J. Name of the Programme: M. Sc. (Ag.) Molecular Biology and Biotechnology

6.4.1. Brief History of the Programme:

M. Sc. (Ag.) in Agricultural Biotechnology was started in 2013-14. However it is renamed as **M. Sc. (Ag.) in Molecular Biology and Biotechnology in 2021**. The thrust areas of teaching and research are molecular breeding, molecular diagnostics, recombinant DNA technology, plant tissue culture & genetic transformation, genomics, proteomics & bioinformatics.

Objective

- To apprise the students about the role of molecular biology and biotechnology in society and management of environment for sustainable eco-system and human welfare leading to development of manpower to serve the different stakeholders including higher education and research.

Accomplishment

- Two students are pursuing Ph. D. in our university with University Research Scholarship. One student is pursuing PhD enjoying UGC sponsored Swami Vivekananda Single Girl Child fellowship. One student is pursuing PhD at Punjab Agricultural University, Ludhiana after qualifying ICAR-SRF.

- Five students qualified ICAR-NET, One student qualified Jawaharlal Neheru Memorial Fund, One student qualified UGC-Minority Fellowship, One student qualified DBT-JRF, One student qualified GATE-Biotechnology, One student qualified GATE-Life Science, One student qualified National Fellowship for OBC, and one student qualified Swami Vivekananda Fellowship for Single Girl Child Scholarship during their study in our department.

- Students are also getting placement in public sector like Agriculture development officer or similar rank state government posts as well many student got placement in nationalized banks like Central Bank, Syndicate Bank, State bank of India and Punjab National banks through competitive examination. One student joined as Range officer in Bihar Government and another student got service in Central Warehouse, Pondicherry. One of our students is working as District Manager (Purulia), AICIL (Agricultural Insurance Company).

6.4.2. Faculty Strength

SL. No.	Type of Faculty	Sanctioned Faculty	Faculty in place	Vacant position	Faculty recommended by ICAR
1.	Professor	1	0	1	
2.	Associate Professor	1	1	0	
3.	Assistant Professor	2	2	0	

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 Asst Gr.-III	1	1	0	
2.	Field Assistant Gr. II	1	1	0	
3.	Laboratory Attendant GR. III	1	0	1	
4.	Junior Assistant	1	0	1	
5.	Junior Storekeeper	1	0	1	
6.	Office Attendant Gr. III	2	1	1	

6.4.4. Classrooms and Laboratories:

6.4.4.1. Number of Classroom: One

Sl No.	Class room	Area (Square-metre)	Sitting capacity
1	**One PG Class room**	48	15 students

6.4.4.2. Number of Functional Laboratories: 4

Sl No.	Name of Laboratory/ Facility	Area (Square-metre)	No. of Supporting Staff Attached
1.	**General Laboratory**	48 (15 students)	2
2.	**UG Laboratory**	60 (30 students)	
3.	**Plant Tissue Culture Laboratory**	24 (05 students)	
4.	**PG laboratory**	60 (15 Students)	

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

SL. No.	Name of Laboratory/ Facility	List of major equipments and facilities
1.	**General Laboratory**	Deep freezer, Hot air oven, Double distillation set (glass), Steel distillation set, Water bath
2.	**UG Laboratory**	Electronic balance, High speed centrifuge, Laminar Air Flow, UV transilluminator, Gel documentation system, Deep freezer, Hot air oven, pH meter, Microcentrifuge, PCR Machine, Electrophoresis System, Water bath, UV-visSpectro

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

SL. No.	Name of Laboratory/ Facility	List of major equipments and facilities
3.	**Plant Tissue Culture Laboratory**	Orbital Shaker, Electronic balance, Laminar Air Flow, Deep freezer, BOD incubator. pH meter, Normal Shaker, Incubator shaker (4°C - 60°C), Plant Growth Chamber, Glass bead sterilizer
4.	**PG Laboratory**	Electronic balance, High speed centrifuge, Laminar Air Flow, Vertical gel electrophoresis, UV transilluminator, Gel documentation system, Deep freezer, BOD incubator, pH meter, Orbital shaking incubator, Deep freezer (-80), UV-Vis Spectrophotometer, PCR Machine, Electrophoresis System, Water bath

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

Presently 5 seats are allotted for admission to M. Sc. programme. In respect of conducting practicals as per curricula, these facilities are good enough for successful accomplishment with some limitations of human resources (Non teaching staff in particular) and space which will be resolved soon as committed by Administration.

6.4.4.5. Number of theory batches for the Degree Programme- 1

6.4.4.6. Number of Practical Batches for the Degree Programme-1

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

Approximately 90% of the practical syllabus is successfully done with the available facilities. Facilities are given individually to all five students to make them skillful enough for the entire practical modules. The department has limitation with respect to human resources and space at present, which could be resolved in future with the active help of the administration for betterment of the programme.

Practical manual Published

1. ABT 505: Biotechnology Lab-I (0+3) for 1st semester
2. ABT-553: Bioinformatics (2+1) for 2nd semester
3. ABT-551: Plant Tissue Culture and Genetic transformation (2+2) for 3rd semester
4. ABT 602: Biotechnology Lab-II (0+3) for 3rd semester

6.4.6. Supervision of students in PG Programme:

6.4.6.1. Total Number of Students pursuing the Degree at Present: 0

6.4.6.2. Total Number of faculties supervising the Students: 3

Status	2016-17	2017-18	2018-19	2019-20	2020-21
Number of Students	3	4	5	3	0
Number of eligible Faculty	3	3	3	3	3

Eligible Criteria to become a PG Advisor:

(Clause 4.08 of the BCKV Regulations regarding Masters' Degree Programme, 2019)

4.08 Advisement:

A Chairperson shall be assigned to each student by the Head of the department in consultation with the Board of Studies (BOS) from amongst the internal member of BOS in which the student is registered. The chairperson must be associated with regular post graduate teaching program of the concerned department. The students should be allotted to the Chairpersons following the norm as laid down below.

(i) Head of the department, in consultation with the Board of Studies, will prepare a list of eligible teachers according to seniority, keeping continuity of the previous years.

(ii) Student will not be allotted to the teachers having less than (2) two years of regular service in the Viswavidyalaya at the time of allotment of the student.

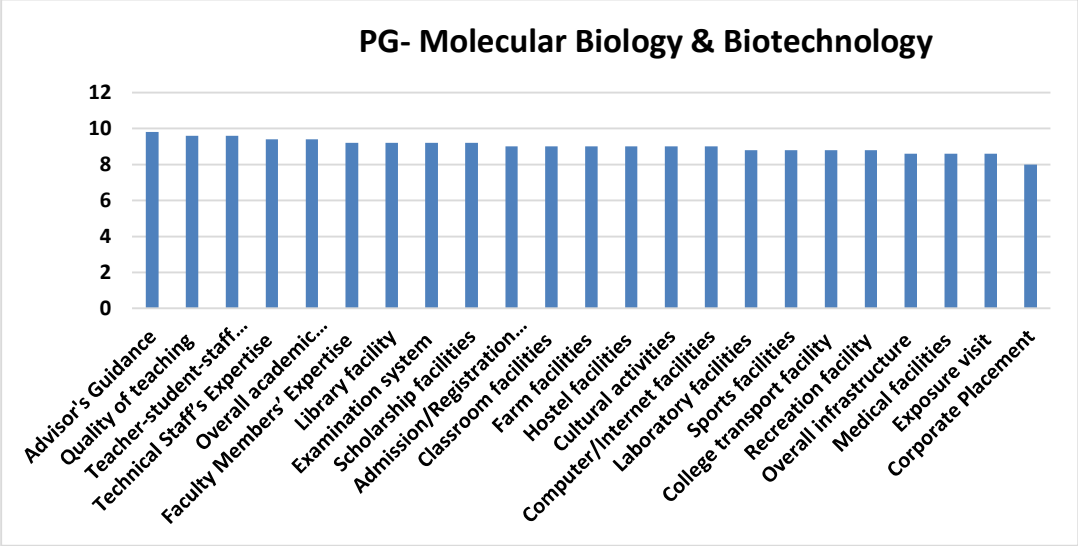
(iii) Student will not be allotted to a teacher when he /she is on lien.

* Documentary evidence attached as annexure-I

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 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: Masters' degree students of Ag. Biotechnology Programme are extremely happy with all the facilities provided by the University.

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	3	33.3
2017-18	5	2	0
2018-19	5	4	25.0
2019-20	5	0	0
2020-21	5	0	0

6.4.9. ICT Application in Curricula Delivery:

LCD Projectors and computers in both classrooms and practical room. Facilities of computers with necessary software/tools are available for Bioinformatics course.Though we did not have any M. Sc. students in our department for last two years, we offered all the courses for the M.Sc. students of other departments for minor/ supporting courses. We have conducted online classes and continuously under the pandemic situation utilizing different online platform and social media like google meet, google form, email, Whats up including university website.

I, the Dean, **Dean**, **Prof. Subhendu Bikash Goswami**, 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

Dean
Faculty of Agriculture
Bidhan Chandra Krishi Viswavidyalaya
Mohanpur, Nadia, West Bengal

.....

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