Faculty of Agricultural Sciences & Allied Industries

Rama University, Uttar Pradesh, Kanpur

(Vide U.P. Act No. 1 of 2014 as passed by State Legislature and recognized by UGC U/s 2 (f))

F.N.Agri./Dean/2025/717.1 Dated: 15/7/2025

NOTICE

This is to inform all concerned that Faculty of Agricultural Sciences & Allied Industries will be conducting a **"Board of Studies (BOS)"** meeting on **18th July 2025**.

All Board of Studies (BOS) members are requested to kindly make it convenient to attend.

(Dr. Aneeta Yadav)
Dean
Faculty of Agricultural Sciences
& Allied Industries

Dean
Faculty of Agricultural Sciences and Allied Industries
Rama University, Mandhana, Kanpur (U.P.)

Rama University Uttar Pradesh, Kanpur

Ref: RU/FASAI/BOS/2025/ **Dated:** 18/7/2025

Faculty of Agricultural Sciences & Allied Industries

Minutes of Meeting

Boards of Studies

A meeting of Boards of Studies for **B.Sc. (Agriculture), M.Sc. Agriculture (Genetics and Plant Breeding/Agronomy/Horticulture (Fruit Science & Vegetable Science) /Soil Science/Plant Pathology/Agriculture Extension/ Agricultural Economics) and Ph. D. in specialized fields of Agriculture** held on 18th July 2025 at 11:00 AM in Dean Office. The following members were present:

1. Dr. Aneeta Yadav - Chairperson
2. Dr. Vinay Joseph Silas - Member
3. Dr. Kartikay Bisen - Member
4. Dr. Ravi Kesh Pal - Member
5. Dr. Raghvendra Singh - Member
6. Dr. Anuj Tiwari - Member
7. Dr. Ashish Srivastava - Member

The following members agreed to review the minutes.

1. Dr. D. D. Yadav - External Member
2. Dr. U. K. Tripathi - External Member
3. Dr. Anand Singh - External Member
4. Dr. A. K. Singh - External Member
5. Dr. Debjyoti Sen Gupta - External Member

6. Dr. A. K. Pal - External Member

7. Dr. Satendra Kumar - External Member

8. Dr. O. P. Singh - External Member

Agenda:

1. **Action Taken Report (ATR) on Minutes of Previous Meeting.**

   The BOS committee confirmed the minutes of the BoS meeting held on **19th September, 2024.**

2. Review of the existing programs and their curricula

S. No.	Item No.	Existing	Recommendation /Action Taken
1.	**RU/FASAI/BOS/2025/001** To review the persisting syllabus of B. Sc. Ag.& M. Sc. Ag. and to recommend the changes required for the academic session 2024-25. The incorporation of attainment matrix with reference to PO and CO.	ICAR Vth Dean's Committee.	The committee recommended tofollow the persisting syllabus as per the ICAR Vth Dean's Committee. The incorporation of attainment matrix with reference to PO and CO may be introduced as per the need, in the academic session 2025-26 for UG program towards excellence in teaching learning evaluation.
2.	**RU/FASAI/BOS/2025/002**Panel of External Examiners	-	Panel of external examiners for semester final exams as well as practical exams is submitted for approval
3.	**RU/FASAI/BOS/2025/002** To review the persisting syllabus of M.Sc. Ag & Ph.D. To recommend the change required for the academic session 2025-26.	-	The committee recommended to follow the persisting syllabus

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3. Recommendation on New courses/Short term training

S. No.	Item No.	Feedback from Faculty/Student	Recommendation /Action Taken
1	**RU/FASAI/BOS/2025/003** To Consider incorporation of JeevanKaushal 2.0, IKS and NEP for the Academic session 2025-26	Based on the need and the relevance of the prescribed syllabus by ICAR	The committee recommended that the syllabus already covers the major aspects of NEP like multidisciplinary courses, continuous assessment, elective subjects as well as skill oriented concerns. In compliance with IKS, the subjects like Agricultural Heritage UGR 111 and other fundamental courses are already exists, hence can be continued for the Academic session 2025-26
2	**RU/FASAI/BOS/2025/004** To Consider the syllabus of Ph.D. (Agri. Extension) as a new programme for the Academic session 2025-26	Based on the subject demand and Query by students	The committee recommended the syllabus and programme to be run without any change for Academic session 2025-26 without any change.
3	**RU/FASAI/BOS/2025/005**Conduction of career oriented short term courses (30 Hours)	Training/ certificate based short term courses for developing practical skills is suggested	Few short term courses are proposed for enhancing the knowledge and skills of students. Any new trend based course apart from the mentioned titles may also be introduced as per the requirement: 1. "Hands on training on basic Plant tissue culture techniques" 2. "Analysis and testing for quality maintenance in seed production" 3. "Transforming Farming with DSR" 4. Any other

			trending and relevant topics as per the need of time.

4. **Consideration of the curricula of the new programs**

S. No.	Item No.	Feedback from Faculty/subject experts/Industries	Recommendation /Action Taken
1	**RU/FASAI/BOS/2025/006**Exposure visits (Industry and Institutes)	All the courses are already based on entrepreneurship skills, recent trends and practical based applications to enhance the knowledge of students.	Applicability of the courses will be thoroughly discussed along with exposure visits as per need of the subject.

5. Review of Teaching Process/Pedagogy

S. No.	Item No.	Existing	Recommendation /Action Taken
1	**RU/FASAI/BOS/2025/007**Enrichment in teaching Pedagogy for better understanding	Audio visible aids, Projectors, white board, Peaceful learning environment	Proper interaction with students, involve the students in training & learning program and experimental learning by doing principle must be adopted.

6. Result Analysis: --- Summary of Result Analysis of the students' performance in the previous semester examination was presented and it was suggested that the course instructors should conduct remedial classes for the students whose performance was not found satisfactory and the subjects where results are below standards.

7. Feedback Analysis: --- Analysis was performed based on summary of already collected feedback from students and the course instructors have been instructed for improvement in teaching pedagogy for better understanding of students in the cases where the feedback is below average.

8. Any other issue with the permission of the Chair: ---- No

The meeting concluded with a vote of thanks to the chair. Date of the Next Meeting: to be decided and conveyed later

Dr. Aneeta Yadav
(Chairperson)

Encl.: Recommended Evaluation scheme and Curricula (If modified) attached for consideration and approval.

CC:
1. Dean, Academic Affairs
2. Registrar Office

RAMA UNIVERSITY UTTAR PRADESH, KANPUR

Faculty of Agricultural Sciences & Allied Industries

SYLLABUS & EVALUATION SCHEME

Ph.D. Genetics & Plant Breeding

[Effective from the Session 2025-26]

Report on Feedback on Genetics and Plant Breeding by Industry and Stakeholders

Genetics and plant breeding are essential in tackling global issues such as food security, sustainable agriculture, and climate change adaptation. To align research efforts with real-world needs, it is important to gather insights from industry stakeholders. This report summarizes key feedback collected through interviews, surveys, and consultations with representatives from various sectors.

1. Need for Enhanced Crop Traits:

Stakeholders emphasized a strong demand for crop varieties with improved characteristics such as higher yield, tolerance to environmental stresses (e.g., drought, heat, pests), disease resistance, and better nutritional content. The industry seeks breeding solutions that can effectively address challenges like climate variability, pest infestations, and declining soil health.

2. Adoption of Advanced Technologies:

There was widespread support for integrating advanced tools in breeding programs, including genomic selection, marker-assisted breeding, gene editing, and high-throughput phenotyping. These technologies were seen as key to accelerating genetic gains and creating customized crop solutions for diverse agro-climatic conditions.

3. Emphasis on Sustainability and Climate Resilience:

Sustainability emerged as a top priority. Stakeholders advocated for the development of crop varieties that require fewer chemical inputs, use water more efficiently, and support soil health. There is also a strong interest in breeding crops that are resilient to extreme weather events and adaptable to changing climate patterns.

4. Importance of Collaboration and Knowledge Sharing:

Collaborative efforts among academic institutions, industry, and government agencies were identified as vital for driving innovation in genetics and plant breeding. Stakeholders expressed interest in partnerships that provide access to advanced technologies, genetic resources, and expert knowledge.

They also stressed the need for effective knowledge transfer and outreach to ensure research outcomes are widely adopted.

5. Regulatory and Market Dynamics:

Navigating regulatory environments and understanding market trends were highlighted as key considerations. Stakeholders called for transparent and science-based regulatory frameworks, especially concerning gene editing technologies. Additionally, aligning breeding efforts with consumer preferences and market demands is seen as critical for product development and commercialization.

Conclusion:

The feedback obtained from industry stakeholders underscores the importance of genetics and plant breeding in addressing current and future challenges in agriculture. There is a strong demand for innovative breeding solutions that enhance crop performance, sustainability, and resilience while addressing regulatory, market, and societal considerations. Collaboration, technology adoption, and knowledge exchange will be critical for driving advancements in genetics and plant breeding that benefit farmers, consumers, and the environment.

BoS Chairman

Dean

RAMA UNIVERSIT, UTTAR PRADESH, KANPUR

Faculty of Agricultural Sciences & Allied Industries

Department of Genetics and Plant Breeding

Programme: Ph. D Genetics and plant Breeding

Action Taken Report based on Feedback at BoS held on 18.07.2025

- Industry professionals were invited to engage with and deliver talks to the students.
- Students undertook visits and interacted with progressive farmers, seed industry experts, marketing professionals, and personnel from ICAR research stations to explore thé latest technological advancements.
- On-campus research trials related to genetics and plant breeding are being actively conducted by the students.

BoS Chairman

Dean

RAMA UNIVERSITY UTTAR PRADESH, KANPUR

A meeting of the Board of Studies of the Ph.D. Genetics and Plant Breeding, Faculty of Agricultural Sciences & Allied Industries, Rama University Uttar Pradesh, Kanpur was held on 18th July 2025, 10:00 am. The following members were present:

1.	Dr. Aneeta Yadav	Convener
2.	Dr. Syed Mohd Quatadah	Member
3.	Dr. Vinay Joseph Silas	Member
4.	Dr. Debjyoti Sengupta	External Member

The quorum of the meeting was complete.

Agenda of the meeting:

1. Assessment Criteria
2. Question Paper Format
3. Syllabus

The meeting resolved unanimously that attached Assessment Criteria, Question Paper Format and Syllabus are justified and approved.

Note: No changes have been suggested by the committee. Course curriculum, syllabus and evaluation scheme will be based on the previous pattern of BOS.

Convener
Signature: .....
Name : Dr. Aneeta Yadav
Date : 18/7/25

Internal Members

Signature: 1..... 2.....
Name: Dr. Syed Mohd Quatadah Dr. Vinay Joseph Silas
Date: 18/7/25

External Members

Signature: 1.....
Name: Dr. Debjyoti Sengupta
Date: 18/7/25

Faculty of Agricultural Sciences & Allied Industries
Rama University Uttar Pradesh, Kanpur
Course Detail and Evaluation Scheme
(Effective from the Session 2025-26)

Ph.D. Genetics & Plant Breeding(SEMESTER-I)

S.N.	Subject Code	Subject Name	Period			Evaluation Scheme			Subject Total	Credit Hours
			L	T	P	CE	MTE	ETE		
Theory subjects										
1	GPB-601	Plant Genetic Resources and their utilization	2	0	0	20	20	60	100	2
2	GPB-602	Genomics in Crop Improvement	2	0	0	20	20	60	100	2
3	MBB-604	Advances in Crop Biotechnology	2	0	0	20	20	60	100	2
4.	STAT-511	Statistical Methods for Applied Sciences	2	0	0	20	20	60	100	2
5.	PDRM-101	Research Methodology	4	-	-	-	-	-	100	4
6.	PDRP-101	Research &Publication Ethics	2	-	-	-	-	-	100	2
Practical/Project										
7	GPB-602(P)	Genomics in Crop Improvement	0	0	2	30	20	50	100	2
8	STAT511(P)	Statistical Methods for Applied Sciences	0	0	2	30	20	50	100	2
Total			**14**	**0**	**4**	**140**	**120**	**340**	**800**	**18**

Faculty of Agriculture & Allied Sciences
Rama University Uttar Pradesh, Kanpur
Course Detail and Evaluation Scheme
(Effective from the Session 2025-26)

Ph.D. Genetics & Plant Breeding (SEMESTER-II)

S.N.	Subject Code	Subject Name	Period			EVALUATION SCHEME			Subject Total	Credit
			L	T	P	CE	MTE	ETE		
Theory subjects										
1	GPB-603	Advances in Plant Breeding Systems	2	0	0	20	20	60	100	2
2.	GPB-604	Breeding Designer Crops	1	0	0	20	20	60	100	1
3.	GPB-605	Advances in Breeding of Major Field Crops	2	0	0	20	20	60	100	2
4.	MBB-606	Commercial Plant Tissue Culture	2	0	0	20	20	60	100	2
5	STAT.-512	Experimental Designs	2	0	0	20	20	60	100	2
6.	GPB-691	Doctoral Seminar I	-	-	1	100	-	-	100	1
Practical / Project										
7.	GPB-604 (P)	Breeding Designer Crops	0	0	1	30	20	50	100	1
8.	STAT.-512(P)	Experimental Designs	0	0	1	30	20	50	100	1
Total			**10**	**0**	**2**	**290**	**140**	**400**	**800**	**12**

Faculty of Agriculture & Allied Sciences
Rama University Uttar Pradesh, Kanpur
Course Detail and Evaluation Scheme
(Effective from the Session 2025-26)

Ph.D. Genetics & Plant Breeding (SEMESTER-III)

S.N.	Subject Code	Subject Name	Period			EVALUATION SCHEME			Subject Total	Credit
			L	T	P	CE	MTE	ETE		
Theory Subjects										
1.	**GPB-692**	Doctoral Seminar II	1	0	0	100	00	00	100	1
Practicals / Project										
1.	**GPB-699**	Doctoral Research	-	-	11	Satisfactory/Unsatisfactory				11
Total			1	0	11	100	00	00	100	12

Faculty of Agriculture & Allied Sciences
Rama University Uttar Pradesh, Kanpur
Course Detail and Evaluation Scheme
(Effective from the Session 2025-26)

Ph.D. Genetics & Plant Breeding (SEMESTER-IV)

S.N.	Subject Code	Subject Name	Period			EVALUATION SCHEME			Subject Total	Credit
			L	T	P	CE	MTE	ETE		
Theory Subjects										
Practicals / Project										
1.	**GPB-699**	Doctoral Research	-	-	12	Satisfactory/ Unsatisfactory				12
Total					12					12

Rama University Uttar Pradesh, Kanpur
Course Detail and Evaluation Scheme
(Effective from the Session 2025-26)

Ph.D. Genetics & Plant Breeding (SEMESTER-V)

S.N.	Subject Code	Subject Name	Period			EVALUATION SCHEME			Subject Total	Credit
			L	T	P	CE	MTE	ETE		
Theory Subjects										
Practicals / Project										
1.	**GPB-699**	Doctoral Research	-	-	12	Satisfactory/ Unsatisfactory				12
Total					12					12

Rama University Uttar Pradesh, Kanpur

Course Detail and Evaluation Scheme

(Effective from the Session 2025-26)

Ph.D. Genetics & Plant Breeding (SEMESTER-VI)

S.N.	Subject Code	Subject Name	Period			EVALUATION SCHEME			Subject Total	Credit
			L	T	P	CE	MTE	ETE		
Theory Subjects										
Practicals / Project										
1.	**GPB-699**	Doctoral Research	-	-	10	Satisfactory/ Unsatisfactory				10
Total					10					10

L-Lecture, T-Tutorial, P- Practical, CE- Continuous Evaluation, MTE-Mid Term Examination, ETE-End Term Examination

Evaluation Scheme:

- **Course without practical components**

For Continuous Evaluation (CE) is such as: 20 Marks

1. Overall class performance: 5 Marks
2. Assignments/Quiz / Seminar/Term paper /Project :15Marks

MTE - Mid Term Examination: 20 Marks

a. First Mid Term Examination: 10 marks
b. Second Mid Term Examination: 10 marks

ETE - End Term Examination: 60 Marks

- **Course with practical components only**

For Continuous Evaluation (CE) is such as: 30 Marks

Conduct / Perform/Execution /Practical File/ Viva-Voice

MTE - Mid Term Examination: 20 Marks

a. First Mid Term Examination: 10 marks
b. Second Mid Term Examination: 10 marks

ETE - End Term Examination: 50 Marks

Convener

Signature: .....

Name : Dr. Aneeta Yadav

Date : 18/7/25

Internal Members

Signature: 1..... 2.....

Name: Dr. Syed Mohd Quatadah Dr. Vinay Joseph Silas

Date: 18/7/25

External Members

Signature: 1.....

Name: Dr. Debjyoti Sengupta

Date: 18/7/25

Ph.D. Genetics & Plant Breeding Syllabus

Major subject	Subject Name	Credit
GPB-601	Plant Genetic Resources and their utilization	2+0
GPB-602**	Genomics in Crop Improvement	2+1
GPB-603**	Advances in Plant Breeding Systems	2+0
GPB-604	Breeding Designer Crops	1+1
GPB-605	Advances in Breeding of Major Field Crops	2+0
GPB-691	Doctoral Seminar I	1+0
GPB-692	Doctoral Seminar II	1+0
GPB-699	Doctoral Research	45
Minor subject		
PDRM	Research Methodology	4+0
PDRP	Research &Publication Ethics	2+0
MBB-604	Advances in Crop Biotechnology	2+0
MBB-606	Commercial Plant Tissue Culture	2+0
Supporting subject		
STAT-511	Statistical Methods for Applied Sciences	2+1
STAT.-512	Experimental Designs	2+1