CAT/ ACDM (P&P)/Agronomy/Pr/2025

COLLEGE OF AGRICULTURE, TRIPURA

(ESTD.2007)

LEMBUCHERRA, WEST TRIPURA, TRIPURA -799 210

(Affiliated to Tripura University)
A Central University, Suryamaninagar
Accredited to ICAR, New Dehli

PROSPECTUS

M.Sc.(Ag.) in Agronomy, Department of Agronomy
College of Agriculture, Tripura

Website: www.coatripura.ac.in
Email: hod.agro.cat@gmail.com

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LEMBUCHERRA, WEST TRIPURA, TRIPURA -799 210
(Affiliated to Tripura University)
A Central University, Suryamaninagar
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PROSPECTUS

Course Name-M.Sc.(Ag.) in Agronomy
Department of Agronomy
College of Agriculture, Tripura

Website: coatripura.nic.in
Email: www.catagartala@gmail.com

DISCLAIMER

The statements made in the prospectus and all the information contained here-in are believed to be correct at the time of publication. However, the College reserves the right to make changes at any time, without notice, addition(s)/deletion(s) to the regulations, conditions governing the conduct of students, requirement(s) for degree, fee and any other information, or statements contained in this prospectus. No responsibility will be accepted by the College for hardship or expenses incurred by its students or any other person(s) for such change(s), addition(s), omission(s) or error(s), no matter how they are caused.

All seats will be filled up based on academic merit of the candidate. However 50% seats are reserved for candidates passed out from College of Agriculture, Tripura, while, rest 50% are open to all including candidates passed out from College of Agriculture, Tripura. In both categories, standing reservation policies of Tripura will be followed.

F O R E W O R D

Greeting and warm welcome to the College of Agriculture, Tripura

College of Agriculture, Tripura (CAT) is solely autonomous agriculture college of the state, Tripura imparting quality education in the field of Agriculture Science. The college is offering M.Sc. (Ag.) in Agronomy degree programme at par with guidelines and recommendation of Indian Council of Agricultural Research (ICAR) and Central Agricultural University, Imphal(CAU). It is permanently affiliated to Tripura University (A Central University), Suryamaninagar and accredited by ICAR. The college is actively involved in research and extension based activities with premier public organization of India like ICAR, Department of Bio-technology, National Bee Board, Department of Science and Technology, NABARD etc.

During upcoming days the college will be dedicated to follow the guidelines and principles of National Education Policy-2020 issued by Ministry of Human Resource Development, Govt. of India. The thrust will be given to recognizing, identifying and fostering the unique capabilities of each students, multidisciplinary and holistic education, a light but tight regulatory framework etc.

This prospectus will help every PG (AGRONOMY)student to know the college relating to rules and regulations, courses and programmers of academics, fee structures etc.

Prof. Debashish Sen
Principal
College of Agriculture, Tripura

From the desk of Head, (I/c)

Greeting and warm welcome to the, Department of Agronomy, College of Agriculture, Tripura

The Postgraduate (PG) Programme in Agronomy was introduced in the year 2021 for the first time in this College, affiliated with **Tripura University (A Central University), Suryamaninagar.** This initiative aims to provide higher education opportunities in Agriculture, especially for students from Tripura who face challenges in pursuing studies outside the state due to various reasons.

The M.Sc. (Ag.) in Agronomy programme has an **intake capacity of 06 (six) students** per academic session.

This Prospectus includes essential information such as the **PG syllabus, Departmental profile, rules and regulations specific to the Department of Agronomy, Hostel rules,** and other relevant guidelines. This comprehensive document is designed to assist incoming students in understanding the structure, expectations, and opportunities of the programme.

We hope this prospectus serves as a valuable resource for every aspiring postgraduate student and paves a clear path toward academic success and professional growth in the field of Agronomy.

Dr. Utpal Giri
Head(I/c)
Department of Agronomy
College of Agriculture, Tripura

CONTENTS

Check list of the documents to be attached to the "Admission Form" (to be submitted only at the time of counselling)

For Admissions to M.Sc. (Ag.) in Agronomy Degree Programme:

- Original Mark sheet & certificate of B.Sc.(Ag)
- Original Mark sheet & certificate of 12th standard examination.
- Original Mark sheet & certificate of 10th standard examination.
- Original Certificate of proof of date of birth [Date of Birth Certificate or Admit Card of Madhyamik Examination/H.S.(+2)] .
- Permanent Residence Certificate /Citizen Certificate .
- Certificate relating to SC/ST.
- Photo identity card (AADHAAR/Voter ID).

OFFICERS OF THE COLLEGE		
Designation	**Name**	**Contact No**
Principal	Dr. Debashish Sen	7005461193
Head (I/C), Dept. Of Agronomy	Dr. Utpal Giri	8131047743
Drawing and Disbursing Officer	Dr. Niren Majumder	9362942906
Academic Co-ordinator (PG)	Dr. Abhijit Saha	9609340740
Hostel Warden (Boys)	Dr. Tridip Bhattacharjee	9402529141
Hostel Warden (Girls)	Dr. Debasree Saha	9774608785
Jr. Librarian	Mrs. Debasree Das	9436128170
Coordinator, Student Affairs (SA)	Dr. Ezekiel Reang	8413990437
For Admission Related Queries Contact :		
Dr. Utpal Giri (HoD(I/C), Dept. Of Agronomy :		8131047743

Website: coatripura.nic.in
Email: www.catagartala@gmail.com

List of Abbreviation	
CAT	College of Agriculture, Tripura
B.Sc. (Hons.) Agri.	Bachelor of Science with Honours in Agriculture
TU	Tripura University
ICAR	Indian Council of Agricultural Research
GPA	Grade Point Average
CGPA	Cumulative Grade Point Average
OGPA	Overall Grade Point Average
ST	Scheduled Tribe (s)
SC	Scheduled Caste (s)
GEN	General Category
CP	Credit Point
CL	Credit Load
Cr. Hr.	Credit Hour

IMPORTANT INSTRUCTION FOR THE CANDIDATES:

1. Application form will be available in the official website of College of Agriculture, Tripura viz. www.coat.ac.in or the same can be physically collected from the office of the Principal of the college.

2. The application form is to be completed in all respect. Incomplete applications are liable to be rejected.

3. There should be no cutting/ overwriting on the form of application and all entries must be made by the candidate himself. The columns not applicable to a candidate should be crossed out.

4. Copy of typed and duly signed application form along with scanned copy of self-attested supporting documents and requisite application fee (Demand Draft only) is to be submitted to the Principal through Email addressed to coat.pgs@ gmail.com within application deadline.

5. Any application received after the last date of submission shall not be entertained under any circumstances.

6. An affidavit in prescribed format of U.G.C in relation to anti-ragging has to be submitted both by the student and Parent/Guardian at the time of admission.

7. If the applicant gives any wrong information in the application, his/her application shall be rejected. If the admission is secured on the basis of wrong information furnished, it would be cancelled as soon as the mistake is detected at the cost and risk of the students.

8. The College is equipped with hostel facilities and it is mandatory for all the students to reside in the hostel during their entire course curriculum.

CHAPTER I

1. Introduction

Tripura, a land of beauty which has a unique feature of cultural heritage is one of the seven sister in the North Eastern Region of India and three fourth of its boundary runs neighbouring with Bangladesh, it is connected with the main land only by Assam and Mizoram on the North East. The state lies approximately between latitude 22°56' and 24°32' North and longitude 91°10' and 92 ° 21' East, with multitude of ethnic groups, tribes, religions, languages, and dialects. The state is covered by picturesque hills and dales; deep green valley's which add beauty to its landscape. Tripura enjoys a typical monsoonal climate with variations ranging from sub-tropical to temperate conditions in hilly areas. The climate of the state is generally hot and humid. The average maximum temperature is 35°C in May-June and the average minimum temperature is 10.5°C in December-January. The monsoon starts generally in the month of June and continues up to September. Summer starts in March and continues up to May which is followed by the rainy season extending over about three-four months.

Agriculture plays a significant part of the economic activities and is closely related to the socio-economic development of the people. About 70% of the total population of the state is, directly or indirectly, dependent on Agriculture. The main activity of more than three-fourths of the workers is agriculture. The principal crops are paddy, wheat, jute, sugarcane, potato, maize, turmeric, coconuts vegetables and oil-seeds. Agriculture is being practiced in about 2.5 lakh hectares, which contributes about 64% of the total employment in the state. There are ample scopes for enhancing the area under cultivation as well as the productivity. Rice is the predominant crop for both the Jhum & Plain land settled cultivation. The state has made a remarkable achievement in the adoption of paddy cultivation through SRI (System of Rice Intensification).The state remains a pioneer in the country for the production of TPS (True Potato Seed). The pineapple along with Jackfruit and Orange production of the state-registered themselves as the best quality product of the country. The organically produced Pineapple of the state creates a glut for the state and marketed surplus for the country as a whole.

2. Location:

The College of Agriculture is located at Lembucherra, West Tripura district the proposed technical educational hub of the state Tripura. The college is situated in the vicinity of the College of Fisheries and ICAR Research Complex for the North Eastern Hill (NEH) Region. It is well connected with roads and around 12 km away from the state capital towards North. The College Campus is 10 km away, from the airport.

3. College of Agriculture, Tripura :

College of Agriculture, Tripura was established in the year 2007 and is permanently affiliated to the Tripura University (A Central University), Suryamaninagar and accredited by Indian Council of Agricultural Research (ICAR). With a mission to excel in teaching, research and extension programmes in agriculture. It is committed to continuous improvement in the productivity and profitability of agriculture and allied sectors through the achievement of the following goals :

1. To provide quality education in the areas of agriculture and allied fields.
2. To undertake basic, applied and adaptive research to seek appropriate solutions to emerging problems in agriculture and develop relevant technologies to improve socio-economic conditions of the farming community.
3. To develop an effective mechanism for the transfer of technology to the farmers and agricultural organizations through different extension programmes with a view to improve agricultural productivity and economic condition of rural population.
4. To develop appropriate technology for supporting the growth of agro-based industries and delivering quality products.
5. To make the Agriculture profession, a business rather than the way of life for the state and the country.

4. The Faculty: The faculty consists of teachers having Post Graduate / Ph.D degree from different Agricultural Universities, NIT & other leading institutions of the Country. Faculty members are engaged in research, teaching and extension activities. One of the missions of the College is to impart higher education in agriculture and allied sciences for developing human resources. Teaching activity is carried out in the college campus as per the ICAR guidelines under semester system. One All India Co-ordinated Research Project on Pigeon pea under ICAR, Projects under Directorate of Bio-technology, New Delhi, ICAR-Indian Institute of Oilseed Research, Institute of Pulses Research, Institute of Millets Research, NABARD, RKVY, National Bee Board are also running smoothly in the college.

5. Departmental Profile:-

Faculty List of Department of Agronomy: -

Name	Designation	Qualification	Mobile No. & Mail ID
Dr. Debashish Sen	Professor	Ph.D.	Mob-7005461193 Email-dr.d.sen@gmail.com
Dr. Abhijit Saha	Asstt. Professor (SS)	Ph.D.	Mob-9609340740 Email-abhijitsaha80@gmail.com
Dr. Utpal Giri	Asstt. Professor (SS)	Ph.D.	Mob-8131047743 Email-utpalagiricat2014@gmail.com
Dr. Debasree Saha	Asstt. Professor (SS)	Ph.D.	Mob- 9774608785 Email-sdebasree84@gmail.com
Dr. Biman De	Scientist (AICRP on Kharif pulses)	Ph.D	Mob-9612612335 Email-biman_de@rediffmail.com

6. Laboratory instruments:

Sl.No	Instruments	Sl.No	Instruments
1	pH meter	**12**	Hot air oven(small size)
2	Water level gauge	**13**	Hot air oven(big size)
3	EC meter	**14**	Seed Desiccators
4	UV-VIS Spectrophotometer	**15**	Leaf flrea Meter
5	Balance Machine	**16**	Flour Mill
6	Precision balance	**17**	Mini Dol mill (workshop)
7	Willy mill mixture	**18**	Visi cooler
8	Premium water quality tester	**19**	Double steveson screen
9	Rotary shaker	**20**	Anemometer
10	Soxttelet apparatus	**21**	Sun screen recorder
11	Freeze	**22**	Millet dehulling machine
		23	Flame photometer

i) PG Class Room - 1

ii) Seminar cum training Hall - 1

iii) Head of the Department Room -1

iv) Experimental farm for PG students research Work

v) PG Laboratory -I


Leaf Area Meter 211
SET ZERO
COARSE
FINE
SET
FULL SCALE

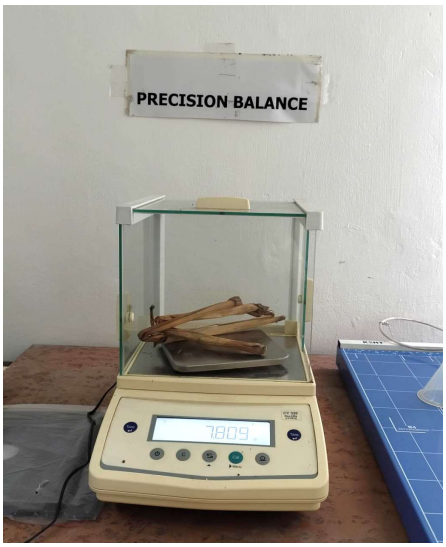

HOT AIR OVEN
(SMALL SIZE)


Digital pH Meter 335
029


FLAME PHOTOMETER
MICROCONTROLLER BASED FLAME PHOTOMETER
LABTRONICS
COMPRESSOR


EC METER
.969


HOT AIR OVEN
(BIG SIZE)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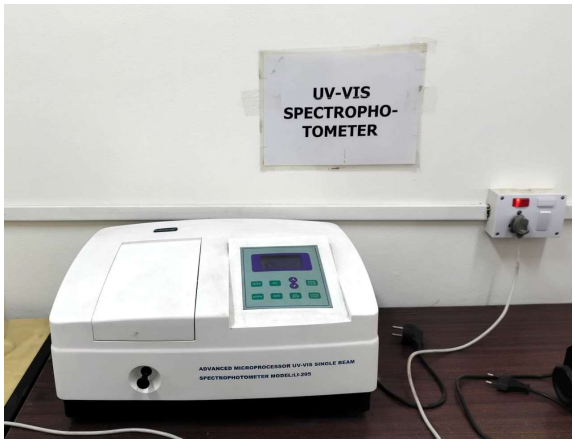
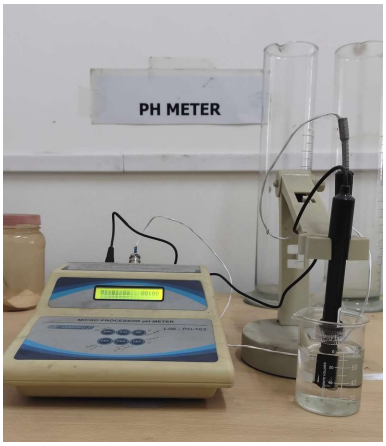

UV-VIS
SPECTROPHO-
TOMETER


NICE
WATER TESTING KIT
NICE
WATER TESTING KIT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7. Admission Procedure:

i. Admission:

All seats will be filled on the basis of academic merit of the candidate. However, 50% seats are reserved for candidate passed out from the College of Agriculture, Tripura, while, rest 50% are open to all including candidates passed out from College of Agriculture, Tripura. In both categories, standing reservation policies of Tripura will be followed.

ii. Eligibility for Master's Programme:

Candidate must possess four (4) years bachelors' degree in the respective/ related subjects viz. B.Sc. (Hons.) Agriculture/B.Sc. (Hons.) Horticulture/ B.Sc. Agriculture/ B.Sc. Horticulture with minimum 6.00 out of 10.00 or equivalent OGPA or equivalent percentage of marks for general category candidates and minimum 5.50 out of 10.00 or equivalent OGPA or equivalent percentage of marks for SC/ ST category candidates at bachelors' degree level.

Age limit: Aspirants should be at least 21 years of age.

iii. Submission of application:

Application form will be available in the official website of College of Agriculture, Tripura www.coat.ac.in or the same can be physically collected from the office of the Principal of the college. Copy of typed and duly signed application form along with scanned copy of self attested supporting documents and requisite application fees (Demand Draft only) is to be submitted to the Principal through email addressed to coat.pgs@gmail.com within application deadline.

iv. Application fee for PG Courses:

The Application fees (Rs. 200 for general category candidates and Rs. 150 for SC/ST candidates) need to be paid in form of Demand Draft in favour of DDO, College of Agriculture, Tripura and should be payable at Account No. 36420611563 of State Bank of India (Agricultural College Branch), Lembucherra IFSC- SBIN0016016. Candidate/s applying for more than one subject has to submit separate application with separate application fee.

v. Section of candidates for admission:

As Aspirants will be shortlisted for admission on the basis of their merit list based on marks obt obtained in graduation programme, 12th standard and 10th standard as per following guidelines

Level of Examination	**Essential requirement**	**Guidelines of scoring**	**Score obtained**
B.Sc (Ag.) for admission in Agronomy	≥55% (for SC/ ST) ≥60% (for others)	(% of marks X 0.5)	S_1
High School (12^{th})/ Uchcha Madhyamik/ SSCE	---	(% of marks X 0.3)	S_2
Secondary School (10^{th})/ Madhyamik/ AISSE	---	(% of marks X 0.2)	S_3
Total Score			$S_1 + S_2 + S_3$

In case, total score obtained by two or more candidates are equal, then the candidate with higher marks in graduate level will be shortlisted for admission. Similarly, if total score obtained by two or more candidates are equal even after comparing the marks in graduate level then the candidate with higher marks in H.S. (12th)/ Uchcha Madhyamik/ SSCE will be shortlisted for admission.

2.1. Admission procedure

Based on the selection criteria, provisional merit list of the aspirants prepared by the Post Graduate Admission committee and approved by the Principal, College of Agriculture, Tripura will be uploaded in the official website www.coat.ac.in. Shortlisted candidates (maximum 1:5 ratio) will be informed to present themselves for counseling on the prescribed date and time. During counseling, candidate must produce one set of self-attested photocopy of the following documents along with original copy of the same for verification:

i) Mark sheet and certificate of B.Sc. (Ag.) / B.Sc. (Hort.)

ii) Mark sheet and certificate of 12th Standard Examination

iii) Mark sheet and certificate of 10th Standard Examination

iv) Certificate of proof of date of birth

v) SC/ST certificate

vi) Permanent Resident Certificate/Citizenship Certificate

vii) Photo Identity Card (AADHAAR/Voter ID)

Based on merit and roster, panel of successful candidates for admission in the respective PG course/s recommended by the designated committee will be submitted for approval of the Principal. Selected candidates as per approved number of seats in the respective discipline will be issued 'Admission Form'. Candidate will secure admission in his/ her desired discipline after acceptance of filled up 'Admission Form' and receipt of the admission fees.

Note 1. Vacant seats under reserved/ unreserved category shall be filled-up from the panel of candidates on merit basis following the roster of Govt. of Tripura.

Note 2. S ubmission of the Application form in no way confirm admission to the College of Agriculture, Tripura. On scrutiny of the relevant documents on the day of counseling or even letter, if any document is found to be false/ fraudulent, the admission is liable to be cancelled.

Note 3. Original migration certificate or UG marksheet & certificate need to be submitted if he/she has been selected for the admission in the Department of Agromony.

CHAPTER II

1. Academic Rules and Regulations

i. Academic year and duration of the degree programmes

a. The academic year for Masters shall generally commence from the month of August.

b. A semester shall consist of a minimum 110 working days.

c. Co-curricular activities shall be organized simultaneously with academic activities after class hours. Loss of instructional days due to inter class/inter collegiate competitions in sports/ games/ cultural activities or due to any other reason shall be compensated by providing additional instructional days.

d. Number of classes for each credit of a course shall be 1 in a week and 16 in a semester.

ii. Duration of Master's Degree Programme

Minimum 2 years (4 semesters), Maximum 4 years (8 semesters)

iii. Advisory Committee

Function:

The advisory committee meetings of the P.G. students shall be conducted for all activities like; finalization of the programme of work, research plan, synopsis seminar, conduct of comprehensive examination, thesis seminar and viva-voce.

Formation of Advisory Committee :

a. Minimum 3 members and maximum 5 including HoD (2 from major subject including Chairperson and one from minor subject). The Head of Department will be Ex-Officio Member of the Advisory Committee of all the PG students of the Department.

b. The Chairperson of a student's Advisory Committee shall be a recognized PG teacher eligible to guide PG research and Thesis work.

iv. ACADEMIC PROGRAMME of M. SC.(Ag.) IN AGRONOMY

Course No.	Course Title	Credits
MAJOR CORE COURSE (12 CREDIT)		
AGRO 501	Modern Concepts in Crop Production	3 + 0
AGRO 502	Principles and Practices of Soil Fertility and Nutrient Management	2 + 1
AGRO 503	Principles and Practices of Weed Management	2 + 1
AGRO 504	Principles and Practices of Water Management	2 + 1
MAJOR OPTIONAL COURSE (e ≥ 8 CREDIT)		
AGRO 506	Agronomy of Major Cereals	2 + 1
AGRO 507	Agronomy of Pulse Crops	2 + 1
AGRO 508	Agronomy of Oilseed Crops	2 + 1
AGRO 513	Cropping Systems and Sustainable Agriculture	2 + 0
AGRO 514	Integrated Farming Systems	2 + 0
MINOR COURSE (e ≥ 9 CREDIT)		
SOIL 501	Soil Physics	2 + 1
SOIL 503	Soil Chemistry	2 + 1
SOIL 506	Soil Biology and Biochemistry	2 + 1
SUPPORTING COURSE (e ≥ 5 CREDIT)		
STAT 512	EXPERIMENTAL DESIGNS	2 + 1
PP506	Physiology of Growth, Yield & modelling	1+1
COMPULSORY NON-CREDIT COURSES (6 CREDIT)		
PGS 501	Library and Information Services	0 + 1
PGS 502	Technical Writing And Communication Skills	0 + 1
PGS 506	Disaster Management (e-Course)	1 + 0
PGS 503	Intellectual Property & its Management in Agriculture (e-Course)	1 + 0

Course No.	Course Title	Credits
PGS 504 PGS 505	Basic Concepts in Laboratory Techniques Agricultural Research, Research Ethics and Rural Development Programs (e-Course)	0 + 1 1 + 0
SEMINAR AND THESIS		
AGRO 591 AGRO 599	Master's Seminar Master's Research	1 + 0 0 + 20
Total	**12 + 23 + 9 + 1 = 45 credit from major + minor courses and Seminar; 6 compulsory non-credit courses and 20 credit research work**	

v. Credit Requirements

The minimum total course and research credit requirements for the Master degree programmes shall be 55 as per the following break up:

Course work/research work	Minimum Credit Hour
Major subject	20
Minor subject	09
Supporting subject (s)	05
Master's Seminar	01
Master's Research (thesis)	20
Total credits	**55**
CompulsoryNon-credit (6 courses)	06

Semester wise course breakup & credit of M.Sc. Agriculture (Agronomy)

1st Semister Exmination

Course No.	**Course Title (Credits)**	
Paper Code	**Paper Title**	**Credit**
AGRO -501	Modern Concepts in Crop Production	(3+0)
AGRO - 502	Principles and Practices of Soil Fertuity & Nutrient Management	(2+1)
AGRO - 506	Agronomy of Major Cereals	(2+1)
AGRO - 513	Cropping Systems and Sustainable Agriculture	(2+0)
SOIL - 501	Soil Physics	(2+1)
PGS - 506	Disaster Management	(1+0)
PGS - 501	Library and Information Services	(0+1)
	Total Credit	**14**

2nd Semister Exmination

Course No.	**Course Title (Credits)**	
Paper Code	**Paper Title**	**Credit**
AGRO -503	Principles & Practices of Weed Management	(2+1)
AGRO - 504	Principles & Practices of Water Management	(2+1)
AGRO - 507	Agronomy of Pulse Crops	(2+1)
STAT - 512	Experimental Design	(2+1)
AGRO - 599	Master Research	(0+3)
PGS - 504	Basic Concept in LaboratoryTechniques	(0+1)
PGS - 505	Agri Research, Research Ethics & Rural Development Programmes	(1+0)
	Total Credit	**15**

3rd Semister Exmination

Paper Code	Paper Title (Including Credit)	Credit
AGRO -508	Agronomy of Oilseed	(2+1)
SOIL - 503	Soil Chemistry	(2+1)
SOIL - 506	Soil Biology & Biochemistry	(2+1)
PP-506	Physiology of Growth & Yield & Modelling	(1+1)
AGRO - 591	Master's Seminar	(1+0)
AGRO - 599	Master Research	(0+3)
PGS - 503	Intelientual Property & its Management in Agriculture	(1+0)
PGS - 502	Technical Writting & Communication Skills	(0+1)
	Total Credit	**15**

4th Semister Exmination

Paper Code	Paper Title (Including Credit)	Credit
AGRO -514	Integrated Farming System	(2+0)
AGRO - 590	Comprehensive Exam /Viva	(1 NC)
AGRO - 599	Master Research Including Pre-submission Thesis Seminar	(0+14)
	Total Credit	**16**

vi. SYLLABUS of M. Sc(Ag) in Agronomy Courses

1st Semister

AGRO501 : MODERN CONCEPTS IN CROP PRODUCTION (3 + 0)

Objective : To teach the basic concepts of soil management and crop production.

Theory

UNIT I : Crop growth analysis in relation to environment; agro-ecological zones of India, Crop distribution.

UNIT II: Quantitative agro-biological principles and inverse yield nitrogen law; Mitscherlich yield equation, its interpretation and applicability; Baule unit.

UNIT III : Effect of lodging in cereals; physiology of grain yield in cereals; optimization of plant population and planting geometry in relation to different resources, concept of ideal plant type and crop modelling for desired crop yield.

UNIT IV : Scientific principles of crop production; crop response production functions; concept of soil plant relations; yield and environmental stress.

UNIT V : Integrated farming systems, organic farming and resource conservation technology including modern concept of tillage; rainfed farming; determining the nutrient needs for yield potentiality of crop plants, concept of balanced nutrition and integrated nutrient management; precision agriculture.

AGRO 502: PRINCIPLES AND PRACTICES OF SOIL FERTILITY AND NUTRIENT MANAGEMENT (2 + 1)

Objective : To impart knowledge of fertilizers and manures as sources of plant nutrients and to appraise integrated approach of plant nutrition and sustainability of soil fertility.

Theory

UNIT I: Soil fertility and productivity - factors affecting; features of good soil management; problems of supply and availability of nutrients; relation between nutrient supply and crop growth; organic farming - basic concepts and definitions.

UNIT II: Criteria of essentiality of plant nutrients; essential plant nutrients - their functions, nutrient deficiency symptoms; transformation and dynamics of major plant nutrients.

UNIT III: Preparation and use of farm yard manure, compost, green manures, vermicompost, biofertilizers and other organic concentrates; their composition, availability and crop responses; recycling of organic wastes and residue management, role of organic matter in maintenance of soil fertility.

UNIT IV: Commercial fertilizers, composition, relative fertilizer value and cost; crop

response to different nutrients, residual effects and fertilizer use efficiency, fertilizer mixtures and grades; agronomic, chemical and physiological methods of increasing fertilizer use efficiency; SSNM, nutrient interactions.

UNIT V: Time and methods of manures and fertilizers application; relative performance of organic manures and inorganic fertilizers; economics of fertilizer use; integrated nutrient management; use of fertilizers in intensive cropping systems.

Practical

- Determination of soil pH, ECe, organic C, total N, available N, P, K and S in soils.
- Determination of total N, P, K and S in plants
- Interpretation of interaction effects and computation of economic and yield optima

AGRO 506 : AGRONOMY OF MAJOR CEREALS
(2 + 1)

Objective : To teach the crop husbandry of cereals.

Theory

Origin and history, area and production, classification, improved varieties, adaptability, climate, soil, water and cultural requirement, nutrition, quality components, handling and processing of the produce for maximum production of

UNIT I : Rabi cereals (wheat, barley, boro rice)

UNIT II : Kharifcereals (Rice, maize and millets)

Practical

- Phenological studies at different growth stages of crop.
- Estimation of crop yield on the basis of yield attributes.
- Formulation of cropping schemes for various farm sizes and calculation of cropping and rotational intensities.
- Working out growth indices (CER, CGR, RGR, NAR, LAD) and competition functions (aggressiveness, relative crowing coefficient, monetary yield advantages and ATER) of prominent intercropping systems of different crops.
- Preparation of rice nurseries
- Planning and layout of field experiments.
- Intercultural operations in different crops.
- Judging of physiological maturity in different crops.

- Determination of cost of cultivation of different crops.
- Working out harvest index of various crops
- Study of seed production techniques in various crops
- Visit of field experiments on cultural, fertilizer, weed and water management aspects.
- Visit to nearby villages for identification of constraints in crop production

AGRO 513 : CROPPING SYSTEMS AND SUSTAINABLE AGRICULTURE

(2 + 0)

Objective : To apprise about different enterprises suitable for different agroclimatic conditions for sustainable agriculture.

Theory

UNIT I : Cropping systems : definition, indices and importance; classification of cropping systems according to type of rotation, degree of commercialization, water supply, enterprises, land use assessment.

UNIT II : Production potentials of different cropping systems, Interaction and mechanism of different production factors; stability in different systems through research; eco-physiological approaches to intercropping, yield advantage in intercropping systems.

UNIT III : Simulation models for intercropping; soil nutrient in intercropping; preparation of different cropping system models; evaluation of different cropping systems.

UNIT IV : New concept and approaches of farming systems and cropping systems and organic farming; case studies on different farming systems.

UNIT V : Concept of sustainability in cropping systems; efficient farming systems.

UNIT VI : Concerns of natural resources and their management; modern agriculture and sustainability; LEIA vs. HEIA; LEISA; agrobio-diversity and sustainable agriculture; diversification in cropping systems and its importance; IWM and INM in cropping system for sustainable crop production

SOIL 501 - SOIL PHYSICS (2+1)

Objective: For basic knowledge about basic soil physical properties and processes in relation to plant growth.

Theory

1. Scope of soil physics and its relation with other branches of soil science; soil as a three phase system.

2. Soil texture, textural classes, mechanical analysis, specific surface.

3. Soil consistence; dispersion and workability of soils; soil compaction and consolidation; soil strength; swelling and shrinkage - basic concepts.

4. Soil structure - genesis, types, characterization and management soil structure; soil aggregation, aggregate stability; soil tilth, characteristics of good soil tilth; soil crusting - mechanism, factors affecting and evaluation; soil conditioners; puddling, its effect on soil physical properties; clod formation.

5. Soil water: content and potential, soil water retention, soil-water constants, measurement of soil water content, energy state of soil water, soil water potential, soil-moisture characteristic curve; hysteresis, measurement of soil-moisture potential.

6. Water flow in saturated and unsaturated soils, Poiseuille's law, Darcy's law; hydraulic conductivity, permeability and fluidity, hydraulic diffusivity; measurement of hydraulic conductivity in saturated and unsaturated soils.

7. Infiltration; internal drainage and redistribution; evaporation; hydrologic cycle, field water balance; soil-plant-atmosphere continuum.

8. Composition of soil air; renewal of soil air - convective flow and diffusion; measurement of soil aeration; aeration requirement for plant growth; soil air management.

9. Modes of energy transfer in soils; energy balance; thermal properties of soil; measurement of soil temperature; soil temperature in relation to plant growth; soil temperature management.

Practical

- Mechanical analysis by pipette and international methods.
- Measurement of Atterberg limits.
- Aggregate analysis - dry and wet.
- Measurement of soil-water content by different methods.
- Measurement of soil-water potential by using tensiometer and gypsum blocks.
- Determination of soil-moisture characteristics curve and computation of pore-size distribution.
- Determination of hydraulic conductivity under saturated and unsaturated conditions
- Determination of infiltration rate of soil.
- Determination of aeration porosity and oxygen diffusion rate.
- Soil temperature measurements by different methods.

- Estimation of water balance components in bare and cropped fields.

PGS 501 LIBRARY AND INFORMATIION SERVICES (0+1)

Objective: To equip the library users with skills to trace information from library efficiently. It apprise tem of information and knowledge resources, to carry out literature survey, to formulate information search strategies, and to use modern tools (Internet, OPAC, search engines etc.) of information search. Practical introduction to library and its services; role of libraries in education research and technology transfer; classification systems and organization of library; sources of information- primary source, secondary source and tertiary sources; intricacies of abstraction and indexing services; tracing information from reference sources; literature survey; citation techniques/preparation of bibliography; use of CD-ROM database, online Public Access. Catalogue and other computerized library services, use of internet including search engines and its resource; e-resources access methods.

PGS 506 DISASTER MANAGEMENT (e-Course) (1+0)

Objectives- To introduce learners to the key concepts and and practices of natural disaster management; to equip them to conduct thorough assessment of hazards, and risks vulnerability, and capacity building.

Natural disasters: meaning and nature of natural disasters, their types and effects. Floods, drought, cyclone, earthquake, landslide, avalanches, volcanic eruptions, heat and cold waves, climate change: global warming, sea level rise, ozone depletion.

Man Made disasters- Nuclear disasters, chemical disasters, biological disasters, building fire, coal fire, forest fire, oil fire, air pollution, water pollution, deforestation, industrial wastewater pollution, road accidents, rail accidents, air accidents, sea accidents.

Disaster management: efforts to mitigate natural disasters at national and international levels; International strategies for disaster reduction. Concept of disaster management, national disaster management framework; financial arrangements; role of NGOs, community based organizations and media. Central, state, district, and local administration; armed forces in disaster response; disaster response, police and other organizations.

2nd Semister

AGRO 503 : PRINCIPLES AND PRACTICES OF WEED MANAGEMENT

(2 + 1)

Objective: To familiarize the students about the weeds, herbicides and methods of weed management.

Theory

UNIT I: Weed biology and ecology, classification, crop-weed competition including

allelopathy; principles and methods of weed management; weed indices.

UNIT II: Herbicides introduction and history of their development; classification based on chemical, physiological, application and selectivity; mode and mechanism of action of herbicides.

UNIT III : Herbicide structure - activity relationship, factors affecting the efficiency of herbicides, herbicide formulations, mixtures, herbicide resistance and management, herbicide rotation, adjuvants, antidotes and protectants, degradation of herbicides in soil, plants and environment; herbicide resistance in crops and weeds, weed management through bio-herbicides, myco-herbicides and allelochemicals; application of biotechnology in weed management.

UNIT IV: Weed management in major crops and cropping systems; parasitic weeds; weed shifts in cropping systems; aquatic and perennial weed management, quarantine regulations of weed management.

UNIT V: Integrated weed management; cost; benefit analysis of weed management.

Practical

- Identification of important weeds of different crops
- Preparation of a weed herbarium
- Weed survey in crops and cropping systems
- Crop weed competition studies
- Calculation of herbicidal requirement
- Preparation of spray solutions of herbicides for high and low-volume sprayers
- Use of various types of spray pumps and nozzles and calculation of swath width
- Economics of weed control
- Herbicide residue analysis in plant and soil
- Bioassay of herbicide residue
- Precautionary measures in herbicide use

AGRO 504 : PRINCIPLES AND PRACTICES OF WATER MANAGEMENT

(2 + 1)

Objective: To teach the principles of water management and practices to enhance the water productivity.

Theory

UNIT I : Water and its role in plants; water resources of India, major irrigation projects, extent of area and crops irrigated in India and different states.

UNIT II : Soil water relations; water retention by soil, soil moisture characteristics; moisture conservation, soil water movement in soil and plants; soil-water-plant relationships; concept of evaporation and evapotranspiration; different approaches of ET determination; development of crop water deficit, plant response to water stress, crop adaptation to water deficit, morpho-physiological effect of water deficit, crop plant adoption to moisture stress condition.

UNIT III : Soil, plant and meteorological factors determining water needs of crops; principles and methods of irrigation; concepts of irrigation scheduling; different approaches of irrigation scheduling, depth and micro-irrigation system; fertigation; management of water in controlled environments and poly houses.

UNIT IV : Water management of the corps (rice, wheat, sugarcane, potato, mustard, sesame and mung) and cropping systems; quality of irrigation water and management of saline water for irrigation; irrigation and water use efficiency; fertilizer use in relation to irrigation.

UNIT V : Excess of soil water and plant growth; water management in problem soils, drainage requirement of crops and methods of field drainage; water table in relation to crop production, rain water harvesting, storage and recycling.

Practical

- Determination of soil water by thermo-gravimetric and volumetric methods.
- Measurement of soil water potential by using tensiometer, pressure plate and membrane apparatus.
- Determination of Evapo-transpiration by Blaney-Criddle and Thornthwaite.
- Measurement of evaporation by USWB class A pan evaporimeter.
- Soil moisture characteristics curves.
- Water flow measurement using different devices.
- Determination of irrigation requirement.
- Calculation of irrigation efficiency.
- Determination of infiltration rate.
- Laying out fields for irrigation by border strip, check basin and furrow methods.
- Determination of quality of water.

- Determination of saturated/unsaturated hydraulic conductivity.
- Field drainage

AGRO 507 : AGRONOMY OF PULSE CROPS (2 + 1)

Objective : To teach the crop husbandry of pulse crops.

Theory

Origin and history, area and production, economic importance, classification, improved varieties, adaptability, climate, soil, water and cultural requirements, nutrition, quality components, handling and processing of the produce for the maximum production of

UNIT I : Rabi pulses (chickpea, pea, lentil and lathyrus)

UNIT II : Summer and Kharif pulses (pigeon pea, mung bean, urdbean, Rajmas and cowpea)

Practical

- Phenological studies at different growth stages of pulse crops.
- Estimation of crop yield on the basis of yield attributes.
- Formulation of cropping schemes for various farm sizes and calculation of cropping and rotational intensities.
- Working out growth indices (CER, CGR, RGR, NAR, LAD) aggressiveness, relative crowding coefficient, monetary yield advantages and ATER of prominent intercropping systems of different crops.
- Nodulation studies.
- Planning and layout of field experiments.
- Judging of physiological maturity in different pulse crops.
- Intercultural operations in different pulse crops.
- Determination of cost of cultivation of different pulse crops.
- Working out harvest index of various pulse crops
- Study of seed production techniques in various pulse crops
- Visit of field experiments on cultural, fertilizer, weed and water management aspects.
- Visit to nearby villages for identification of constraints in pulse production

STAT 512 - EXPERIMENTAL DESIGNS (2+1)

Objective- This course is meant for students of agricultural and animal sciences other

than statistics.

Theory

1. Need for designing of experiments. Characteristics of a good design. Basic principal of design- randomization, replication and local control.

2. Uniformity trails, size, and shape of plots and blocks, analysis of variance, CRD, RBD, and LSD.

3. Factorial experiments, orthogonality, and partitioning of degrees of freedom, confounding in symmetrical factorial experiments, factorial experiments with control treatment.

4. Split and stripe plot design, analysis of covariance and missing plot techniques in RB and LSD, transformations, crossover design, alpha design- concepts, randomization procedure, analysis and interpretation of results, response surfaces. Experiments and mixtures

5. Bioassays- direct and indirect, indirect assays based on quantal dose response, parallel line and slope ratio assays potency estimation

Practical

Uniformity trial data analysis, formation of plots and blocks, Fairfield smith law; analysis of data obtained from CRD,RBD,LSD, analysis of factorial experiments without and with confounding, analysis with missing data, split plot and strip plot design, transformation of data, analysis of resolvable designs, fitting of response surfaces.

PGS 504 BASIC CONCEPTS IN LABORATORY TECHNIQUES (0+1)

Objective- To acquaint the students about the basics of commonly used techniques in laboratory.

Practical safety measures while in Lab, handling of chemical substances, use of burrets, pipettes, measuring cylinders, flasks, separatory funnel, condensers, micropipettes and vaccupets, washing, drying and sterilization of glassware, drying of solvent/chemicals, weighting and preparation of solutions of different strengths and their dilution, Handling techniques of solutions, preparations of different agro-chemical doses in the field and pot applications, preparation of acid solution, neutralization of acid and bases, preparation of buffers of different strengths and pH values, use and handling of microscope, laminar air flow, vaccum pump, viscometer, thermometer, magnetic stirrer, micro-ovens, incubators, sandbath, warerbath, oilbath, electrical wiring and earthing, preparation of media and methods of sterilization, seed viability testing, testing of pollen viability, tissue culture of crop plants, description of flowering plants in botanical terms in relation to taxonomy.

PGS 505 AGRICULTURAL RESEARCH, RESEARCH ETHICS AND RURAL DEVELOPMENT PROGRAMMES (e-Course) (1+0)

Objective: To enlighten the students about the organization and agricultural research systems at national and international levels, research ethics, and rural development programmes and policies of Government.

History of agriculture in brief, global agri research system, need, scope, opportunities, role in promoting food security, reducing poverty and protection of environment. NARS, and RARI's, CGIAR, IARC, partnership with NARS, role as a partner in the global agri research system, strengthening capacities at national and regional levels, International fellowships for scientific mobility.

Research ethics, research integrity, research safety in labs, welfare of animals used in research, computer ethics, standards and problems in research ethics, concept and connotations of rural development, rural development and policies and strategies. Rural development programmes; CDP, IADP, special group- area specific programme, IRDP, Panchayati raj institutions, Co-operatives, Voluntary agencies/ non-govt. organizations; Critical evaluation of rural development policies and programmes; constraints in implementation of rural policies and programmes.

3rd Semister

AGRO 508 : AGRONOMY OF OILSEED CROPS (2 + 1)

Objective : To teach the production technology of oilseed crops.

Theory

Origin and history; area, production and productivity; classification; improved varieties; adaptability; climate, soil and water requirement; crop nutrition; weed management, cultural practices; quality component; handling and processing of the produce and the value added products.

UNIT I: Rabi oilseeds - Rapeseed and mustard, linseed, sunflower and safflower.

UNIT II : Kharifoilseeds - Groundnut, sesame, castor and soybean.

Practical

- Planning and layout of field experiments
- Judging of physiological maturity in different crops and working out harvest index.
- Working out cost of cultivation of different oilseed crops.
- Estimation of crop yield on the basis of yield attributes, formulation of cropping schemes for various farm sizes and calculation of cropping intensities.

- Study of seed production techniques of various oilseed crops.
- Inter culture operations in different oilseed corps.
- Determination of oil content in oilseeds and computation of oil yield.
- Formulation of cropping schemes

SOIL 503 - SOIL CHEMISTRY (2+1)

Objective: To introduce the classical concepts of soil chemistry and familiarize structural and modern development in chemistry of soils in relation to using soil as a medium for plants growth and development.

Theory

1. Chemical (elemental) composition of the earth's crust and soils.

2. Elements of equilibrium thermodynamics, chemical equilibria, electrochemistry and chemical kinetics.

3. Soil colloids: inorganic and organic colloids - origin of charge, concept of point of zero-charge (PZC) and its dependence on variable-charge soil components, surface charge characteristics of soils; diffuse double layer theories of soil colloids, zeta potential, stability, coagulation/flocculation and peptization of soil colloids; electrometric properties of soil colloids; sorption properties of soil colloids; soil organic matter - fractionation of soil organic matter and different fractions, clay-organic interactions.

4. Ion exchange processes in soil; cation exchange- theories based on law of mass action (Kerr-Vanselow, Gapon equations, hysteresis, Jenny's concept), adsorption isotherms, donnan-membrane equilibrium concept, clay-membrane electrodes and ionic activity measurement, thermodynamics, statistical mechanics; anion and ligand exchange - innersphere and outer-sphere surface complex formation, fixation of oxyanions, hysteresis in sorption-desorption of oxy-anions and anions, shift of PZC on ligand exchange, AEC, CEC; experimental methods to study ion exchange phenomena and practical implications in plant nutrition.

5. Potassium, phosphate and ammonium fixation in soils covering specific and non-specific sorption; precipitation-dissolution equilibria; step and constant-rate K; management aspects.

6. Chemistry of acid soils; active and potential acidity; lime potential, chemistry of acid soils; sub-soil acidity.

7. Chemistry of salt-affected soils and amendments; soil pH, ECe, ESP, SAR and important relations; soil management and amendments.

8. Chemistry and electrochemistry of submerged soils.

Practical

- Determination of CEC and AEC of soils.
- Analysis of equilibrium soil solution for pH, EC, Eh by the use of Eh-pH meter and conductivity meter.
- Determination of point of zero-charge and associated surface charge characteristics by the serial potentiometric titration method.
- Potentiometric and conductometric titration of soil humic and fulvic acids.
- (E4/E6) ratio of soil humic and fulvic acids by visible spectrophotometric studies and the ? (E4/E6) values at two pH values.
- Adsorption-desorption of phosphate/sulphate by soil using simple adsorption isotherm.
- Construction of adsorption envelope of soils by using phosphate/fluoride/sulphate and ascertaining the mechanism of the ligand exchange process involved.
- Determination of titratable acidity of an acid soil by BaCl2-TEA method.
- Determination of lime requirement of an acid soil by buffer method.
- Determination of gypsum requirement of an alkali soil.

SOIL 506- SOIL BIOLOGY AND BIOCHEMISTRY (2+1)

Objective: To teach students the basics of soil biology and biochemistry, including biogeochemical cycles, plant growth promotion rhizobacteria, microbial interactions in soil and other soil activities.

Theory

1. Soil biota, soil microbial ecology, types of organisms in different soils, soil microbial biomass, microbial interections, un-cultural soil biota.

2. Microbiology and biochemistry of root-soil interactions, phyllosphere, soil enzyme, soil characteristics influencing growth and activity of microflora.

3. Microbial transformations of nitrogen, phosphorus, sulpfur, iron and manganese in soil biochemical composition, and biodegradation of soil organic matter and crop residues, humane formation, cycles of important organic nutrients.

4. Bio-degradation of pesticides, organic wastes and their use of production of biogas and manures, biotic factors in soil development, microbial toxins in the soil.

5. Preparation and preservation of farmyard manure, animal manures, rural and urban

composts and vermicompost.

6. Bio-fertilizers - definition, classification, specifications, method of production and role crop production.

Practical

- Determination of soil microbial population.
- Soil microbial mass.
- Elemental composition, fractionation of organic matter and functional groups.
- Decomposition of organic matter in soil.
- Soil enzymes.
- Measurement of important soil microbial processes such as ammonification, nitrification, N2 fixation, S oxidation, P solubilization and mineralization of other micro nutrients.
- Study of rhizosphere effect.

PP 506- PHYSIOLOGY OF GROWTH AND YIELD AND MODELING (1+1)

Objective-To impart knowledge regarding crop growth analysis and different yield prediction models.

Theory

1. Crop growth analysis, key growth parameters. Analysis of factors limiting crop growth and productivity- the concept of rate limitation.

2. Phenology- growth stages, internal and external factors influencing flowering photoperiodic and thermo-periodic responses and the concept of degree days and crop growth duration.

3. Canopy architecture, light interception, energy use efficiency of different canopies, LAI, LAD, concept of optimum LAI.

4. Source-sink relationships, translocation of photosynthates and factors influencing transport of sucrose. Physiological and molecular control of sink activity- partitioning efficiency and harvest index.

5. Plant growth analysis techniques, yield structure analysis, theoretical and actual yields.

6. Plant ideotypes.

7. Simple physiological yield models- Duncan's, Monteith's and Passioura's.

8. Crop growth models- empirical models testing and yield predictions.

Practical

Plant sampling for leaf area and biomass estimation, analysis of growth and yield parameters- LAD, NAR, CGR, LAI, LAR, SLA portioning efficiency HI, measurement of light interception, light extinction coefficient, energy utilization efficiency based intercepted, and realized, computer applications in plant physiology, crop productivity and modeling.

PGS 502 TECHNICAL WRITING AND COMMUNICATION SKILLS (0+1)

Objective- To equip the students/scholar with skills to write dissertations, research papers etc. to equip the students/scholars with skills to communicate and articulate in English. Practical technical writing- various forms of scientific writings- thesis, technical papers review, manuals, etc. various parts of thesis and research communications. Writing abstracts, summaries, précis, citations etc. commonly used abbreviations in the thesis and research communications, illustrations, photographs, and drawings with suitable captions; pagination, numbering of tables and illustrations; writing of numbers and dates in scientific write-ups, editing and proof-reading, writing of a review article. Communication skills- Grammar; error analysis; concord; collocation; phonetic symbols and transcription; accentual pattern: weak forms in connected speech, participation in group discussion; Facing an Interview; presentation of scientific papers.

PGS 503 INTELLECTUAL PROPERTIES AND ITS MANAGEMENT IN AGRICULTURE (e-Course) (0+1)

Objective- The main objective of this course is to equip students and stakeholders with knowledge of intellectual property rights (IPR) related protection systems, their significance and use of IPR as a tool for wealth and value creation in a knowledge based economy. Theory historical perspectives and need for the introduction of IPR regime, TRIPs and various provisions in TRIPS agreement; IPR rights, benefits of securing IPRs, Indian legislations for the protections of various types of intellectual properties. Fundamentals of parents, copyrights, geographical indications, designs and layout, trade secrets and traditional knowledge, trademarks, protection of plant varieties and farmers' rights and biodiversity protection. Protectable subject matters, protection in biotechnology, protection of other biological materials, ownership and period of protection, national biodiversity protection initiatives, convention of biological diversity, international treaty on PGR for food and agriculture, licensing of technologies, material transfer agreements, research collaboration agreement, license agreements

4th Semister

AGRO 514 : INTEGRATED FARMING SYSTEMS (2 + 1)

Objective : To apprise about different enterprises suitable for different agroclimatic conditions for sustainable agriculture.

Theory

UNIT I : Farming systems: definition and importance; classification of farming systems according to type of rotation, intensity of rotation, degree of commercialization, water supply, enterprises.

UNIT II : Concept of sustainability in farming systems; efficient farming systems; natural resources - identification and management.

UNIT III : Production potential of different components of farming systems; interaction and mechanism of different production factors; stability in different systems through research; eco-physiological approaches to intercropping.

UNIT IV : Simulation models for intercropping; soil nutrient in intercropping; preparation of different farming system models; evaluation of different farming systems.

UNIT V : New concepts and approaches of farming systems and cropping systems and organic farming; case studies on different farming systems.

Practical: Problems related to the topics mentioned in the theory syllabus.

CHAPTER III

1. College Fee

i. Fees for newly admitted students

a. Students selected for admission to the first semester of first year shall pay the admission fee and all other one time fees, and semester fees on the day of admission. The students shall be allowed to register only after payment of all prescribed fees notified by the College of Agriculture, Tripura from time to time.

b. The students discontinuing their study after admission/registration shall not be eligible for refund of any fees other than the caution money deposits.

c. Caution money deposited by student shall be refunded at the time of leaving the college after producing no dues certificate.

ii. Fees for continuing students

a. The students registering to the second and subsequent semesters shall pay the prescribed semester fees as notified by the College of Agriculture, Tripura on the day of registration, failing which registration will not be allowed.

b. Late registration of the continuing students is governed by the Regulation 2.4.

c. At the time of payment of semester fees for registration to the second and subsequent semesters, the students shall produce his/her Identity Card and no dues certificate from all concerned.

iv. A student registering with junior batch students shall pay the semester fees applicable to the junior batch in that particular semester in which he/she registers.

d. Miscellaneous fees

Students shall pay fees for various certificates and other related fees as notified by the College of Agriculture, Tripura from time to time.

Sl No	Particulars	Amount (In INR)	Non-Hostellers (in INR)	Remarks
A	**Tripura Iniversity Charges**			Time to time revised as per Tripura University
1	Registration (to be paid once at the time of Admission)*	500.00	500.00	
2	Examination Fee (Per semester)*	1830.00	1830.00	
	Sub Total	**2330.00**	**2330.00**	
B	**College Fee (Non Refundable)**			Per Semester
1	Admission	1000.00	1000.00	
2	Tuition (including thesis)	2500.00	2500.00	
3	Laboratory	600.00	600.00	
4	Library	200.00	200.00	
5	Course Register	150.00	150.00	
6	Semester Report	150.00	150.00	
7	Student's Welfare Fund			
	i) Magazine Fee	150.00	150.00	
	ii) Medical Fee	250.00	250.00	
	iii) Sports Fee	250.00	250.00	
	iv) Recreation /Common Room	100.00	100.00	
	v) Student Aid Fee	100.00	100.00	
	vi) Student Society	50.00	50.00	
	Sub Total -	**5500.00**	**5500.00**	
C	**Hostel Fee (Non Refundable)**			Per Semester
9	Hostel Admission Fee	200.00	00.00	
10	Hostel Establishment Fee	400.00	00.00	

Sl No	Particulars	Amount (In INR)	Non-Hostellers (in INR)	Remarks
11	Hostel Utensils, Crockery and depreciation Charge	200.00	00.00	
12	Hostel Room Rent	1000.00	00.00	
13	Electricity Charges	400.00	00.00	
14	Water Charges	200.00	00.00	
15	Hostel Common room fee	400.00	00.00	
	Sub Total	**2800.00**	**00.00**	
D	**Annual Fee (Refundable)**			
16	Caution Money**	1400.00	1400.00	Once at the time of Admission
	Sub Total	1400.00	1400.00	
	Grand Total	**12030.00**	**9230.00**	

* Will be deposited to Tripura University time to time. ** This refundable amount will be kept in the savings account of college and will be refundable after completion of the degree.

The Semester Examination Fee will be collected from the students before each Semester End Term Examination as per the decision of Tripura University.

CHAPTER IV

SAY NO TO RAGGING

i. What is Ragging?

Any Act Resulting in :

- Mental/ physical/ sexual abuse
- Verbal Abuse
- Indecent Behaviour
- Criminal Intimidation / wrongful Restraint
- Undermining Human Dignity
- Financial Exploitation/extortion
- Use of Force

ii. A student indulcing in Ragging Can be :

- Cancellation of admission.
- Suspension from attending classes.
- With holding/withdrawing Scholarship/Fellowship and other benefits.
- Debarring from appearinng in any test/examination or other evaluation process.
- With holding results.
- Debarring from representing the institution in any regional, national or international meet, tournament or youth festival etc.
- Collective punishment : when the persons identified the Institution shall resort to collective punishment as a deterrent to ensure community pressure on potential ragger.

BEFORE YOU EVEN THINK OF RAGGING

i. Think of

- Humiliation
- Suspension
- Blacklisting
- Ruined Career
- Expulsion
- Possible Prosecution

Don't just stand and watch, stop Ragging! Show Character
Remember RAGGING is for LOSERS

Visit UGC website i.e. www.ugc.ac.in & www.antiragging.in
to see UGC Anti Ragging Regulations

Are you being ragged?
Immediately call UGC Anti Ragging Helpline 1800-180-5522 (24x7 Toll Free)
Or send an e-mail to helpline@antiragging.in

CHAPTER V

1. Students Discipline and Conduct Rules

i. Authority for Maintenance of Discipline

Principal of the Colleges shall deal with all the acts of students' indiscipline in the college campus including hostels, libraries, play grounds or any other place in the campus. One Disciplinary Committee shall be formed as given below. The term of the Disciplinary Committee shall be for a period of two years from the date of notification.

ii. Disciplinary Committee

Principal of the College	Chairman
Head/ In-charge (s) of the Departments in which PG programme is conducted	Members
Wardens of Girls' hostel and Boys' hostel	Members
Students' Welfare Officer	Member Secretary

iii. Acts of indiscipline

All students of the College of Agriculture, Tripura shall maintain discipline and good conduct, and shall not indulge in such activities, which may cause breach of discipline in the college campus.

iv. Generally the following activities shall constitute the acts of indiscipline:

i. Ragging of any type, either physically or mentally to fellow student(s) in any place of the College campus including hostels, library, playground, etc.

ii. Damaging or threatening to damage any property of the College.

iii. Misbehavior / disrespect to officers, teaching and non-teaching staff of the College.

iv. Keeping or using intoxicants, drugs and liquor or persuading others for consumption of liquor, drug etc.

v. Any form of gambling.

vi. Use of College or Hostel premises for the purposes other than meant for without permission of the Competent Authority.

vii. Demonstrations in any form including processions, recourse to violence, assault, rioting, strike, hunger strike etc.

viii. Keeping fire-arms / weapons in the hostel.

ix. Disturbing other students in their studies.

x. Breach of law of the country or state and rules and regulations of the College of Agriculture, Tripura.

xi. Absconding from the College Campus/ Hostel without proper permission

of the College authority.

xii. Any other act of student(s) which may be considered as an act of indiscipline by the College of Agriculture, Tripura Authorities.

v. Award of punishment for breach of discipline

For breach of discipline, College of Agriculture, Tripura may impose any of the following punishments or combination of punishments on any students (s) as per the recommendations of the Disciplinary Committee:

vi. Monetary fine

The Principal of the College can impose monetary fine up to Rs. 500/- to any student involved in an act of indiscipline.

vii. Reprimand on record

This shall consist of warning to the defaulting student(s) indicating the particular indiscipline committed and not to repeat any act of indiscipline in future. This shall be recorded in the student's permanent record / file maintained at College of Agriculture, Tripura.

viii. Conduct Probation (CP)

i. This shall consist of placing the student on Conduct Probation with a warning that one more incident of act of indiscipline might lead to his/her expulsion from the College of Agriculture, Tripura. The conduct probation shall be noted on the permanent record / file of the concerned student and shall be in-force for one year from the date of communication to the student(s).

ii. During the period of CP, the student shall not be allowed to represent College of Agriculture, Tripura in games, sports, cultural programmes etc., outside the college. Moreover scholarship, if any, sanctioned by the Government of Tripura / ICAR/ other funding agency, will be suspended during the period of CP.

ix. Temporary expulsion

i. The student(s) shall be expelled from the College of Agriculture, Tripura for a minimum period of one semester and he/she shall leave the College of Agriculture,

Tripura including hostel immediately. The period of temporary expulsion shall be entered in the permanent record of the student(s).

ii. The student(s) awarded with the punishment of temporary expulsion shall be re-admitted to the College of Agriculture, Tripura after expiry of the expulsion period on his/her written request and undertaking that he/she shall not commit any act of indiscipline in future.

x. Permanent expulsion

The student shall be permanently expelled from the College of Agriculture, Tripura and shall be debarred from re-admission to the College of Agriculture, Tripura.

xi. Rustication

The student shall be rusticated from the College of Agriculture, Tripura and his/her punishment shall be entered in the permanent record, semester report and transcript of the student who shall be debarred from re-admission to the College of Agriculture, Tripura.

xii. Closure of College / cancellation of semester / academic year

In case of any en-mass organized and prolonged indiscipline conducted by the students of College, the Principal shall make day-to-day report to the Government of Tripura as well as Tripura University. If the agitation continues for a week or more, the Principal in consultation with the Disciplinary Committee shall make suitable recommendation to the Government of Tripura.

(i) Closure of the College sine die

(ii) Cancellation of a semester or academic year for any particular batch or the college as a whole.

The Punishment awarded to any student may be communicated to the Academic Council of the Tripura University at the earliest.

xiii. Appellate authority

The Vice Chancellor shall be the Appellate Authority. If an appeal is made to him, he may reduce / enhance the punishment, after review of the case. The decision of the Vice-Chancellor shall be final and binding on the student(s).

xiv. Discipline in examinations

i. A student appearing in the mid-term or end-term examination shall carry his/her Identity Card to the examination hall and shall show the same to the invigilator, teacher in-charge of examination and Principal of the College when asked for.

ii. The examination halls shall be opened 15 minutes earlier on the first day and 10

minutes on subsequent days to the commencement of the examinations. A student arriving in the examination hall 15 minutes after commencement of the examination shall not be allowed to sit in the examination.

iii. The examinees shall occupy their respective allotted seats at least 5 minutes before the scheduled examination time.

iv. No examinee shall be allowed to go out of the examination hall within 30 minutes from the time of commencement of examination.

v. The examinees shall follow strictly the instructions written on his/her cover page of the answer books, which will be supplied by the College authorities duly authenticated. If additional sheets are required those shall also be authenticated by the College authority before issuing to the examinee. Unused pages from the answer book/additional sheets should not be removed.

vi. The examinee shall not take any book, notes, unauthorized sheet of papers, mobile phone, or any other incriminating material to the examination hall.

xv. Unfair means

The following activities of the examinees in the examination halls shall be considered as adoption of unfair means:

(i) Helping other examinees or getting help from others verbally, through gestures or by any other means.

(ii) Making an appeal to the examiner for help in the answer book, or trying to influence the examiner by any means.

(iii) Possession and/or use of any incriminating materials.

(iv) Creating disturbance for other examinees by consulting or attempting to consult with them, offering his answer books/incriminating materials to others or receiving the answer books/incriminating materials from others.

(v) Misbehavior with the invigilator(s) in the examination hall or non cooperation with him in discharging his duties.

The Principal of the college shall deal with the cases of adoption of unfair means in examinations and award of punishment for breach of discipline as per the following procedure:

(i) The invigilator concerned shall seize the answer book along with incriminating materials, if any, and report the case(s) of unfair means adoption along with a written statement of the concerned student and incriminating material, (if any) to the Principal of the College on the day of occurrence of the incident.

(ii) In case the defaulting student refuses to give a written statement even after persuasion by the invigilator, he/she shall be asked to record in writing his/her refusal to give a statement. If the student refuses to do even that, the fact of refusal, shall be recorded duly witnessed at least by another invigilator / teacher and submitted along with answer book and incriminating material (if any) to the Principal of the College. The student shall be sent out of the examination hall.

(iii) The Principal shall call for explanation from the concerned student and on receiving the written explanation; he/she shall conduct an inquiry by the Disciplinary Committee of the College.

(iv) In the Process of enquiry, the student shall be given full opportunity for his/her defense through personal appearance.

(v) The award of punishment shall be in accordance to the severity of the case and shall be in accordance to award of punishment mentioned under clause 5.4. However, if a student is found indulging in a malpractice in mid-term examination, he/she shall be expelled from the examination hall for that particular course following the procedure and he/she shall be declared as failed in that course.

(vi) If a student is found indulging in malpractice in an end-term examination, he/she shall be declared as failed in all courses registered in that semester and he/she shall be expelled from the college for the next semester.

(vii) The Principal shall take appropriate action on recommendation of the Disciplinary Committee duly approved by the Vice-Chancellor.

1) List of Passout Students (2021-2022 batch)

a) Anandita Kar
Registration No. 019199 of 2015-16

b) Paramita Lodh
Registration No. 011380 of 2017-18

c) Ashok Nandi
Registration No. 023631 of 2021-22

d) Sarmistha Sarkar
Registration No. 023634 of 2021-22

e) Deeptanu Aich
Registration No. 011353 of 2017-18

f) Pohor Debbarma
Registration No. 023630 of 2021-22

2) List of Passout Students (2022-2023 batch)

a) Sourabh Biswas
Registration No. 014485 of 2018-19

b) Bobilan Debbarma
Registration No. 026665 of 2022-23

c) Suhrid Teli
Registration No. 026667 of 2022-23

d) Trideb Das
Registration No. 026666 of 2022-23

Some Glimpses of Different PG (Agronomy) Activities at College of Agriculture, Tripura

COLLEGE OF AGRICULTURE, TRIPURA

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