
- Supporting innovative researches on technology-enabled learning for evidence-based advocacy and decision making ·
- Helping the institution to use technology-enabled learning for the extension program delivery ·
- Promoting the use of open source technologies and OER for skills development.

The success of online or blended learning delivery is, to a large extent, dependent on the knowledge, expertise, support and leadership available in the transition to this new way of learning. In addition, quality teaching is a long-standing challenge in higher education where

faculties are not so qualified to teach. In order to use online and blended learning but maintain or enhance quality teaching, more work to identify, disseminate, and implement best practices is required. A recent Massive Open Online Course (MOOC) was designed and delivered as one step in this direction. Other important technology enabled learning tools invariably followed in the University are Video based learning, Mobile learning, Tablets, Learning Apps and Micro-learning etc.

6.5.3.1 College Library (digital):

Mention the information about location of the library, present staff position (in place) and availability of Wi-Fi, sufficient books and other reading materials, periodicals and research journals, internet with sufficient number of computers, seating capacity, employing the latest technology in library sciences, stocking arrangements, collection of volumes on different subjects, latest publications in the fields of relevant subjects, automation and user services through computer, opening hours, subscription of journals of national and international repute, national dailies, magazines etc.

C.S. Azad University of Agriculture & Technology, Kanpur have Central Library with large quantity of books, periodicals, journals, magazines, current affairs and some journals are also available online. A book club is also readable is available within the departments having books, periodical sectional M.Sc. and Ph.D. Theses for the students as and when need.

The Library is one of the most important centres of the University, which facilitates the teaching, research and extension programmes. Both the faculty and students extensively use this facility. The Chandra Shekhar Azad University of Agriculture & Technology, Kanpur has, therefore, given key prominence to the development of the library facilities at the headquarters as well as at the constituent colleges and research campuses.

The Library was established in 1906 as a part of the Agricultural School Library. A magnificent building was constructed for the Library. After the school was upgraded as the Government Agricultural College, Kanpur the library was further developed and strengthened. The library served the college of the Agriculture from 1928-1969 and later on UPIAS from 1969- 1975. It was renamed as Institute of Agricultural Sciences Library in 1969. Finally, it was elevated to the status of Central Library in 1975. The Central Library continued in its building till 1984 as a part of CSAUA&T. The Central Library was shifted to a newly constructed building adjoining its original building, which is now used as office of the Registrar. Books, periodicals, theses, reports, maps and encyclopedia relevant to the mandate areas of the university have been stocked in the University Library and its constituent centres. Thus the Library is an oldest establishment. It has good collection of valuable and rare books, reference books, periodicals, thesis, subjective and competitive magazines, reports, bulletins, encyclopedias, maps gazetteers, dictionaries, agricultural statistical records etc.

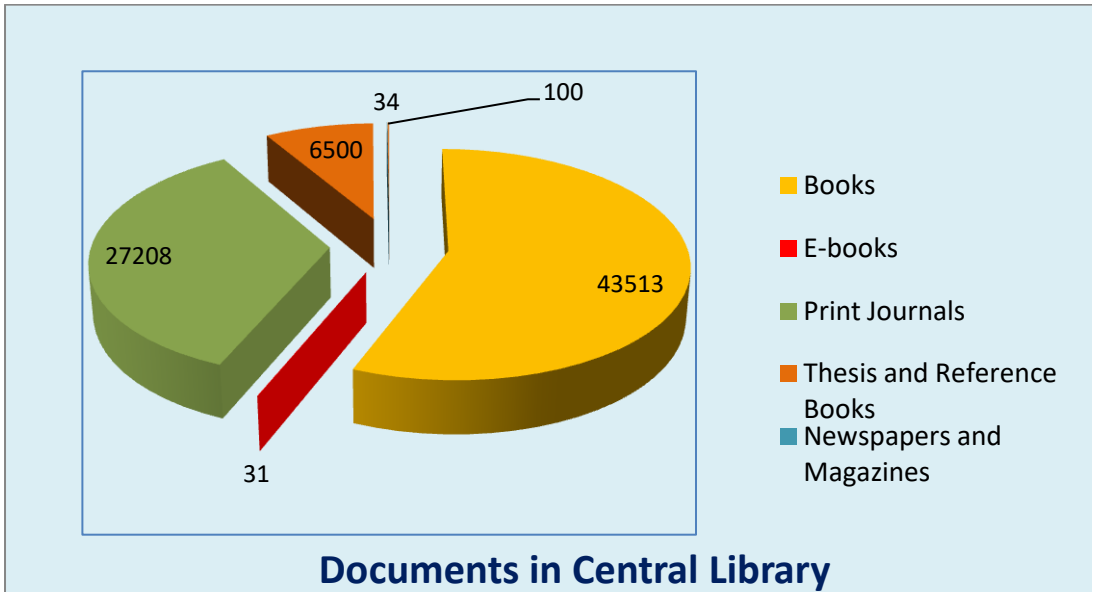
The function of library is to enhance status of teaching research and extension through availability of latest literature. Library updates knowledge bank of readers. Central Library is fulfilling all the requirements needed for students' researchers and extension personnel of the university. It has well developed infrastructure with all essential sections i.e. circulation, technical, processing, periodicals, books and computer information centre etc. Library is also supported with ERNET connectivity. It has online facilities for search of literature available in the library. The modernization process of Central Library is in progress. Since the beginning, efforts have been made to meet the requirements of teaching, research and extension activities of the University and its collection has reached 62,995 volumes consisting of books, theses and journals. All the books, Journals and theses have been automated with barcode facilities.

During the last decade, efforts have been made to keep abreast of information technology and introduce modern systems of library management and service. Thus, several journals that were hitherto obtained as “hard copies” have been discontinued in favour of the CD-ROM version of the journals. This has facilitated a tremendous improvement in the usage of the library for reference purposes especially by the research students and staff. Despite these initiatives, there is a genuine feeling that the University Library can further enhance its role in serving the needs of its users.

The University has been brain storming this with much concern and hopes to reach a solution to circumvent this problem. Inter-University Library linkage is one of the approaches that is being actively pursued to enhance the literature coverage for the leaders. For the first time biometric machine has also been installed in the library for the employees working there.

In addition a large number of bound volumes of periodicals, pamphlets, reports, theses, maps and micro-films, CD ROM etc are also available. The information provided gives a comprehensive picture of different kinds of documents available in the Library. Further, the subject-wise distribution of bound volumes of books and journals are shown in Figure.

Sl. No.	**Resources**	**Total**
1.	Books	43513
2.	E-books	31
3.	Print Journals	27208
4.	Thesis and Reference Books	6500
5.	Newspapers and Magazines	34
6.	CD-ROM/DVDs	100
7.	Library Automation Software	SOFTGRANTH


34
100
6500
27208
43513
31
Books
E-books
Print Journals
Thesis and Reference Books
Newspapers and Magazines
Documents in Central Library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Central Library of the University

6.5.3.2. Laboratories, Instructional farm, Workshops, Dairy Plant, Veterinary Clinic, Hatchery, Ponds etc.

Cleary mention about laboratories, instructional farm, workshops, dairy plant, veterinary clinic, hatchery, ponds etc. facilities available in the College with its numbers, space, and specialty to conduct practical/hands on training.

The main building of College of Horticulture was constructed with ground and first floor with plenty of laboratories, committee rooms and class rooms. The well-equipped post harvest laboratories are also available to the students for their learning and practical utility.

In the Department of Vegetable Science, available Class Room and laboratories facilities is given below.

List of equipment's in laboratories

1. Thermo hygrograph
2. Kjeldhal distillation set
3. Spectrophotometer
4. Flame photometer
5. Digital balance
6. Plastic crates

7. Generator set
8. Auto clean machine
9. Hot Plate
10. Glass ware dryer
11. Mechanical shaker
12. Electronic balance
13. pH meter
14. Leminar Flow
15. Air purifier
16. Microscope

Details of farm facilities

1. 24 ha. Total Land
2. 15.6 ha cultivated Land
3. 1.36 ha nursery & Garden
4. ha Polyhouse
5. 01 Tractor
6. 02 Tube bell (15HP)
7. One Harrow
8. Two Cultivator
9. One Rotavetor
10. Threshing Floor- 14 m radius

Details of workshop facilities

NA

Details of instructional facilities

1. Poly house- 04 units (440 sq. meter each)
2. Net house- 01 unit (20 X 13.5 meter)
3. Go down- 01 (13 X 8.5 meter)
4. Pre-cool chamber-01 unit (200 sq. meter)
5. Onion garlic storage- 01 unit (10.5 X 4.5 meter)
6. Laboratory and classroom - 01 each (6.50 X 8.30 meter)

6.5.3.3 Student READY/In-Plant Training/Internship/ Experiential Learning Programmes:

Clearly mention about the implementation of Student READY/ In-plant training/ Internship/Experiential Learning programmes and learning outcomes as per the guidelines of ICAR. Profitsharing mechanism (amount) shall be mentioned for each ELP unit sanctioned by the ICAR forthe college.

Student READY/ In-Plant Training / Internship: Student READY programme was implemented for first year batch started in 2016-17. This programme was taken up during the VII semester for duration of 24 weeks of 20 credit hours. The programme includes orientation, village stay, all India study tour, industrial placement programme, report writing and final examination. Different Activities Performed by Students during Village Attachment is given below

- PRA survey of the villages for selection of Host farmers
- Collected data on socio-economic condition, population, cropping pattern, irrigation facilities, resources available, labour, employment etc.
- Farm plans activity includes family system approach for the host farmer and village in consultation with local research/ extension scientists of the University for reorganization of farm business for higher income and sustainable production
- Identified constraints in marketing of horticultural produce, institutional credit facilities, input supply agencies and co-operative enterprises
- Identified horticultural problems of the village
- Conducted method demonstrations and result demonstration
- Performed field visit and group discussion with farmers on need based horticultural issues Identified on-going horticultural programmes in the village and assess their impact
- Visited local institutions to study their role in development programmes.
- Students created awareness regarding the role of mass media in transfer of technology with the help of University scientist

- Participated in village social work - conduct survey on youth problems, initiated youth clubs, worked with youth and involved themselves in youth specific work.
- Prepared report.

In addition to practical's, hands on training are also provided to students for the protective cultivation of Vegetables in poly houses and the storage of Onion and Garlic. However,college of horticulture has not devised any profit sharing machenism for ELP courses till date.

Name of Degree	Batches (A or B or C)	Name of the course	Credit of the course	Practical hour(s)	Place of practical (Field/Laboratories/Glasshouse other)
UG	A & B	ELP-427, Organic crop production technology	10(0+10)	10	Field
	A & B	HEL-422, Protective cultivation of high value horticultural crop	10(0+10)	10	Field

6.5.3.4. Curricula Delivery through IT (smart class rooms/interactive board etc.):

Whether the College is using smart class rooms/interactive board etc. for teaching and practical. Number of class rooms upgraded as smart class rooms should be mentioned.

Information and communication Technology is an important component of University educational systems. The university has setup centralized computer lab and an agricultural knowledge Management Unit (AKMU) from financial support of ICAR, which

is equipped with ICT facilities that is highly beneficial for good governance and providing facility to support university education system . The AKMU facility has internet access, which is in process is being extended to each and every department of the university.

The University has created a conducive physical ambience and Information and Communication Technology (ICT) infrastructure to facilitate high quality teaching and research. These include net connectivity currently comprises of 1 Gbps fibre-based, expandable network connections to connect to NKN (National Knowledge Network) / internet. The University has huge LAN based network, Wi-Fi connectivity, 1000 Mbps link connects the whole campus. All the classrooms are equipped with audiovisual systems with LCD projectors in addition to conventional methods of teaching. The newly constructed academic building of the colleges and departments are equipped with smart classrooms to facilitate teachers and students to access the internet for a blended teaching-learning process.

The department is fully equipped with digital classroom facilities since 2015-16 for U.G. and P.G. students through power point presentation and by internet facilities. Sometime the interrupted internet connectivity appeared.

6.5.4. Student Development:

Student Development at the College directs its educational efforts at fostering the intellect and character of students by integrating in-class and co-curricular experiences. To accomplish this, the College provides a wide range of educational experiences through programs and activities that complement and support the academic experience in the classroom.

Well-furnished class rooms and garden practical rooms are available in building and adjoining garden of the department.

6.5.4.1. Student intake and attrition

The information about student intake and attrition, for the College as a whole but separated in UG, PG and PhD categories shall be provided in tabular form for last five years.

Name of the Degree Programme	**Actual student admitted in last five yea**					**Attrition (%)**				
	Y1	**Y2**	**Y3**	**Y4**	**Y5 (Curren Year)**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5 (Current Year)**
	2015-16	2016-17	2017-18	2018-19	2019-20	2015-16	2016-17	2017-18	2018-19	2019-20
U.G.	30	30	40	31	35	-	-	-	-	-
M.Sc.(Hort.) Fruit Science	-	11	11	09	10	-	-	-	-	-
M.Sc.(Hort.) Veg. Science	NIL	11	12	9	10	NIL	36.36	8.33	11.11	10.00

Ph.D.(Hort.) Fruit Science	-	02	04	04	05	-	-	-	-	-
Ph.D.(Hort.) Veg. Science	NIL	3	5	4	4	NIL	33.33	40.00	NIL	NIL

6.5.4.2. Number of Students in Theory and Practical Classes:

Mention the Degree Programme-wise number of students sitting in a class for theory and practical, separately in tabular form.

The students of B.Sc.(Hons.) Horticulture and M.Sc. (Horticulture) Fruit Science and vegetable science are sitting separately in class rooms as per their offered semesters. Only one batch each of B.Sc.(Hons.) Horticulture and M.Sc. (Horticulture) Fruit Science are engaged for their practicals and respective research programmes of P.G. and Ph.D. students are being conducted under strict supervision of their advisors.

S. No.	**Name of the Degree Programme**	**Year wise Total intake**	**Batch of students in theory class**	**Batch of students in practical class**
1	B.Sc. (Hons.) Horticulture	2015-16	One Batch of 30 Students	Two Batch of 15 Students
		2016-17	One Batch of 30 Students	Two Batch of 15 Students
		2017-18	One Batch of 30 Students	Two Batch of 15 Students
		2018-19	One Batch of 30 Students	Two Batch of 15 Students
		2019-20	One Batch of 30 Students	Two Batch of 15 Students
2	M.Sc. (Hort.) Fruit Sci.	2016-17	One Batch of 11 Students	One Batch of 11 Students
		2017-18	One Batch of 11 Students	One Batch of 11 Students
		2018-19	One Batch of 9 Students	One Batch of 9 Students
		2019-20	One Batch of 10 Students	One Batch of 10 Students
	M.Sc. (Hort.) Veg. Sci.	2016-17	One Batch of 11 Students	One Batch of 11 Students
		2017-18	One Batch of 12 Students	One Batch of 12 Students
		2018-19	One Batch of 9 Students	One Batch of 9 Students
		2019-20	One Batch of 10 Students	One Batch of 10 Students
3.	Ph.D. (Hort.)	2016-17	One Batch of 2 Students	One Batch of 2 Students

	Fruit Sci.	2017-18	One Batch of 4 Students	One Batch of 4 Students
		2018-19	One Batch of 5 Students	One Batch of 5 Students
		2019-20	One Batch of 5 Students	One Batch of 5 Students
	Ph.D. (Hort.) Veg.Sci.	2016-17	One Batch of 3 Students	One Batch of 3 Students
		2017-18	One Batch of 5Students	One Batch of 5Students
		2018-19	One Batch of4 Students	One Batch of4 Students
		2019-20	One Batch of 4 Students	One Batch of 4 Students

6.5.4.3. Admission Process:

Clearly give complete mechanism of admission for UG, PG and programmes, fee payment mechanism, registration procedure, academic schedule publication at the start of the semester etc. Write information in one page only.

The admission to various programme is done strictly in order of merit-cum-reservation, based on the aggregate marks obtained by the candidates in the Uttar Pradesh Combined Agricultural and Technology Entrance Test (UPCATET). The admission notifications for UG degree programmes are notified in important newspapers and also in all colleges of the University. The notification also contains the courses offered at different campuses and minimum qualifications prescribed for seeking admission. The entrance examination conducted on All India basis during May-June every year.

Undergraduate Programme

Bilingual question paper of three hours duration in English and Hindi language consist of 200 objective type questions with multiple choices carrying 600 marks is given. Paper group wise following criteria is adopted for deciding the merit.

1. **PCB:** In the event of two or more candidates securing equal marks, the merit is decided on the basis of marks secured in the Biology (D), Chemistry(C), and Physics (B) and then qualifying examination.
2. **PCM:** In the event of two or more candidates securing equal marks, the merit is decided on the basis of marks secured in the Mathematics (D), Physics (B), and Chemistry (C) and then qualifying examination.
3. **PAG:** In the event of two or more candidates securing equal marks, the merit is decided on the basis of marks secured in the Agriculture Group (D), Zoology and Botany(C), Physics and Chemistry (B) and then qualifying examination.

Enrollment of students in undergraduate degree programme:

The college offers one undergraduate degree programmes in the faculty of Agriculture. The duration of the programmes is of 4 years.

All admissions are provisional in the first instance and the Vice-Chancellor reserves the right to cancel admission granted to a candidate without assigning any reason. No person is entitled to claim any compensation or concession if the admission granted is subsequently cancelled. Candidates appearing in the final year / semester of B.Sc. (Hons.) Horticulture are required to produce their mark sheet /transcript on the day of counseling, otherwise their

candidature are not included in merit index for admission. The candidate themselves are required to ensure that their mark sheet / transcript available before the counseling committee.

The allocation of discipline to a successful candidate is done on merit index-cum reservation cum subject available at the time of counseling. The choice once exercised is final and change is not allowed even if a vacancy exists in any other discipline at a later stage.

The qualified candidates, as per merit, are called for counseling's on a specified date and time for consideration for admission to Undergraduate. The counseling continue still the last seat in programme is filled-up. No minimum qualifying marks required for any programme.

The candidates report at the counseling place as per schedule given in counseling letter for checking of relevant documents and depositing prescribed fee. Candidates who do not turn up at their call will be given a chance at the end of the day. They can claim only the programmes in which seats are available at that time and as per their qualifications/groups.

Reservations and relaxations/Weightage:

The allocation of the University, Programme and Discipline to a successful candidate is made on merit-cum-reservation-cum-choice available at the time of counseling. The choice once exercised is treated as final and no change is allowed thereafter in this respect, even if vacant seats exist in any other University at a later stage.

Table: Reservation to different categories:

S.N.	Vertical Reservation (Main category)		S. No.	Horizontal Reservation (Sub-category) In every main category, reservation to following sub-category as given below will be applied	
1.	Scheduled caste	21%	**1.**	Ward of Freedom Fighters (FF)	02%
2.	Scheduled Tribe	02%	**2.**	Physically handicapped (PH)	03%
3.	Unreserved	40%	**3.**	Ward of Defense Personnel (DP)	01%
4.	Other Backward caste	27%	**4.**	Ward of University Employees (UE) only in undergraduate programmes	10%
5.	EWS	10%			

Note:

- Only one son /daughter of a University employee is allowed to avail of this relaxation in one academic year.
- Criteria for a person to be treated as Defense Personnel will be as follows:
- He/she should either be in active Army Service or a retired military personnel and be a bonafide resident of Uttar Pradesh;
- Documentary evidence shall have to be produced in support of the above claim. Civilian employees of the Military Department shall not be eligible for this concession.

- 15% seats at undergraduate and 25% seats at postgraduate level over and above will be filled through ICAR National level examination.
- Minimum eligibility conditions may be relaxed by the Vice-Chancellor for such outside candidates from foreign countries, under developed States, NEC and Tribal areas as are sponsored by their respective government/ ICAR/NEC.
- Admission to B.Sc. (Hons.) Agriculture second semester in not permissible in any condition.

6.5.4.4. Conduct of Practical and Hands on Training:

Mention the brief report on how the practical and hand-on-training is being conducted in different courses to meet the student satisfaction. Write information in one page only.

Different practicals of students of U.G., P.G. and Ph.D. are conducted in departmental garden as well as laboratories periodically according to their course and semester. The arrangement for propagation practical considerably offered in different orchard of the garden as well as related to floriculture practical of U.G. Classes are organized on floriculture plants like cutting, budding, layering and grafting. Regarding fruit technology field level practicals like training as well as pruning are conducted in orchard plants those are treated as Horticulture field laboratory. Other practicals like processing and value additions are done in fruit technology lab in the department of Fruit Science. Other cultural operations like basin channels removing of weeds touting as cultural practices to U.G. classes, practical regarding spraying of chemicals like insecticides, fungicides hormones etc. are practiced and demonstrated to the students in the field laboratory i.e.garden. Different identification of fruit plants as well as floriculture plants are also practiced to the students regarding their concerning periodic courses.

6.5.4.5 Examination and Evaluation Process:

The evaluation of students' performance is a central task of College administration. A brief report on examination and evaluation process for UG, PG and PhD be given separately

mentioning external/internal components. System of evaluation should clearly be mentioned for UG, PG and PhD.

UNDER-GRADUATE PROGRAMME: (According to recommendation of Fifth (V) Deans' Committee report)

Degree Nomenclature: B.Sc. (Hons) Horticulture **2. System of Education:** Formal education with semester system

Program Duration

- Minimum: 8 semesters (4 academic years)
- Maximum: 14 semesters (7 academic years)

Minimum eligibility requirement for admission:

Pass in 10+2 examination.

Mode of Admission: Entrance examination at 10+2.

Reservation of seats: Reservation of seats shall be governed by the rules of State government. 25% ICAR seats to be filled through ICAR entrance examination.

Semester Duration: The minimum duration of 110 working days, consisting of 95 instructional days and 15 examination days.

Credit Definition: The University adopted the semester based course work and evaluation during 1976. One credit is defined as the lecture of 50 minutes (one period) duration or minimum of two-periods (100 minutes) practical/ and three- periods for field work per week. Thus, in a semester, 18 periods for theory and 36 periods for practical/ tutorial work per credit are required. However, for many courses where field work is required, one credit requires 3 periods of field work per week.

Master's Programme

- SAUs are free to adopt entrance examination or merit at the Bachelor's level or a combination of both while making admissions. Particularly for admission out of University/State students should be based on Common Entrance Test and not by merit only. This is being suggested to minimize the problems of disparate grading and academic standards followed across universities.
- Present system of Common Entrance Test to fill the allocated ICAR seats will continue. However, the quota for ICAR seats is recommended to be increased from 25 to 30%.
- Reservation of seats should be governed by the relevant policy/rules of the State government.

Doctoral Programme

- SAUs are free to follow entrance examination or merit at Master's level or a combination of both.
- Entrance examination (80% weightage) and interview (20% weightage) for seats filled by the ICAR.
- Reservation of seats should be governed by the relevant rules/policy of the State government.
- Those candidates who have qualified ICAR's SRF examination, meet the university criteria for admission
- and are recommended by ICAR, may be admitted by the agricultural universities with or without fellowship.

Constitution of the Student Advisory Committee

M. Sc .: Minimum 3 members (2 from major subject including Chairman, and one from minor subject) to be constituted within three months of the 1st Semester

Ph. D.: Minimum 4 members (2 from major subject, one each from minor and supporting subjects), to be constituted within three months of the 1st Semester...

Minimum Credit Requirements

i. Course work	**Master's Programme**	**Doctoral Programme**
Major subject	20	15
*Minor subject	09	08
*Supporting subject(s)	05	-
*Non-credit compulsory courses	-	05
**Seminar	01	02
ii Comprehensive Exam.	**Non-credit**	**Non-credit**
iii. Thesis	**20**	**45**

Medium of Instruction: English and Hindi both.

Attendance: 80 per cent (Relaxation in minimum attendance requirement should be given only in the case of indoor hospitalization).

RECORD OF CLASS ATTENDANCE: Each Instructor shall maintain a record of the student's attendance in each course taught by him in each semester.

MINIMUM CLASS ATTENDANCE: Each student shall be regular in attending classes and shall be required to have a minimum of 80% attendance in each course in each semester, failing which he/she shall not be awarded grade in that course, unless withdrawal from the course is permitted.

The percentage of attendance of a student in a course in a semester shall be computed on the basis of the total number of lectures, practicals and tutorials attended by him/her and those actually held between the date of commencement of instruction and the date of closing

instruction, irrespective of the date of his/her registration and/or the duration of leave duly granted to him/her.

The Dean, may on the recommendation of the instructor/advisor concerned, through the Head of the Department, condone shortage in attendance up to 5% in a course(s) in exceptional circumstances and allow students with an attendance of 75% or more to appear at the final examination. However, on the recommendation of the Dean, the Vice Chancellor may grant a condonation to the extent of 5% and allow students with an attendance of 70% or more to appear at the final examination. In a very exceptional case, if a student fails to secure even 70% attendance, his case can be referred to the Academic Council through Dean for condonation to the extent of further 5% and allow students with an attendance of 65% or more.

NOTE 1:- *In computation of percentage of attendance, fractions of 0.5 or above shall be counted as 1.*

NOTE 2:- *If student is called upon to repeat a course but he/she has already put in required attendance in that course on a previous occasion, above requirements of attendance will not apply in his/her case.*

NOTE 3:- *Whenever students resort to mass absence from classes, a fine of Rs. 15.00/ student/ day may be levied from all such students. All such students will have to pay this fine before the final examination of the next semester and failure to do so shall render them liable to be debarred from appearing in the examination.*

Course Curriculum and minimum credits requirement: The ICAR Model Course Curriculum and Syllabus has been followed to meet regional requirements. The minimum credit requirement for the graduate degree should be **180 credit** including non-gradial and remedial courses.

Advisement:

(a) Student freshly admitted as well as continuing students shall present themselves in the beginning of each semester on dates notified by the Registrar for advisement and shall be assigned in groups to staff. Advisors/ course instructors are nominated by the Dean Agriculture.

(b) The advisor shall help the UG student in planning the programme of their studies and the choice of courses. He shall also guide the student in determining the credit load, which he can safely and conveniently carry in each semester and shall advise him regarding adding of or withdrawal from the course during a semester. Each Advisor shall maintain a close contact with his student and keep himself informed of their progress. Problem cases needing special measures shall bring to the notice of the Dean by the Advisor.

13. **Registration:** Following advisement as prescribed above, registration of candidates selected for admission and also of continuing students shall be completed on schedule date(s) notified earlier by Registrar for each semester.

Mode of Registration: Registration shall consist of the following steps:

1. Payment of the University fee and other dues.
2. Enrolment of the students in various courses with individual instructors at particular place, date and time.

(i) Registration of fresh students: Registration for the first Semester of the year of a degree programme is part of admission procedure and shall be governed by the admission rules. Admission of new students failing to register in the prescribed manner on the appointed date is liable to be cancelled and the seats so fallen vacant shall be offered to the candidates in the waiting list.

(ii) Registration of continuing students: Registration of continuing students in the subsequent semesters shall be held in a similar way on the date time notified by the *Kulsachiv* (Registrar).

(iii) Late registration: A continuing student, who does not register on the day of registration, shall be required to pay a prescribed late registration fee for the first day and further prescribed fee for subsequent two days. Student failing to register within 3 days shall not be allowed registration.

Note: *If under special circumstances, a student is unable to present himself/ herself for registration, he/she may, with the prior permission of the Dean be permitted to deposit his/her fee by the prescribed date through his/her representative. However, he/she should present himself/herself for registration within a period of 10 days from the initial date of the registration on payment of a prescribed late fee failing which he/she will not be allowed registration in that semester.*

(iv) Registration necessary for award of degree: In case, a student studies a course without registration in the prescribed manner, he/she will liable to be summarily dropped from the University.

14. Examination and Evaluation System

Examination

- External theory (50%)
- Internal Theory + Practical (50%)

- **Courses with Theory and Practical**
  Mid-term Exam (30%) + Assignment (5%) in practical oriented courses + Practical (15%)

- **Courses with only Theory**
  Mid-term Exam (40%) + Assignment (10%)

- **Courses with only Practical**:
  (100%) Internal

- Paper to be set by external: HOD shall ensure the coverage of syllabus. If needed moderation can be done.

- Evaluation to be done **i**nternally by the faculty other than the Course Instructor. Syllabus of the concerned course shall be sent to the external examiner, who shall prepare the question papers. For practical, it is recommended that examination shall be conducted by course instructor(s) and one teacher nominated by HOD.

- **Evaluation of Experiential Learning Programme/ HOT (Hand on Training)**

Sl. No.	**Parameters**	**Max. Marks**
1.	Project Planning and Writing	10
2.	Presentation	10
3.	Regularity	10
4.	Monthly Assessment	10
5.	Output delivery	10
6.	Technical Skill Development	10
7.	Entrepreneurship Skills	10
8.	Business networking skills	10
9.	Report Writing Skills	10
10.	Final Presentation	10
	Total	100

Evaluation and Grading

Percentage of Marks Obtained	**Conversion into Points**
100	10 Points
90 to <100	9 to <10
80 to <90	8 to <9
70 to <80	7 to <8
60 to <70	6 to <7
50 to <60	5 to <6
<50 (Fail)	<5

Eg. 80.76	8.076
43.60	4.360
72.50 (but shortage in attendance)	Fail (1 point)
OGPA	**Division**
5.000 – 5.999	Pass
6.000 – 6.999	II division
7.000 – 7.999	I division
8.000 and above	I division with distinction

GPA = Total points scored / Total credits (for 1 semester)

CGPA = ∑ Total points scored / Course credits

OGPA = ∑ Total points scored (after excluding failure points)/ Course credits

% of Marks = OGPA x 100/10

FINAL EXAMINATION: Final examinations shall be held on the dates, which shall be notified by the Registrar either in the University calendar or at the beginning of each academic or otherwise. If a student fails to appear in the final examination of a semester, he will not be allowed for registration in the next semester. Such student will repeat the semester when it runs. However, this rule is not applicable for that student who has been permitted for make up examination by the competent authority.

PREPARATION OF EXAMINATION SCHEDULE: The final examination schedule shall be prepared and notified by the Registrar ten days before the commencement of the examination.

SEATING ARRANGEMENT: The Dean shall conduct the examination and the respective centre superintendents shall make the seating arrangements.

SUPPLY OF EXAMINATION MATERIAL:

(1) Examination materials such as answer books twine, drawing papers, log tables, graph papers etc. will be supplied by the Registrar.

(2) Every student shall be required to bring examination materials such as set squares, scales, pen, pencils, highlighters etc., as he shall not be permitted to borrow any of these materials from fellow students in the examination hall.

APPEARING IN THE FINAL EXAMINATION: Candidates coming late by more than 30 minutes in the Final Semester examination shall not be allowed to appear in that examination and no examinee shall be allowed to go out of the examination hall for the first 30 minutes.

MAKE-UP EXAMINATION: In case a student is seriously ill either in the campus and produces a medical certificate from the University Medical Officer or is hospitalized elsewhere and is unable to attend his examinations, the Dean may permit him to appear in more than one make-up examination but not more than two make-up examinations during any one Semester.

MID TERM AND FINAL EXAMINATION: Normally no make-up examination shall be permissible in lieu of the missed mid term or final examination except as permitted by Dean.

(i) If a student fails to appear in any mid term examination for reasons beyond his/her control, he/she must file an application on the very day on which the examination is missed.

(ii) As far as possible, make-up examinations shall be discouraged. Only in extremely genuine cases like hospitalization, a student can be permitted by the Dean to appear at the make-up examination in the mid term examination.

(iii) Dean is empowered to allow a student for make-up only in mid term examination, if he/she fulfills the requirements.

Note: The student can be permitted to appear at the make-up examination only in extremely genuine cases, on the following grounds:

(a) If he/she is seriously ill.

(b) If he/she has taken leave on account of the death of his father, mother, brother, sister, spouse, child or grandparent.

(c) Any other genuine cause with which the Dean is satisfied. Such cases should be reported to the Registrar.

(d) Only one make-up examination will be permissible during a semester.

1. The application for make-up examination must be supported by medical certificate either from the University Medical Officer or from the hospital concerned and should be routed through warden/advisor.
2. No application for make-up examination shall be considered if received after 24 hours from the expiry of the last date of mid term examination.
3. Make-up examination must be completed within one week from the date of grant of permission by the Dean. It will be the responsibility of the student to get in touch with his/her teacher and have a date fixed for the make-up examination after necessary permission is granted.
4. Result of make-up examination will count along with the previous performance of the student during the term for awarding the final grade in course concerned.

Restriction for students going out on educational tours and extra-curricular activities: The educational tours and extra curricula activities may be organized in such a way not to disturb the academic programme particularly the final examination. As far as possible such programmes be organized during semester break.

15. SCRUTINY:

1. Scrutiny means totalling of marks and evaluation of questions left unmarked.
2. If any student desires scrutiny in any course, he shall be permitted to do so with a prescribed scrutiny fee per course.
3. He/she shall have to file an application on the prescribed form, which can be obtained from the office of the Registrar within a period of 7 days from the date of registration in the semester, failing which no such applications shall be entertained.
4. After having the approval of the Registrar, he/she will present the form to the instructor concerned.
5. The answer book shall be scrutinized by the instructor concerned in collaboration with Head of the Department.
6. The result of scrutiny shall be intimated to the Registrar as soon as possible but in no case later than three weeks from the date of registration.
7. The result of the scrutiny shall be final.

CHANGE OF GRADE AS A RESULT OF SCRUTINY: After the grade has been revised as a result of scrutiny, the instructor will send the grade through his/her Head of the Department to the Registrar/ the Dean.

16. USE OF UNFAIR MEANS (UFM):

(1) The terms "use of unfair means in the examination" or "attempt to use unfair means in the examination" shall denote the items prescribed by the Academic Council, through its resolution, from time to time. The following items are included in this category-

(a) Possession of any books, notes, chits, or such other material and also any notes or signs written on any part of the body, furniture or any other material pertaining to the subject matter of the examination in the examination hall during the examination hours.

(b) Talking, whispering or signaling in any form in the examination hall or outside the examination hall during the examination hours.

(c) Copying or allowing to copy.

(d) Any other activity, which may give undue advantage in the examination to any student.

(e) Any attempt to use any other means, which in the opinion of the Superintendent of examination may be considered to be unfair.

(2) **Unfair means in examination:** The Dean of the college in which the student is registered shall be responsible for dealing with all the cases of use of unfair means in the semester test and examinations. In this matter, a Committee consisting of the Dean and two Professors of the College shall assist the Dean. This Committee shall be constituted by Vice Chancellor every year in the beginning of the session. The committee shall take appropriate action after effecting full opportunity to the student for his defence and the penalty will be as indicated below:

(a) A student if found using unfair means during mid term examination, he will be awarded zero in mid term examination.

(b) A student found using unfair means during the final examination shall be punished

as under-

(i) If the material found with the student is related with the course and the student has not used it, he would be awarded 'F' grade in that course.

(ii) If the student has used the material found with the student he will be awarded 'F' grade in all the courses in that semester.

(iii) A student found to appear in the examination in place of another student would be treated under unfair means. Such students will be summarily expelled from the University.

(c) If a student repeats the offence more than twice, during a particular degree programme, he will be disqualified for being a student in this University and shall be immediately removed from College.

(3) The instructor/ invigilators concerned shall report to the Dean through the Head of the Department/ Superintendent Examinations on the day of occurrence of cases of unfair means with full details of the evidence and/ or exhibits. An explanation of the student concerned, if possible, shall also be submitted.

17. REPETITIONS OF COURSES:

a) If a student secures 'F' grade, he shall have to repeat the course whenever the University offers it.

b) In case a student obtains 'F' grade in a course and repeats it, the grade secured by the student on repeating the course shall be reflected in the grade report.

c) If a student secures 'F' grade in a course and fulfills attendance requirement, he may be permitted by Dean to take re-examination of that course after six month in the semester in which the said course is being offered. However, the student shall submit his application for permission within a month from the date of registration with prescribed fee.

d) Just after announcement of results, the Registrar will communicate the list of students, who have obtained 'F' the University is offering grade in the course. The Dean will notify that such students have to appear in first offered opportunity by the University. Even after notification of a student fails to appear in the first offered opportunity he/she will will loose one chance of repeat.

6.5.4.6. NCC/NSS/RVC Units:

Clearly mention the existence and functioning of these units and how it is benefiting the student development. A brief report should be given (without photographs).

At College of Horticulture, Kanpur the active participation in NSS and NCC is compulsory to each and every student during their degree programme. The main aim of NSS is to inculcate a sense of national and social responsibility amongst the students. Under NSS they have to participate in programmes related to environment, health and education.

National Service Scheme (NSS) programme

National Service Scheme was started in this university from 1976 to develop the young graduate students' personality through social and community development work. It is the largest organization in the country working on the thought of Swami Vivekanand and Mahatma Gandhi. The main principle of NSS is "Not me but you". Through this scheme, students are motivated towards the awareness about various social evils in the rural and urban community related to education, health, disaster management, environmental, voter awareness and agriculture and also enable them to solve their problem jointly at their own level. There are six functional NSS units in the university comprising 537 volunteers of different colleges Viz. College of Agriculture, College of Horticulture, College of Forestry, College of Home Science, Kanpur and Dr. B.R. Ambedkar College of Engineering & Technology, College of fisheries and College of Dairy Technology, Etawah.

Major activities undertaken by NSS volunteers by NSS volunteers during years 2019-20:

- Cleaning and repairing of university pond nearby ATIC building and other places in the University.
- Cleaning and repairing roads of Student Instructional Farm and Hostels
- Cleaning and repairing of play ground in front Ambedkar hostel Kanpur
- Organized mass scale plantation programme with Estate Officer in university campus and in selected villages and Planted and after care of more than 1500 plants.

NCC (Infantry) programme and activities

NCC is one of the premier youth organization in our country involved in propagating national unity and integrity amongst the youth. Its role in inculcating discipline, hard work, moral values and shaping them in to dynamic responsible citizen of the country had been well recognized. Accordingly NCC cell has been established and is working efficiently.

Details of activities undertaken during the last five years under ***NCC (Infantry) programme*** is given here as under:

S.N.	Year	Enrolled Cadets	Camp attended Camp Name - Cadets Number	Swachhata Abhiyan	Cadet Passed B Exam	Cadet Passed C Exam	Other Programme
1	2016-17	21	CATC190-18 CATC191-17	1	17	10	Environment Awareness Programme
2	2017-18	20	CATC191-10 CATC192-15 CATC193-12	1	19	12	1-Paryavaran Jagrukta Rally 2-Tree Plantation
3	2018-19	18	CATC193-14 CATC195-12 CATC199-10	1	20	16	Water Conservation Awareness
4	2019-20	18	CATC193-15 CATC1941-20	1	18	Awaited	Tree Plantation

General Programme

Initiative taken in strengthening of programme activities involving volunteers and other local development agencies.

- Management of Kishan Melas/ Exhibition by NSS Volunteers organized by our University
- Red Ribbon Club activities are running in College of Agriculture under NSS Programme in which HIV/AIDS awareness.
- Sven awareness lectures and four one day camp organized every unit about various social evils in the rural and urban community
- **Parthenium awareness week**

  Parthenium is a weed of global significant responsible for agricultural losses, human and animal health issues besides a great problem for biodiversity. To create awareness amongst the general public, farmers, school and colleges students and policy makers and planners we talked about the impact of the obnoxious weed and how to manage

this weed. Parthenium awareness week was celebrated in the month of August every year.

- **Beti padhao, beti bachao and Beti padhao, dahej mitao** awereness programmes and ralley organized
- **Communal Harmony campaign**

  Communal Harmony week was celebrated from November 19-25. Flag Day was organized on 23 November. Simultaneously, debate and essay competition also organized to motivate the volunteers.
- **AIDS Awareness Programme and Mega Rally**

  A rally was organized by Red Ribbon Club of the NSS in joint collaboration with District AIDS Control Association on International AIDS Day i.e. 1st December.
- **Youth day/weeks** was celebrated from January 12-19

  In which different competitive and cultural events have been organized and volunteers are honored with Vivekanand prizes
- **Women empower day** was celebrated on March 18, 2019 to aware the problem of women in present scenario.
- **World water day** was celebrated to aware the students and villagers about various ways and means to conservation and water harvesting.
- **Cleanliness Awareness Programme and Rallies**

  Swacchata campaigning programme and Rallies were organized by NSS volunteers
- **Voter Awareness Programme and Rallies**

  Voter awareness programme and Rallies were organized by NSS volunteers separately and in collaboration with Hindustan News paper
- **Yoga Day:** Yoga day was celebrated on 21 June, 2019
- **Cycle Day:** Cycle day was organized on 18 January, 2020.

Celebrations

Days: NSS day, Youth day, International Aids day, National Integration Day Sadbhavna Divas, International women Empower day, Independence Day, Gandhi Jayanti, Ambedker Jayanti. Ekta divas

Weeks: Yuva week

Other: Socio-economic survey of slums, *Ganga Safai Abhiyan* for ***"Aviral Ganga-Nirmal Ganga"***

S.N.	Activities celebrated	Date
1	NSS Day	24th September
2	National Youth Day	12th January
3	International AIDs Day	1st December
4	Sadbhavana Divas (Rajiv Gandgi Jayanti)	20th August
5	International Women Empowerment Day	8th March
6	Independence Day	15th August
7	Gandhi Jayanti/Swachcha Bharat Diwas	2nd October
8	Ambedkar Jayanti	14th April
9	Republic Day	26th January
10	International Unity Day (SVBP jayanti)	31st October
11	Swachchata Pakhwada	
12	Environment Day	5th June
13	Plantation Day	5th July
14	Mahila kisan Diwas	15th October
15	World health Day	7th April
16	Yoga Diwas	21st June
17	Chandra Shekjhar Azad Jayanti	23rd July

6.5.4.7. Language Laboratory:

It is required of any student to have a good command of the language for communication purposes, with clarity and accuracy being vital for effective and efficient communication. What helps one to acquire such proficiency in a language is the process and the method of learning that language. Mention which of these type of Conventional, Lingua Phone, Computer Assisted Language Laboratory and Multimedia Hi-Tech Language Laboratory are being used for language teaching in the college.

For developing good command of the language for communication purposes, with clarity and accuracy, the college computer laboratory is assisted with audio-visual aids for proficiency in writing and speaking language skills of the students. Computer assisted language laboratory and multimedia hi-tech language laboratory are being used for language teaching in the college. Approximately 32 computers are well connected with Wi-Fi system, which provides easy accessibility to the users. However, the medium of instruction and examination for all undergraduate programmes is English. Besides this a non-credit speaking english and personality development courses has been recently initiated to empower our students in communication skills

6.5.4.8. Culture Center:

Does the college has cultural center to empower student leaders to explore, celebrate, and educate the campus community about the diversity among them? Does the college offers an inclusive and reflective space, multicultural programming, and support services that encourage positive interaction, academic persistence, and growth among students, faculty, and staff?

There are abundant opportunities to participate in cultural activities that match students' particular interest and inclination. These center serve students looking for a diversion from academic life, or looking to bring about a significantly enabling impact on the community. Center also organize a variety of events that provide distinct opportunities for refining, learning, organizational management experience, exploring interest, meeting like-minded people, socializing outside of the classroom and enhancing professional and personal skills. If students don't find what they are looking for, we encourage them to start a new student club to explore their passion. There is something or other for everyone.

Cultural center’s goal is to increase awareness of performing arts in University as well as to discover the talent among students in music, art, dance, theatre etc. The center members minutely watch and learn the process of art and occasionally meet artists and painters to discuss the finer beauty of art. In music the members not only listen to the classical concerts and rock-shows but create their own bands and exhibit their own talent on various occasions. The students learn various forms of Indian and western dances. Activities like workshops and interactive sessions are organized to promote theatre. The center takes care of the ecological and environmental issues within the campus and suggests ways and means to reduce carbon emissions responsible for degradation and damage to the Earth's ecosystem. A road map to convert the campus into green campus has been prepared with the help of the eco club. The sports club organizes various sports events and also conducts yoga

sessions. An interesting place called "Zero Noise" has been constructed within the University Campus for meditation and yoga, where anyone can come and achieve peace of mind and stability of the body. Yoga and breathing exercises are also conducted. Students create projects of their choice and integrate with other members of the cultural center to create functional and indigenous models/tools.

6.5.4.9. Personality Development:

Personality development programme is aimed at increasing employability of the students. Whether the college has provisions for inclusion of functional grammar in Standard English, speaking skills, reasoning, group discussions interview skills, personal interviews, quantitative ability, verbal ability, mock tests and some special sessions to promote the personality development in the students?

Youth are energetic and active. The right direction to them may bring many positive changes, which can be seen in the society. Nation building can be possible only through youth development, for which imbibing the spirit in youth and in the right direction is very essential. Creating and adopting innovative techniques and practices need flow of positivity in directional manner so that it inculcates and nurtures the creativity and innovations among all stakeholders of University. We have to highlight the achievements and propose new teaching, research and extension concepts to develop and promote innovative and need-based scientific technologies to meet the demand of continuously changing social and economic needs together with an explicit analysis of our weaknesses and strengths. It is expected that approaches and advance concepts will prove useful for educationist, scientist and extension educationist to address the future challenges for growth and development of agriculture and related sectors in southern-western semi arid and central plain zone of Uttar Pradesh. The interaction of students and teachers need innovative practices for effective learning, good governance through innovative administrative measures.It is the most important skill of doing accurate things according to diverse situations. We endow our students with the best exposure by authentic internship and teaching practice to build up these valuable qualities.

College bestows students with diverse opportunity of growing expertise, classroom presentation extempore, mock conversation, group discussion and play and debate.

6.5.5. Physical Facilities:

6.5.5.1. Hostels:

Clearly mention the number of hostels available for the College students for boys and girls, separately with its total capacity, students per room accommodated in each hostel, mess facility, drinking water, indoor games specially for girls, cleaning of hostel premises, transport facility, emergency medical facility etc.

The Physical facilities including hostel, mess, Indore games, transport and medical facilities available at university headquarters is jointly shared by the students of different colleges located at Kanpur. The details of the hostel and other facilities is given below

SL No.	Student Hostels	Rooms	Seats	Plinth Area
1	Patel Hostel	181	180	G+2 4780.00 Sqm.
2	Abedkar Hostel	90	180	G+1 2320.00 Sqm.
3	Bhagat singh Hostel	90	180	G+1 2320.00 Sqm.
4	Dr. R.P. Hostel	50	50	G+1 1720.00 Sqm.
5	Tilak Hostel	70	140	G+1 2160.00 Sqm.
6	Raman & Bose	36	108	- 700.00 Sqm.
7	R.S.R.P. Hostel	50	100	G+1 1686.00 Sqm.
8	Karpuri Thakur Hostel	34	102	G+1 2298.00 Sqm.
9	Shubash chandra Bose	20	60	668.00 Sqm.
10	International Hostel	12	12	832.00 Sqm.
11	Shekhar Hostel	105	105	G+2 2996.36 Sqm.
12	APJ Hostel	50	50	G+2 2222.00 Sqm.

Guest House Facilities at Kanpur Campus

SN	Guest House	Plinth Area	Rooms/Suite
1	Teachers guest House	1785.00 Sqm.	26 Nos
2	Farmers guest House	1200.00 Sqm.	09 Nos
3	V.V.I.P. guest House	399.00 Sqm.	02 Nos
4	V.I.P. guest House	1078.00 Sqm.	70 Nos
5	Dr. Babu Singh Kisan Ghar	1225.00 Sqm.	05 Nos Suite & 11 Nos Hall
6	Sir Mayadas guest House	1368.00 Sqm.	14 Nos
7	Dr. Swami Nathan guest House	996.00 Sqm.	08 Nos
8	Narendra Mohan Community Centre	835.00 Sqm.	Rooms, Hall & Dinning Complete

Civic Facilities

SN	Particular	Plinth Area (Sqm.)
1.	Auditorium (Sitting capacity 833 Nos)	1994.34
2.	Dispensary	400.00
3.	Cafeteria	645.00
4.	Bank (SBI)	300.00
5.	Bank (IDBI)	355.00
6.	Post Office	30.00
7.	Sales Outlet (Namaste India)	15.00
8.	Police Chauki	65.00
9.	Badminton Hall	350.00
10.	Recreation Hall	294.00

11.	Swimming Pool	500.00
12.	Football Ground	1000.00
13.	Security Office	150.00

Faculty and Staff Residential Facilities

Type	No. of Quarters	Area (Sqm)
Type-A	425	11480.00
Type-B	51	3315.00
Type-C	81	6400.00
Type-D	06	720.00
Old type (Bungalow)	22	4400.00

6.5.5.2. Examination hall:

Mention the availability of number of examination halls, its capacity etc. for the College.

The University has three multipurpose big halls on the First Floor of the college of agriculture building having a 720 Sqm Plinth area for conducting various examinations at Kanpur which is being utilized by the different colleges.

6.5.5.3. Sports and Recreation Facilities:

Clearly mention the number of indoor and outdoor sports facilities available for the College students. A brief note on day to day management and use of these facilities shall be provided in the report.

Outdoor and indoor sports facilities available for the college students is given here in tabular form:-

SN	Particulars of Sports and Recreation facilities	Plinth Area (Sqm.)
1	Badminton Hall	350.00
2	Recreation Hall	294.00
3	Swimming Pool	500.00
4	Football Ground	1000.00
5	Table Tennis	
6	Carom and Chess	
7	Volley Ball	
8	Cricket Ground	

All these sports and recreation facilities are being extended and monitored by Dean Student welfare and his team.

6.5.5.4. Auditorium:

Does the college has auditorium? Mention its year of construction, sitting capacity and how frequently being used for the College functions.

University Auditorium popularly known as Kailash Bhawan is there with carpet area of 1994 Sqm and 833 seating capacity for organizing cultural programmes, annual function and other student activities.

6.5.5.5. Exhibition Hall/Museum:

Does the College have the Examination Hall/Museum? Mention about its use and special events being conducted in these units.

An Agricultural Museum has been established at the agricultural College building of Kanpur Campus having carpet area of 540 m^2 . There is a Horticulture Garden at Kanpur campus spread over an area of about 15.00 acres with a Herbal, orchards and green house.

6.5.6. Research Facilities

6.5.6.1. Postgraduate Laboratories and equipment

Clearly mention the department wise PG laboratories and equipment housed in individual laboratory in the Colleges along with any other research unit.

The list equipments available department of vegetable science for P.G. Students is given below

List of equipment's in laboratories

Thermo hygrograph
Kjeldhal distillation set
Spectrophotometer
Flame photometer
Digital balance
Plastic crates
Generator set
Auto clean machine
Hot Plate
Glass ware dryer
Mechanical shaker
Electronic balance
pH meter
Leminar Flow
Air purifier
Microscope

Details of farm facilities

24 ha. Total Land
15.6 ha cultivated Land
1.36 ha nursery & Garden
1.0 ha Polyhouse
01 Tractor
02 Tube bell (15HP)
One Harrow
Two Cultivator
One Rotavator
Threshing Floor- 14 m radius

Details of instructional facilities

Poly house- 04 units (440 sq. meter each)

Net house- 01 unit (20 X 13.5 meter)

Go down- 01 (13 X 8.5 meter)

Pre-cool chamber-01 unit (200 sq. meter)

Onion garlic storage- 01 unit (10.5 X 4.5 meter)

Laboratory and class room - 01 each (6.50 X 8.30 meter)

List of Equipments used in Processing Lab

Sl. No.	Name of Equipments	No. of Equipments
1.	Microwave Oven	1 One
2.	Automatic slide projector	1 One
3.	Refrigerator	1 One
4.	VCR	1 One
5.	Perfect make 4 KVA Stabilizer	4 Four
6.	Refracto meter	2 Two
7.	PH meter EM-36 make TEKNIK	1 One
8.	G.L.C Set	1 One
9.	Freeze- Dryer	1 One
10.	Temperature Controller	1 One
11.	Deep Freezer	1 One
12.	Spectro photometer	1 One
13.	Bottle Washing machine	1 One
14.	Retaurt	2 Two
15.	Canning Retaurt	1 One
16.	Steam jacked Kettle	1 One
17.	Screw Type juice extractor	1 One
18.	Sea mar	1 One
19.	Hydraulic juice pressure	1 One
20.	Cooling Unit	1 One
21.	Crown Corcking machine	2 Two
22.	Cain Sealer	5 Five
23.	Vacuum Filling Machine	1 One
24.	Lid Embossing Machine	1 One
25.	Dabble Seamar	1 One
26.	Body Reformer Plain	1 One
27.	Body Reformer stripped	1 One

28.	Play Jar	1 One
29.	Exhausting Machine	1 One
30.	12.5 KVA Generator	1 One

6.5.6.2. Research Contingency

A note on amount of research contingency for each department shall be provided. Whether it meets the students' demand?

Need based research contingency is provided by the University to the departments for smooth conduction of the research. In the department of Vegetable Science two AICRPs i.e. vegetable crops and potato and one network project on onion and garlic and one development programmes on seed spices is also running with sufficient grants under the head contingency to meet out the research expenditure on account of P.G. students.

6.5.7. Outcome/output

6.5.7.1. Student performance in National Examination

Provide detailed information in tabular form about student performance in JRF/ SRF/ NET/ ARS/and other national examinations for last five years. Only those students receiving fellowships should be mentioned here.

Students qualified in SRF/NET/ARS Examination:

Name of the student	Id. No.	Degree	Name of qualified examination	Year
Durgesh Kumar	HR0-345/19	Ph.D.	NET	2019
Virendra Kumar	HR0-346/19	Ph.D.	NET	2019
Arun Kr. Verma	HR-0280/18	Ph.D.	NET	2019
Mahendra Kr. Yadav	HR-0288/18	Ph.D.	NET	2018
Ravish Kumar	HR-0281/18	Ph.D.	NET	2018
Saurabh Dixit	HR-0282/18	Ph.D.	NET	2020
Satyendra Kumar	HR-0236/17	M.Sc.	NET	2016
Banke Lal	HR- 0234/17	Ph.D.	NET	2018

6.5.7.2. Students placement profile

Provide detailed information in tabular form about student performance in ARS/and other national examinations/State level examinations or equivalent. Year wise placement profile shall be provided.

Students Placement-

S.No.	Name of the students	Id. No-	Degree	Types of job (govt./private)	No. of students in higher study
1	Ravish kr.	HR-0152/16	Ph.D.	T.A. Deptt. og Ag. U.P.	
2	Abhishek Tiwari	HR-0154/16	M.Sc.	Lecturer Rama university mandhana	
3	Santosh Kumar	HR-0157/16	M.Sc.	PAS, U.P. Govt.	
4	Shreya Awasthi	HR-0201/17	M.Sc.	Ag. Officer PNB	
5	Durgesh Kumar	HR-0204/17	M.Sc.	T.A. Deptt. og Ag. U.P.	
6	Virendra Kumar	HR-0207/17	M.Sc.	T.A. Deptt. og Ag. U.P.	
7	Rishabh Sahu	HR-0208/17	M.Sc.	Ag. Training officer, KRIBHKO	
8	Anoop Kumar Rawat	HR-0206/17	M.Sc.	Ag. Officer Bank of India	
9	Ram Jiean	HR-0209/17	M.Sc.	Farm in charge, BNR Seed Co.	
10	Lalit Ahmad	HR-0269/18	M.Sc.	T.A. Deptt. of Ag. U.P.	
11	Mokil Ahmad	HR-0270/18	M.Sc.	T.A. Deptt. of Ag. U.P.	
12	Nagendra Kumar	HR-0273/18	M.Sc.	T.A. Deptt. of Ag. U.P.	

6.5.7.3. Awards / Recognitions/Certificates :

Provide information on awards/recognitions/certificates in tabular form for last five years separately for students and faculty.

Awards/Recognitions/Certificate received by the students during last five year

Degree programme	Name of the student	Id. No.	Name of the award/medal received
M. Sc.			
Ph.D. (Horticulture)-Vegetable Scence	Mahendra Kumar Yadav	HR-0288/18	Best paper presentation award by SWEFT, New Delhi

University Medals/ Awards to the M.Sc. (Horticulture) Fruit Science/ Vegetable science

Year	Gold Medal	Silver Medal	Bronze Medal
2017-18	Gargi GautamiPadhiary ID No. HR/ 0161/2016 OGPA – 8.66/10 Sub- Vegetable Science	Ankit Singh Bhadauria ID No. HR/ 0141/2016 OGPA – 8.39/10 Sub- Fruit Science	Mahesh Kumar Gupta ID No. HR/0144/2016 OGPA – 8.36/10 Sub- Fruit Science
2018-19	Shreya Awasthi ID No. HR/ 0201/2017 OGPA – 8.31/10 Sub- Vegetable Science	Tanushri Pandey ID No. HR/ 0210/2017 OGPA – 8.24/10 Sub- Fruit Science	Vikash Singh ID No. HR/0205/2017 OGPA – 8.04/10 Sub- Vegetable Science

- Dr. P.N. Bajpai Gold Medal for Horticulture (Fruit Science) for the year 2017-18 Conferred to Sri Ankit Singh Bhadauria, ID No. HR/ 0141/2016 , OGPA – 8.39/10.
- Dr. P.N. Bajpai Gold Medal for Horticulture (Fruit Science) for the year 2018-19 Confeered to Tanushri Pandey, ID No. HR/ 0210/2017, OGPA – 8.24/10
- University Book Prizes to the M.Sc. (Horticulture)- Fruit Science / Vegetable science

Year	I Position	II Position
2017-18	Ankit Singh Bhadauria ID No. HR/ 0141/2016 OGPA – 8.39/10 Sub- Fruit Science	Gargi Gautami Padhiary ID No. HR/ 0161/2016 OGPA – 8.66/10 Sub- Vegetable Science
2018-19	Tanushri Pandey ID No. HR/ 0210/2017 OGPA – 8.24/10 Sub- Fruit Science	Shreya Awasthi ID No. HR/ 0201/2017 OGPA – 8.31/10 Sub- Vegetable Science

Awards/Recognitions/Certificate received by the faculty (Vegetable Science) during last five year

Name of Teacher/ Scientist	Name of Awards	Name of Society/Institute/ Agency	Year	Remarks
Dr. I.N. Shukla	SAP fellowship award	Society of agricultural professionals	2015	For outstanding contribution in vegetable
Dr. Rajiv	Appreciation award	C.S. Azad Univ. of Agri. & Tech., Kanpur	2016	For significant contribution in organizing the workshop on entrepreneurship development in agriculture and allied sector at CSAUA&T, Kanpur on 22 September, 2016.
Dr. Rajiv	Azad Krishi Samman-	C.S. Azad Univ. of Agri. & Tech.,	2017	For outstanding contribution in organizing the National Conference on Organic

	2017	Kanpur		Farming for Sustainable Agriculture and Livelihood Security under Changing Climatic Conditions at CSAUA&T, Kanpur during 12-13 December, 2017.
Dr. Rajiv	Ist prize in Oral Presentation	C.S. Azad Univ. of Agri. & Tech., Kanpur	2017	For best oral presentation of research paper entitles "Yield and economics of coriander-radish cropping system under organic farming" in National Conference on Organic Farming for Sustainable Agriculture and Livelihood Security under Changing Climatic Conditions at CSAUA&T, Kanpur during 12-13 December, 2017.
Dr. Rajiv	Award of Excellence	C.S. Azad Univ. of Agri. & Tech., Kanpur	2018	For significant contribution
Dr. Rajiv	Award of Excellence	C.S. Azad Univ. of Agri. & Tech., Kanpur	2018	For significant contribution
Dr. D.P. Singh	Appreciatio n award	Thailand society of Sugar Cane Technologist (TSSCT), Thailand	2018	For outstanding contribution in organizing the 6th International Sugar Conference (IAPSIT-2018) at Udan Thai, Thailand on March 06-09, 2018.
Dr. D.P. Singh	Best Poster Presentation Award	Thailand society of Sugar Cane Technologist (TSSCT), Thailand & International Association of Professionals in Sugar and Integrated Technologies (IAPSIT)	2018	For best poster presentation of research paper entitled "Harnessing the potential …… farmers income" in 6th International Sugar Conference (IAPSIT-2018) at Udan Thai, Thailand on March 06-09, 2018.
Dr. D.P. Singh	Award of Excellence	C.S. Azad Univ. of Agri. & Tech., Kanpur	2018	For significant contribution
Dr. Sanjive Kr. Singh	Young Scientist Award	Global meet at Indonesia organized by Hi-tech horticultural society	2018	For outstanding contribution in vegetable and spices crops
Dr. I.N. Shukla	Best scientist award	Society of agricultural professionals	2018	For significant contribution in agricultural science
Dr. D.P. Singh	Fellow Award	Society for Sugar Research & Promotion, New Delhi, India	2019	For outstanding contribution to Stevia cultivation on February 16-19, 2019.

Dr. D.P. Singh	Fellow Award	Society for Sugar Research & Promotion, New Delhi, India	2019	For outstanding contribution to Stevia cultivation on February 16-19, 2019.
Dr. Sanjive Kr. Singh	Appreciation award	Additional City Commissioner Nagar Nigam Kanpur	2020	For outstanding contribution during lockdown period
Dr. Sanjive Kr. Singh	Appreciation award	DHO, District horticulture office Kanpur	2020	For outstanding contribution during lockdown period
Dr. Sanjive Kr. Singh	Appreciation award	Amar Ujala newspaper Kanpur	2020	For outstanding contribution during lockdown period

Awards/Recognitions/Certificate received by the faculty (Fruit Science) during last five year

Sr.No	Year	Name of Scientist	Name of Award	Name of the society/agency/Institute given the award
1	2015	Dr.V.K.Tripathi	Young Scientist Award	Astha Foundation, Meerut(UP)
2	2016	Dr.V.K.Tripathi	Fellow Award 2015	National Conference on Recent Advance in Diversified Agricultural System at Muzaffer Nagar(UP)
3	2016	Dr.V.K.Tripathi	Dr.Ram Kripal Pathak Vishist Krishi Vaigyanic Horticulture (Fruits) Purashkar 2-15	CSAUA&T Kanpur
4	2016	Dr.V.K.Tripathi	Excellence in teaching award	Astha Foundation, Meerut(UP)
5	2017	A. K. Dubey, Sanjive Kumar Singh, Saurabh Dixit and Manoj Mishra	First prize in poster presentation	National Conference on Farmers Centric Agri-innovation for sustainable development held *at* CSAUA&T, Kanpur
6	2017	Dr. A. K. Dubey	First prize in poster presentation	CSAUA&T, Kanpur
7	2017	Dr.V.K.Tripathi	Fellow Award 2017	Society for Scientific development in Research & Tech. ,MPUAT, Udaipur, Rajasthan
8	2018	Dr.V.K.Tripathi	Outstanding Achievement Award	Global research initiatives for suitable agriculture & allied sciences (grisaas-2018) Rajasthan Agriculture Research Institute , Durgapura, Jaipur, Rajasthan

9	2019	Dr.V.K.Tripathi	Prof. P.B.Patil Memorial Award 2019	Horticulture in the vanguard of climate change and Urban Environment (HYCCUE-2019), Annamalai Univeristy, Annamalai Nagar, Tamilnadu
10	2019	Dr.V.K.Tripathi	ISHRD Best Teacher Award-2018	Indian Society of Horticultural Research and Development,Ranikhet, Chaubattia-263 651, Almora (Uttarakhand)

6.5.7.4. Employability

What are the set of achievements such as skills, understandings and personal attributes that make College students more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy? Provide one page note on the subjects.

Faculty of the college of Horticulture is well educated, highly experienced and competent enough to develop professional skills and understanding and imbibe personal attributes in the students. An extensive training is given to the P.G. students in the field of nursery management, hybrid vegetable seed production, protected cultivation and organic vegetables production which ultimately provide golden opportunity to the students in getting employment.

6.5.8. SSR of the College must have the SSR of all its Degree Programmes (following section 6.4), then the report of the Colleges shall be considered.

6.5.9. Certificate (Applicable when SSR is submitted for programmes & College)

I, **Dr. Dharam Raj Singh** , Dean College of Horticulture, Kanpur hereby certify that the information contained in section 6.4 and Section 6.5.1 to 6.5.7.4 are furnished as per the records available in the college and degree awarding university.

Date: 10 Jan, 2021
Place: Kanpur

(Dharm Raj Singh)
Dean,
College of Horticulture, Kanpur