

C. Name of the Programme: Ph. D. in Vegetable Science

6.4.1. Brief history of the Programme:

Doctoral degree programme of the Department of Vegetable Science (erstwhile Department of Vegetable Crops) was initiated in 1996 with the establishment of the establishment of the Faculty of Horticulture in the University to strengthen the academic transactions including research works and extension activities in Horticulture as a whole and Vegetable science in particular. Among the different states in India, West Bengal ranks top contributing 16% of the total production. Large pool of small and marginal farmers has taken vegetable farming as their viable livelihood security. The Department is also functioning as an effective linkage for the vegetable farmers, research and extension workers of various stakeholders, Govt., Semi-Govt. and Non-Govt. Organizations.

Objectives:

- This program aims to train and ignite the innovation power of the students for bringing problem-based solutions in different arena of Vegetable Science.
- To overall development of students fit for generating new ideas in teaching and research in the areas of Vegetable Science.

Accomplishment:

- Our Doctoral degree students have become Scientist in Agricultural Research Service, ICAR (3) and Assistant Professor in different Universities (7) like, UBKV, Bihar Agricultural University, Ramkrishna- Vivekananda University, Central Agricultural University and several private universities.
- Around twenty (20) number of our Doctoral degree students have been placed in several prestigious jobs like Assistant Director of Horticulture (14), Horticulture officer of cinchona Board, department of Horticulture and Food Processing Industries, Govt. of West Bengal, Horticulture officer of other state (2), Subject Matter Specialist, KVK (1)
- Some 5-6 Doctoral students also joined the R&D of multinational seed companies.
- About 10 Doctoral degree students are attached to research works under several research projects funded by ICAR, BARC, DST, DBT, PPV & FRA and NHRDF, Govt of India and international organization like ICARDA that are being implemented in the Department of Vegetable Science.



- With the doctoral students' active participation, Departmental faculties developed a few varieties of brinjal, vegetable cowpea, chilli, okra and advanced mutant lines in snake gourd and Faba bean lines over the last five years.

6.4.2. Faculty Strength

| SL. No. | Type of Faculty | Sanctioned Faculty | Faculty in place | Vacant position | Faculty recommended by the ICAR |
|---------|---------------------|--------------------|------------------|-----------------|---------------------------------|
| 1. | Professor | 1 | 0 | 1 | 1 |
| 2. | Associate Professor | 3 | 2 | 1 | 1 |
| 3. | Assistant Professor | 5 | 5+1* | 0 | 4 |

* Faculty placed in AICRP on Vegetable Crops

6.4.3. Technical and Supporting staff

| SL No. | Category of Staff | Sanctioned Staff | Staff in place | Vacant position | No. of Staff recommended by the ICAR |
|--------|---------------------------------|------------------|----------------|-----------------|--------------------------------------|
| 1. | Technical Assistant | 1 | 1 | 0 | 2 (Lab Assistant) |
| 2. | Laboratory Attendant/ Assistant | 1 | 0 | 1 | 1 (Field assistant) |
| 3. | Office Assistant | 1 | 1 | 0 | 2 (Office Assistant) |
| 4. | Store keeper | | | | |
| 5. | Field worker | 1 | 0 | 1 | |

6.4.4. Classrooms and Laboratories:

6.4.4.1. Number of Classroom: 02

| Room | Purpose (Class/Practical) | Area (sq. m) |
|------|---------------------------|--------------|
| 1. | Class room (PG & PhD) | 25 |
| 2. | Class room (PG & PhD) | 15 |

6.4.4.2. Number of Functional Laboratories:

| SI No. | Name of Laboratory/ Facility | Area (Square-metre) | No. of Supporting Staff |
|--------|-------------------------------------|---------------------|-------------------------|
| 1. | PG and Ph.D. laboratory - 1 | 55.74 | 01 |
| 2. | PG and Ph.D. laboratory - 2 | 29.73 | |
| 3. | Laboratory of AICRP Vegetable crops | 25.00 | |



6.4.4.3. List of major equipment, laboratories, farm facilities, workshops and other instructional units

| SL. No. | Name of Laboratory/ Facility | List of major equipment and facilities |
|----------------|-------------------------------------|---|
| 1. | PG laboratory -1 | <ol style="list-style-type: none"> 1. Precision balance 2. Single Pan Balance 3. Hot air oven 4. Hot Plate 5. Leaf area meter 6. Digital micro-centrifuge 7. Digital Lux meter 8. Spectrophotometer 9. Digital pH meter 10. Refractometer (Digital + manual) |
| 2. | PG laboratory – 2 & Vegetable Lab | <ol style="list-style-type: none"> 1. Cold centrifuge 2. Refrigerator 3. Deep Freezer 4. Compound Microscope with photographic attachment 5. Binocular microscope 6. Digital moisture meter, 7. Double Distillation Set 8. Digital thermometer 9. Digital slide callipers 10. UV- Vis Spectrophotometer |
| 3. | Farm facility | <p>Well-equipped poly houses and net house facilities for growing different vegetable crops</p> <p>Germplasm blocks for different vegetable crops</p> <p>Hybridization blocks</p> <p>Well-arranged Research fields with irrigation and machinery facilities</p> |

6.4.4.4. Justify whether these facilities are sufficient to meet the course curricula requirement

The present infrastructure facilities in the farm and laboratories are sufficient to meet the course curricula requirement. Expenditure required for different research programme leading to thesis work for the fulfilment of the degree programme is incurred from the monthly contingent grant of the University. However, separate financial grant for persuasion of research programme for the thesis would be beneficial for the student.

6.4.4.5. Number of theory batches for the Degree Programme: 01

6.4.4.6. Number of Practical Batches for the Degree Programme: 01



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

The practical syllabi are successfully catered with the available facilities. Facilities are given individually to all the students to make them skilful enough for the entire practical. Horticulture Research Station, Mondouri, Central Research Farm, Gayeshpur and C-Block farm for AICRP Vegetable crops are available for taking practical and doing research works for Ph.D. thesis work.

6.4.6. Supervision of students in Ph D Programmes:

6.4.6.1. Total Number of Students perusing the Degree at Present: 19

6.4.6.2. Total number of faculties supervising the students: 9

| | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
|--------------------------|---------|---------|---------|---------|---------|
| No. of students | 10 | 12 | 16 | 19 | 19 |
| No. of eligible teachers | 9 | 9 | 9 | 9 | 9 |

Eligible Criteria to become a PhD Advisor:

(Clause 6.03 of the BCKV Regulations regarding Doctoral Degree Programme, 2019)

6.03. Recognition of chairperson / Member of Advisory Committee

- (i) A teacher of the Viswavidyalaya as defined in the Act having at least three (3) years of research and/ or teaching experience after a doctoral degree and at least seven (7) publications after the doctoral degree or joining in service as applicable in the NAAS/ UGC rated journals and /or peer reviewed journals with impact factor as approved by the Board of Studies of the concerned department and subsequently by the PG-UG Council of the respective Faculty, if required, may be recognised as chairperson / member of the Advisory Committee of a student under doctoral degree program.
- (ii) A teacher of the Viswavidyalaya without Doctorate degree but having at least 10 years of research / teaching experience and at least seven (7) publications in the NAAS/ UGC rated journals and /or peer reviewed journals with impact factor as approved by the Board of Studies of the concerned department and subsequently by the PG-UG Council of the respective Faculty, if required, may be recognised as chairperson /member of Advisory committee of a student under doctoral degree program.
- (iii) The teachers of the Viswavidyalaya who have registered themselves for the doctoral degree programme shall not be eligible as the Chairman / Member of the Advisory committee of a student.

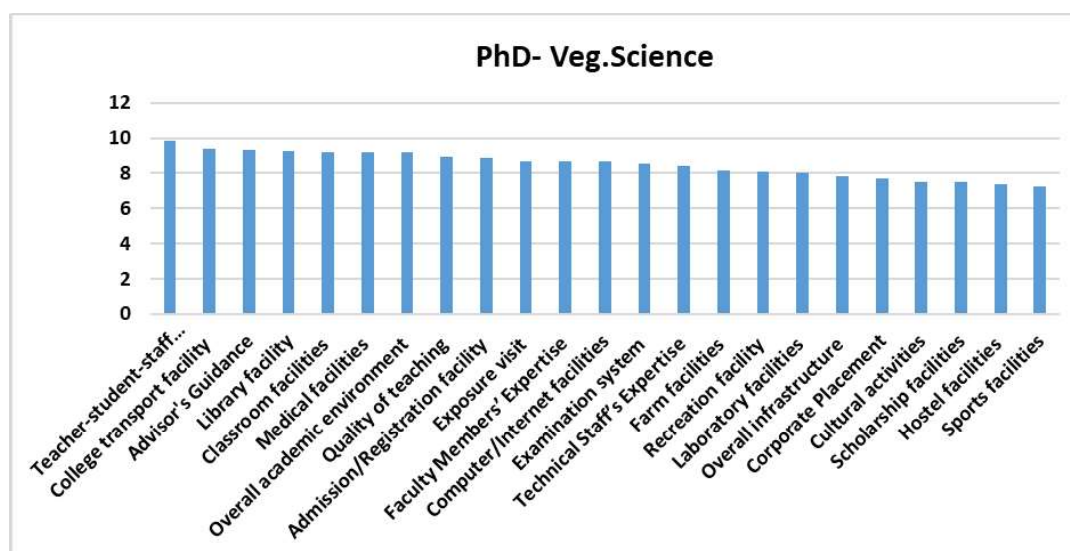
* Documentary evidence attached as annexure at the end



6.4.7. Feedback of stakeholders:

6.4.7.1. Mention the feedback mechanism

Feedback from the students was conducted in Google Forms using standard questionnaire (24 questions) developed on the basis of comprehensive dimension of Agricultural Education in BCKV campus. The dimension covered all the physical and academic facilities provided by the University. The responses were collected on a 10-point scale (1 denotes poorest facility and 10 denotes excellent facility) from the students of this programme. Individual responses were analyzed statistically (by computation of weighted average of every facility as perceived by the students) for the programme and the result was graphically presented in the SSR. As a documentary evidence, individual responses collected from the students' email ID through Google Forms have been stored in our computer (Google Drive). On demand, of ICAR Peer Review Team, the link for the individual responses can be shared.



Comment: Doctoral students of PhD- Vegetable Science Programme are extremely happy with nearly all the facilities provided by the University. Facilities like Corporate Placement and Exposure Visit have some scope for improvement.

6.4.7.2. What action the University has taken to address the issues raised in the feedback?

Action taken

The feedback reports were shared with concerned sections of the university. Students responded very positively with regards to majority of the facilities provided by the university. However, with respect to timely publication of results and corporate placement, there are ample



scopes of improvement. Considering this feedback, the university has taken administrative actions for publication of results within stipulated period as reflected in the circulars of the concerned authorities. As corporate placement, to a great extent, is beyond the purview of the university itself, the Placement Cell continuously in touch with the potential employers to utilize the vacancies in favour of BCKV.

Impact

We are expecting very positive impacts in near future on these issues as some steps have already been taken in recent times as mentioned above.

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

| Academic Year | Sanctioned strength | Actual intake | Attrition (%) |
|---------------|---------------------|---------------|---------------|
| 2016-17 | 5 | 5 | 0 |
| 2017-18 | 8 | 8 | 0 |
| 2018-19 | 9 | 9 | 0 |
| 2019-20 | 10 | 10 | 0 |
| 2020-21 | 9 | 9 | 0 |

6.4.9. Information Communication Technology Application in Curricula Delivery:

The systematic use of ICT tools in classroom instruction makes the teaching learning process more effective and highly interactive. Generally, in the pre-pandemic condition the use of ICT was limited to classroom lecture through power point presentation using LCD projector. The use of ICT tools became more dominant as the pandemic situation started. The University has to run the teaching and learning process completely in distance mode *via* electronic networks. The ICT tools used for the curriculum delivery for different theory and practical classes at regular basis are Google meet, Zoom and Microsoft Team. E-mail, Whatsapp etc. has been used for delivering lecture notes to the students.

I, the **Dean, Prof. Pallab Datta**, 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.

Place: Mohanpur

Date: 02-11-2021

Pallab Datta

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(Signature of Dean of the Faculty with Date & Seal)

