

Student READY Manual

Rural Entrepreneurship Awareness Development Yojana



AUGUST - 2019



Acharya N.G. Ranga Agricultural University
Lam, Guntur - 522 034, A.P.

RAWEP



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Rural Entrepreneurship Awareness Development Yojana



ACHARYA N.G.RANGA AGRICULTURAL UNIVERSITY

LAM, GUNTUR- 522 034

ANDHRA PRADESH

AUGUST 2019



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FOREWORD

Human resource development is an ever ending challenge for the policy makers in the field of higher education system. Day by day, the agricultural education is becoming a challenging task due to tremendous changes in agricultural sector not only in terms of diversified production technologies but also precision in their application. The root cause of the above trend is the dynamics of food habits as well as increased health consciousness among the people in the society. Commercialization of agriculture has thrown light on entrepreneurship in agriculture and the present work force in agriculture is not meeting the demand of stiff competition like other sectors due to lack of proper technical, financial and managerial potential among the stakeholders.

Acharya N. G. Ranga Agricultural University is the first Agricultural University in the country to introduce Rural Agricultural Work Experience Programme (RAWEP) in the year 1979 in its undergraduate curriculum to provide real life experience with the farming community. The Indian Council of Agricultural Research in 5th Dean's committee syllabus introduced student Rural Entrepreneurship Awareness Development Yojana programme duly final year to make students as "job providers than job seeker", in which RAWEP programme is a component in one semester. This programme provides excellent opportunities to develop analytical and entrepreneurial skills through hands on experience and practical training on location specific demands in agriculture and allied areas. The programme is also designed to explore and discover their own potential by the agri-graduates and to transform themselves as agri-preneurs.

I compliment the sincere efforts of Dean of agriculture and his team who are associated in bringing out the manual for student READY programme.

Date:20.8.2019

వచ్చుభవనం చామోదర నాయుడు

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FOREWORD

The Indian Council of Agricultural Research, New Delhi the apex body of agricultural education system in the country regularly updating the curricula of agricultural education to meet the changing demands of the farming community. The face of agricultural education in the present context seeking for the tremendous change towards commercialization and to project agriculture as a lucrative opportunity than a mere livelihood opportunity.

At this juncture, the Indian Council of Agricultural Research has initiated 'Student READY' for the final year students of the undergraduate programme which aims to build confidence among the agri-graduates for establishing self employment avenues or for securing employment in various public or private sector organizations so as to serve the farming community with better quality and commitment. The programme is intended to provide hands on experience and practical training to the under graduates to utilize the technical knowledge learned during the preceding three years of their undergraduate course. The three components which were included under Student READY by Acharya N. G. Ranga Agricultural University viz, Rural Agricultural Work Experience Programme, Internship / In-Plant Training / Industrial Attachment Programme and Experiential Learning programme will definitely provide ample opportunities for the students to acquire practical knowledge and skills to orient them towards providing best services for the welfare of the farming community.

The manual developed as per the Fifth Dean's committee recommendations, as well as the revised guidelines given by ICAR for Student READY will serve as guide for the students as well as the faculty involved in effective implementation of the Programme. I appreciate the committee members involved in preparation of the three components of the Student READY manual viz., Rural Agricultural Work Experience Programme, Internship / In-Plant Training / Industrial Attachment Programme and Experiential Learning programme.

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Student READY

The Student READY (Rural Entrepreneurship Awareness Development Yojana) programme aims to provide rural entrepreneurship awareness, practical experience in real-life situation in rural agriculture and creating awareness to under graduate students about practical agriculture and allied sciences. The programme will help in building confidence, skill and acquire Indigenous Technical Knowledge (ITK) of the locality and thereby, preparing the pass-out for self-employment. It also aims to provide opportunities to acquire hands-on-experience and entrepreneurial skills. To reorient graduates of agriculture and allied subjects for ensuring and assuring employability and develop entrepreneurs for emerging knowledge intensive agriculture, it was felt necessary to introduce this program in all the State Agricultural Universities as an essential prerequisite for the award of degree to ensure hands on experience and practical training.

The Fifth Dean's committee has given detailed curriculum of student READY programme for all the disciplines in agriculture and allied sciences. The course curricula have been restructured to develop much needed skills and entrepreneurial mind-set among the graduates to take up self-employment, contribute to enhanced rural livelihood and food security, sustainability of agriculture and be propeller for agricultural transformation. A total of five components i.e. Experiential Learning, Rural Awareness Works Experience, In-Plant Training / Industrial attachment, Hands-on training (HOT)/ Skill development training and Students Projects were included in Student READY programme by ICAR. Out of which, the following three components were selected for implementation by Acharya N.G. Ranga Agricultural University to carry out one year Student READY programme in all the Under graduate (UG) disciplines from the academic year 2019-20 in all the constituent colleges and affiliated colleges.

1. Rural Awareness Works Experience Programme (RAWEP)
2. Internship / In-Plant Training / Industrial attachment
3. Experiential Learning Programme (ELP)

Eligibility

To get the eligibility for registering the Study READY programme, the student should have passed all the courses of II year and should not have more than three backlog courses of III year.

**RURAL AWARENESS WORKS
EXPERIENCE PROGRAMME
(RAWEP)**

INTRODUCTION

The Acharya N.G. Ranga Agricultural University is the first Agricultural University in the country to introduce RAWEP in the year 1979 in its undergraduate course curriculum. This programme has been appreciated by the ICAR and had become a role model for other State Agricultural Universities. As per the fifth Dean's committee recommendations, the revised curriculum for B.Sc. (Hons) Agriculture degree is under implementation from the academic year 2016-17 in which STUDENT READY programme has been recommended as a new initiative during the final year to provide rural entrepreneurship awareness and practical experience in real life situation. Among the five components of STUDENT READY, Rural Awareness Work Experience Programme (RAWEP) is one of the crucial component that enables the students to expose to the rural milieu. Accordingly the RAWEP manual is modified in tune with the objectives of STUDENT READY. Under this programme, every student is expected to work for one semester with farmers in villages within the vicinity of Research Stations / KVKs / DAATT Centers of the university. This is a unique opportunity for the students to work with the farmers at their farms and identify various production, protection and marketing constraints. In addition, RAWEP develops competency in the areas of technological, managerial and communication skills among the students. The main components of the programme include Crop Production, Plant Protection, Rural Economics, Extension Programme and Research Station / KVK / DAATT Center activities. Duration of the programme shall be for 14 weeks corresponding to *kharif / rabi* including NSS Special camp.

A group of about twenty students shall be allotted to each Research Station / KVK / DAATT Center. The students in turn shall be allotted in batches of three to five boys or six to eight girls to selected village in the vicinity of the Research Station / KVK / DAATT center and attached to one host farmer each. The students shall *have* to make their own arrangements for boarding and lodging in the village and they will be paid a stipend of Rs.3000/- per month during the programme.

OBJECTIVES

1. To develop an understanding of rural life and different situations prevailing in villages with special reference to agriculture among the students.
2. To gain knowledge and experience on the operational aspects of agricultural technology being used / adopted by the farmers.
3. To provide an opportunity for practical training in Crop Production and Plant Protection through work experience.
4. To familiarize with socio-economic conditions of farmers and several agencies and institutions involved in rural development.
5. To help the students to understand the problems pertaining to agriculture in villages with special reference to constraints in application of latest farm technology.
6. To develop communication skills in students using extension training methods in the transfer of agricultural production technology.
7. To make the students acquaint with the functioning of various State and Central Government sponsored programmes / schemes, extension agencies and other organizations involved in rural development.

PROGRAMME OF WORK

The Rural Agricultural Work Experience Programme consists of the following courses equivalent to a semester load of 14 credits.

S.No.	Course Title	Credits
1.	Crop production	4
2.	Plant protection	3
3.	Rural economics	2
4.	Extension programme	4
5.	Research Station / KVK / DAATT Center activities	1
	Total	14

1. Crop Production - 4 Credits

The students will involve themselves to:

- ✓ Follow and work with the host farmers in day-to-day operations and maintain crop-wise record of agricultural operations in a diary
- ✓ Prepare a calendar of operations for the entire crop season during the semester in consultation with host farmer and members of Advisory Committee
- ✓ Make critical observations and ascertain the reasons for non-adoption of recommended package of practices for the crops of the host farmer
- ✓ Record agronomic problems confronted by the host farmer
- ✓ Identify the causes for yield gap between normal and actual yields
- ✓ Record biometrical observations for minimum of two crops in the proforma prescribed and analyze for their performance in comparison to recommended agricultural technology
- ✓ Maintain a record of daily work done in the proforma prescribed
- ✓ Suggest techniques / practices for improving the crop productivity
- ✓ Record meteorological data of the crop season and make critical analysis in relation to crop productivity

2. Plant Protection (Entomology and Plant Pathology) - 3 Credits

The students will involve in the following:

- ✓ Identification of insect and non-insect pests, diseases, nutritional disorders, weeds and other physiological disorders in standing crops (Non-insect pests like rodents, birds, wild boars, etc.)
- ✓ Maintenance of record of plant protection work undertaken in the prescribed proforma for a minimum of two crops
- ✓ Make critical observations on adoption of recommended plant protection measures for the control of diseases and insect and non-insect pests of the crops
- ✓ Record the observations on plant protection separately for insect and non-insect pests and diseases
Collection of information on nematode problems, if any:
- ✓ Recommendation of the use and methods / techniques of applying pesticides for the control of crop pests and diseases
- ✓ Demonstration of preparation of fungicidal/insecticidal spray fluids for important plant protection measures
- ✓ Submission of 10 herbarium specimens each of insect damage, plant disease symptoms, nutritional disorders, weeds and physiological disorders of any of the crops grown in the village.
- ✓ Collection of information on insecticides, fungicides and herbicides available in market from local input dealers
- ✓ Collection of information about the procedure for obtaining licence from government to market pesticides

3. Rural Economics - 2 Credits

The students will involve in the following:

- ✓ Agro-economic Survey: Collection of data on economic status / condition of the village, resources endowment and its utilization, population, cropping patterns, irrigation sources, demand-supply of agricultural labour, labour problems, employment and other economic aspects as per prescribed proforma.
- ✓ Farm Holding Survey: Conduct of farm holding survey as per prescribed proforma, computation of cost of cultivation and farm income measures of two major crops grown by the host farmer. If the host farmer cultivates only one crop, the student has to collect the data from any other farmer in the village for second major crop.
- ✓ Preparation of alternate farm plans and computation of incremental income through partial budgeting technique for the two crops studied earlier under Farm Holding Survey.

4. Extension Programme - 4 Credits

The Students will be involved in conducting the following:

- ✓ Identification of major agricultural problems of the village through Participatory Rural Appraisal (PRA) techniques
- ✓ Gap analysis and preparation of action plan for participatory extension teaching methods
- ✓ Organization of participatory extension teaching methods such as method demonstrations, group discussions, *Rythu Sadassu* including role-play and exhibition
- ✓ Maintenance of agricultural information corner in the village
- ✓ Study of public and private agricultural extension information sources and their critical analysis
- ✓ Study of on-going Central/ State sponsored Rural Development/ Extension Programmes/ schemes operating in the village
- ✓ Training Need Assessment (TNA) of the farmers and conduct of training programme
- ✓ Documentation of Indigenous Technical Knowledge (ITK) and Farm Innovations
- ✓ Study of Farmers groups (FPOs/ CIGs/ Farmers Clubs/ Farmers Associations) and Self Help Groups (SHGs) in the village
- ✓ Documentation of a success story of farmer/ entrepreneur and development of a short video film

5. Research Station / KVK/ DAATT Center Activities – 1 Credit

The students shall be given an opportunity to acquaint themselves with the various research activities/ programmes of the Research Station / KVK /DAATTC concerned and also the agro climatic zone in which it is located. The principles and methodologies involved in conducting different types of experiments / trials, collection and analysis of experimental data, maintenance of farm records, etc. shall be explained to them. The students will observe closely different aspects of research programmes/activities with the guidance of Scientists/ Programme Coordinators / Coordinators of the respective centres. They shall maintain a record of the titles of technical programmes for various research projects undertaken at the Research Station / KVK / DAATTC. They must also record all the items of work either carried out by them or shown to them. This exercise shall be done whenever all the students visit Research Station/ KVK/ DAATTC, once in two weeks or they may be specially called to the centres by the Coordinator. During the visit, the student must record meteorological data of the preceding week/fortnight.

The data pertaining to all the courses of RAWEP are to be recorded regularly in the student's diary (Annexure-I), which has to be submitted to the Scientist (TOT) / Scientist in-charge during his weekly visits. The data given in the weekly diaries and observation note books shall be incorporated in the respective records to be submitted every month.

ADVISORY COMMITTEE

An Advisory Committee shall be constituted for each student to provide necessary guidance in the implementation of the Rural Awareness Work Experience Programme. The Advisory Committee consists of the following members.

- ✓ Coordinator of DAATT Center
- ✓ Scientist (Transfer of Technology) / Scientist in-charge
- ✓ Associate Dean's Representative
- ✓ Representative of the Dept. of Agriculture (not below the rank of Mandal Agricultural Officer)
- ✓ The host farmer of the student concerned

The first member shall be the Chairman of the Advisory Committee. The Chairman of the Advisory Committee shall be vested with the responsibility of formulating the Rural Awareness Work Experience Programme for each allotted student and its implementation and evaluation assisted by the other members of the Advisory Committee.

The Advisory Committee shall meet as often as necessary or at least once in a month by synchronizing with the visit of the Associate Dean's Representative to the DAATTC / KVK / Research Station to review the progress made by the students and to evaluate and suggest mid- course corrections, if any. At the last meeting of the Advisory Committee, the entire progress of the student shall be reviewed and evaluated. The performance of the students shall be evaluated by the members of the student's Advisory Committee in the manner prescribed.

REGISTRATION

Eligibility

A candidate should have passed all the courses of II year and should not have more than three backlog courses of III year.

The registration of RAWEP courses shall be done at the respective colleges within three days. Registration of RAWEP courses shall be done on the first day and it will continue up to third day, but orientation will commence on second and third day only. The students then shall proceed to the respective DAATTC / KVK / Research Station to which they are allotted. Registration shall not be permitted beyond three days under any circumstances.

Orientation

During the orientation programme, the following aspects shall be explained:

- ✓ Objectives and aims of the programme
- ✓ Organizational aspects of the programme
- ✓ Items of work to be attended by the students
- ✓ The data / information to be collected
- ✓ Records to be maintained
- ✓ Attendance requirement
- ✓ Weekly and other reports to be submitted by the student to the Chairman of the Advisory Committee
- ✓ Location of the villages and help in case of emergencies

The Associate Dean, Heads of the Departments of the respective courses, Associate Dean's Representatives, all Scientists (TOT) / Scientists in-charge of RAWEP shall participate in the orientation programme.

Attendance

The attendance of the students shall be maintained by the Scientists (TOT) / Scientist in- charge of the RAWEP and particulars are furnished to the Chairman of the Advisory Committee after every fortnight who will in turn communicate to the Associate Dean of the College concerned every month under intimation to the Associate Director of Research of the respective zone or his / her nominee. The minimum attendance required for this programme is 85%. On the recommendation of the Associate Dean, the Dean of Student Affairs may depute the students to represent the College / University at Inter Collegiate / Inter University meets of NCC, NSS, Games and Sports and other extra and co-curricular meets and the absence of students in such cases shall be allowed up to a maximum of 10% of the working days (over and above the 15% of absence is to be allowed in attendance), provided the list is communicated by the Dean of Student Affairs to the Associate Deans at least two weeks before the last working day.

Associate Dean of the college shall intimate the Coordinator about the particulars of the backlog courses for which RAWEP students have paid reexamination fee within five to six weeks after commencement of the RAWEP Programme. After completion of the mid semester / practical examinations, the Associate Dean shall inform the dates on which students concerned have appeared for the backlog examinations. This period of absence from place of work during his / her exam dates shall be marked absent in the attendance register.

Attendance particulars of students shall be displayed in the notice board by the Chairman of Advisory Committee every month under intimation to the Associate Dean of the college. The student shall be eligible to appear for the final viva-voce examination in RAWEP as well as external evaluation of the RAWEP records, only if attendance requirement is met with. The period of stay in the village shall never be extended to make up the shortage of attendance.

In the event of falling short of attendance, the student has to re-register the RAWEP courses when offered next. However, during the period of re-registered semester, the student shall not be eligible for RAWEP stipend.

Student Discipline

Students whose activities are prejudicial to the interest of the Programme / University or subject to indulging in any malpractices shall be suspended from RAWEP. The students so withdrawn shall not be paid stipend any more. Such students shall not be permitted to register RAWEP courses further in any semester until the stipend is recovered.

SCHEDULE OF WORK

First Month

1. Study of the existing situation of the village (agro-economic survey) (Annexure V & Appendix)
2. Identification of major agricultural problems of the village through Participatory Rural Appraisal (PRA) techniques
3. Gap analysis and preparation of action plan for participatory extension teaching methods (Annexure VIII)
4. Collection, preparation and submission of the crop production practices on various crops as adopted by the farmers in the village
5. Collection, preparation and submission of the plant protection practices (including nutritional disorders, weeds and other physiological disorders) on various crops as followed by the farmers in the village
6. Preparation and submission of the calendar of work (crop-wise)
7. Analysis of the situation of the crops of the host farmer and record comments on the following aspects as per proforma (Annexure II)
 - a) Cultivation practices undertaken by the host farmer
 - b) Comparison of the farmer's adoption on each practice with recommended practices
 - c) Response of the farmer about the recommended management practices
 - d) Performance of various crops raised by the host farmer (biometric observations) as per proforma (Annexure III)
 - e) Practical involvement of the student in various field operations. List out all crop operations carried out by the host farmer with deviations from the recommended practices along with reasons
8.
 - a) Recording of insect pests, non-insect pests, diseases, nutritional disorders, weeds and other physiological disorders in standing crops of the host farmer along with their symptoms and control measures adopted as per proforma (Annexure IV Part A & Part B).
 - b) Comparison of the farmer's adoption on each control measure with recommended practices
 - c) Response of the farmer about the recommended control measures
 - d) Performance of various crops after the adoption of control measures by the host farmer
 - e) Collection of information on nematode problems, bird and rodent damage, if any
9. Collection of information on insecticides, fungicides and herbicides available in the market (Annexure IV Part C).
10. Preparation of information materials related to crop production, plant protection, rural economics and extension programme for information corner

11. Collection of data on Farm Holding Survey from host farmer (Crop 1) (Annexure VI & Appendix)
12. a) Study of organizational pattern and history of Research Station / KVK / DAATTC to which the students are attached
b) Recording of titles of the experiments / programmes and procedure adopted for finalizing the experiments / programmes of the Research Station / KVK / DAATTC

Second Month

1. Organization of participatory extension teaching methods - Method demonstrations and group discussions
2. Repetition of items 7, 8 and 10 of first month
3. Demonstration of preparation of fungicidal / insecticidal spray fluids for important plant protection measures
4. Study of public and private agricultural information sources and their critical analysis (Annexure-IX)
5. Collection of data on Farm Holding Survey from host farmer (Crop 2) (Annexure VI & Appendix)
6. Recording the designs and treatments used in five experiments / programmes at Research Station and KVK / DATTC and recording observations
7. Documentation of Indigenous Technical Knowledge (ITK) and Farmer Innovations
8. Documentation of a success story of farmer/ entrepreneur and development of a short video film
9. Participation in T & V monthly workshop and writing report

Third Month

1. Repetition of items 1 and 6 of second month
2. Repetition of items 7, 8 and 10 of first month
3. Collection of information about the procedure for obtaining licence from Government to market pesticides. The student should approach local Mandal Agricultural Officer (MAO) for collection of information on procedure and various forms used (To be submitted in separate page with information on licensing authority for pesticides, licensing period etc. Model Registration form to be attached with the record for external evaluation)
4. Study of on-going Central/ State sponsored Rural Development/ Extension Programmes/ schemes operating in the village
5. Computation of Total Cost of Cultivation of major crops, Cost Concepts and Farm Income Measures (two crops) (Annexure VI & Appendix)
6. Preparation of Alternate Farm Plans and computation of Incremental Income through Partial Budgeting Technique (Annexure VII & Appendix)
7. Record any other activities carried out at the Research Station / KVK / DAATTC
8. Collection of 10 herbarium specimens each of insect damage, plant disease; nutritional disorder, weeds and physiological disorders in the standing crops.
9. Writing the records of the courses registered based on the data collected
10. Training Need Assessment of the farmers and conduct of training programme (Annexure X)
11. Study of Farmers groups (FPOs/ CIGs/ Farmers Clubs/ Farmers Associations) and Self Help Groups (SHGs) in the village

Fourth Month

1. Conducting participatory extension teaching methods - *Rythu Sadassu* including role-play and Agricultural Exhibition
2. Repeat item 10 of first month
3. Completion and submission of the records on Crop Production, Plant Protection, Extension Programme, Rural Economics and Research Station / KVK / DAATTC activities

The records pertaining to all the courses separately shall be submitted at the end of each month preferably when they visit DAATTC next time, covering all the aspects of all the courses as per the schedule of work for evaluation every month. The records submitted by the student shall be retained with the DAATT Centre, which will be returned to the students after completion of the programme for final binding under certification.

EVALUATION

Attendance: The minimum attendance for this programme is 85%. The students will appear for final examination and get evaluated for the entire programme, only if this attendance requirement is met with.

Records : Student shall complete the record work including diagrams / graphs with his / her own hand writing based on daily field observation note books and weekly diaries (Annexure -I) maintained by them. The students shall not use printed typed material in the preparation of RAWEP records. The records shall be paper bound.

Evaluation Procedure: The students performance shall be evaluated by internal and external evaluation committees

i) Internal Evaluation:

This will be done by the students Advisory Committee. The Advisory Committee shall meet once in a month and evaluate the performance of the students periodically by observing the student when he / she is in the field work, in the collection of data, in the organization of various participatory extension teaching methods, as per the schedule. If the student is lagging behind, this should be indicated in the concerned observation book every month. (The marks obtained by the students during periodical evaluation shall be displayed in the notice Board of the DAATTC along with attendance).

ii) External Evaluation:

The External Evaluation Committee nominated by the Dean of Agriculture consisting of four teachers from each of the discipline of Agronomy, Agricultural Economics, Agricultural Extension and Entomology / Plant Pathology shall evaluate the records submitted by the students. The members of the committee shall evaluate the RAWEP records submitted by the students. The members of the committee shall evaluate all the records assigned to them. The average of the marks secured shall be checked and countersigned by the Head of the Department concerned.

A student shall obtain a minimum of 50% of marks in internal evaluation and 50% of marks in external evaluation for successful completion of the programme in each course. The student who records a grade point less than 5.0 or who secured grade point of 5.0 and above but obtained below 50% of marks in internal/external evaluation in any of the course(s) shall be deemed to have failed in the course(s) and 'F' shall be indicated in the grade report. The student who had failed has to re-register the course(s) when offered next by paying the prescribed fee.

However, if the External Evaluation Committee feels that the student can improve the standard of the record in the failed course(s), he/she can submit the record again by re-writing. The re-submission should be done before the last working day of the next semester. Such students shall be required to pay re-examination fee as prescribed in the U.G. Regulation 9.1 (c) (iv).

Credit load and marks allotment

Sl. No.	Course Title	Credits	Internal evaluation (marks)	External evaluation (marks)	Total marks
1.	Crop Production	4	50	50	100
2.	Plant Protection	3	50	50	100
3.	Rural Economics	2	50	50	100
4.	Extension Programme	4	50	50	100
5.	Research Station/KVK/DAATTC activities	1	100	-	100
	Total	14	300	200	500

ROLE OF FUNCTIONARIES

A. Scientist (Transfer of Technology) / Scientist In-charge

1. He acts as a primary contact person for the students in their day-to-day work
2. He shall select 4 to 6 villages at least, a fortnight in advance of commencement of the programme and the same has to be informed to the Associate Director of Research. He should see that the villages so selected shall have wet, dry and irrigated dry crops, must have transport facilities and be nearer to the Research Station / KVK / DAATTC. Mono crop villages shall be avoided and also the village shall be changed once in three years
3. He shall select the host farmers at least 15 days before the commencement of the programme and the same be informed to the Associate Director of Research. The host farmer shall be knowledgeable, progressive in outlook, friendly, temperamentally good, emotionally matured, accommodative, hospitable and popular.
4. He shall help the students in clarifying their doubts
5. He shall keep the attendance register up to date and display the list of absentees in the notice board at DAATTC every month
6. He shall maintain performance sheet for each of the student (after reviewing the work month- wise). If performance of the students is not up to the mark, the activities in which the student is lagging behind must be brought to his/ her notice by giving written instructions.
7. He shall provide information on management practices for each crop raised in his jurisdiction in the first/ second week of first month. Before this is done, the student shall write the management practices for all crops grown in the village.
8. He shall help the students in planning and execution of various participatory extension teaching methods and in the interpretation of data.
9. He shall contact various agencies engaged in rural development activities viz.,
 - a) State Department of Agriculture
 - b) District Rural Development Authority (DRDA)
 - c) Panchayat Raj
 - d) Department of Irrigation
 - e) District Public Relation Officer
 - f) Forest Department
 - g) Financial institutions
 - i) SC, ST and BC Corporations
 - ii) Other Government financing agencies
 - h) Voluntary organizations
 - i) Adult Education Centres
 - ii) Youth Organizations
 - iii) Balwadies
 - iv) Mahila Mandals
 - v) Nehru Yuvaka Kendras
10. He shall inform the students about the field Observation book, weekly diary and records at the commencement of the programme
11. He shall carry out one or two extension activities for the observation and guidance of the students
12. He shall arrange laying out mini kits, demonstration plots etc., in RAWEP villages
13. He shall visit each village once in a week.

B. Associate Dean's Representative (AR)

1. He shall share the responsibility of executing RAWEP along with Scientist (TOT) / Scientist in- charge. In case of girl students, Associate Dean Representative may preferably be from lady staff members.
2. He shall submit duplicate copy of the master sheet of attendance to the Associate Dean along with report.
3. He shall assess the students' performance based on the monthly guidelines issued as a member of the Advisory Committee and submit report to the Associate Dean and to the Chairman of the Advisory Committee.
4. He shall make surprise visits and sign in the diary note book and attendance register.
5. He shall visit villages and meet the students in the first week and third week of every month and cover all the villages in each trip. After visiting the villages, he/she shall discuss with the Head of the research

station, who is also the Chairman of the Advisory Committee for the students and in mutual consultation, they will examine ways and means to overcome the operational difficulties, if any.

6. He shall monitor the online disbursement of the stipend to the students once in a month.

C. Chairman of Advisory Committee

1. He shall visit the RAWEP villages and sign in the diary notebook and attendance sheet once in a month.
2. He shall arrange laying out of mini kits, demonstration plots, adaptive trial plots in the RAWEP adopted villages through the Scientist(TOT).
3. He shall visit mini kit plots, demonstration plots and on-farm trials laid out by the students.
4. He shall assess students' performance based on the monthly guidelines issued
5. He shall maintain a performance sheet for each of the students.

D. Assistant Director of Agriculture / Mandal Agricultural Officer

1. The nominee of Department of Agriculture shall assist and co-operate with the Scientist (TOT) / Scientist in-charge in developing activities outlined in the programme and help the students to carry out their work.
2. He shall assist the Scientist (TOT) in the selection of villages and host farmer.
3. He shall evaluate the performance of the students throughout the programme as a member of the Advisory Committee.

E. Host Farmer

1. Host farmer selected shall co-operate and communicate with the student with regard to various agricultural operations on his holding.
2. He shall co-operate with the Scientist (TOT) / Scientist in-charge as well as University officials.
3. He shall help the students in settling down comfortably.
4. He shall help the students to work with him in his fields as far as possible on the advice of Scientist (TOT)
5. He shall serve as one of the members in the evaluation of the student's work to the extent necessary.
6. He shall frankly give his assessment of the student's work and his/her activities in the village.
7. He shall help the Scientist (TOT) in the maintenance of attendance.

F. Associate Director of Research (ADR)

1. He shall have the overall responsibility for the implementation of Rural Awareness Work Experience Programme and allot students to DAATTC/ KVK in the zone.
2. He shall also direct the movements of Scientist (TOT) for Rural Awareness Work Experience Programme.

G. Associate Dean

He shall visit the villages once during the semester and discuss with the host farmers regarding the students' activities. He shall also review and monitor the programme.

Schedule of visits by different functionaries

1. Scientist (TOT) / Scientist in-charge shall visit each village once in a week.
2. Associate Dean's Representative shall visit the villages twice i.e. in the first and third week of every month.
3. Coordinator of DAATTC / KVK / Head of the Research Station shall visit each village once in a month.
4. Associate Dean of the College and Head of Agricultural Extension department shall visit each RAWEP village once during the programme.
5. Monitoring team constituted by the Associate Director of Research in consultation with Chairman of the advisory committee make surprise visits to the villages during Rural Awareness Works Experience Programme.

ANNEXURE – I

DIARY OF THE STUDENT

Rural Awareness Work Experience Programme report for the week from to

1. Name of the Student :
2. I.D.No. :
3. Name of the College :
4. Name and address of the host farmer :
5. Name of the RAWEP Centre :
6. Abstract of work:
(Indicate in brief the activities of week)

Week days

Abstract of work done

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

7. New experience gained during the week Experience or skills I would like to gain
8. Period of absence from work Reasons for absence
Days Hours

Signature of the student
9. Comments of the Advisory Committee

Signature of the Chairman of the Advisory Committee
10. Date of receipt of the diary by the
Chairman of the Advisory Committee
11. Date of communication of comments
If any, to the student

ANNEXURE - II
CROP PRODUCTION
RECORD OF AGRICULTURAL OPERATIONS

Name of the Student :
I.D.No. :
Name of the College :
Name of the RAWEP Centre :
Name and address of the host farmer :

I. Year and Season

Survey No. or location of the field
Area of the field
Soil type
Soil characteristics
Textural group
pH and EC
Available NPK (kg ha⁻¹) (indicate low, medium or high)

Crop

Previous crop and manures applied along with yield and returns
Present crop or crops and variety / varieties
Details of cultivation (record the details date-wise)
Preparatory cultivation (if already completed particulars may be obtained)
No. of ploughings, harrowings / puddlings and implements used
Whether optimum or not
Soil and water conservation measures adopted, if any

II. Seeds and Sowing

- a) Seed quality
- b) Seed treatment
- c) Seed rate
- d) Method of sowing
- e) Method of raising nurseries and fertilizers applied
- f) Method of planting
- g) Spacing
- h) Whether sown or planted in appropriate time, if not give reasons
- i) If transplanted, age of seedlings and no. of seedlings per hill
- j) Gap filling or thinning

III. Horticultural crops (vegetatively propagated)

- a) Layout and planting
- b) Systems of planting and spacing, Digging and filling up of pits
- c) Selection of plant material (layers, budded plants or grafts)
- d) Planting (main crop & filler plants, if any)
- e) Wind breaks
- f) Fencing (live / barbed wire fence)
- g) Any other information (pandal erection if grapes etc.)

IV. Manures and Manuring

- a) Organic manures and rate of application
- b) Source of nutrients and rate of application
- c) Time and method of application
- d) Nutritional and physiological disorders, if any (write the symptoms)
- e) Foliar application of nutrients - name and dose
- f) Soil amendments, if any Other particulars

V. Weed Control

- a) No. of weedings and the stage of crop growth
- b) Implements / tools used
- c) Dominant weeds
- d) Details of herbicides, if used
- e) Whether weeds are controlled in time, if not, give reasons

VI. Irrigation

- a) Source
- b) Quality of water
- c) Limited or adequate
- d) Method of irrigation
- e) Depth of irrigation (cm)
- f) Number of irrigations
- g) Whether irrigations are given at right time, if not, specify reasons
- h) Whether water is efficiently used if not, give reasons
- i) Mid-season drainage for rice Other particulars if any

VII. Special Operations

- a) Desiccating, disbudding, deshooting, wrapping, propping, topping, nipping etc.
- b) Mid-season corrections in dryland agriculture (thinning, mulching, water harvesting, supplementary irrigation, ratooning, etc.)
- c) Training and pruning
- d) Application of growth regulators (purpose, concentration, time and number of applications)
- e) Bahar treatment in citrus other details, if any..

VIII. Intensive cropping

- a) Cropping sequence
- b) Intercropping (plant population and crop geometry)
- c) Mixed cropping (Plant population and crop geometry)
- d) Cash crops in orchards
- e) Relay cropping (plant population and geometry)
- f) Time of sowing of component crops
- g) Fertilizer schedule
- h) Any other information

IX. Harvesting, Processing, Storage, etc.

- a) Days to 50 % flowering
- b) Symptoms of crop maturity (fruit/grain/pod/bulb/tuber/rhizome/leaf)
- c) Number of days to flowering and maturity
- d) Method of harvesting
- e) Method of threshing
- f) Method and duration of drying
- g) Number of pickings / harvests
- h) Processing (sugarcane, cotton, turmeric etc.)
- i) Pre-cooling, if any
- j) Method of packing fruits, vegetables and flowers
- k) Method of transportation of fruits, vegetables and flowers
- l) Method of storage for seed and horticultural produce (including cold storage)
- m) Method of storage of non-seed
- n) Method of ripening of fruits
- o) Shelf life of fruits, vegetables and flowers in days after harvesting
- p) Methods of extending the shelf life of fruits, vegetables and flowers
- q) Use of growth regulators in ripening of fruits and vegetables
- r) Preparation of fruits products, if any (Pickles, jam, jelly, squash, chutney, dehydrated products, etc.)

X. Yield and Returns

- a) Grain yield (kg ha^{-1}) and its value (Rs.)
- b) Straw yield (t ha^{-1}) and its value (Rs.)
- c) Value of byproducts, if any
- d) Average fruit / rhizome / bulb / tuber / seed weight
- e) Fruit / rhizome / bulb / tuber / seed yield
- f) Fruit / rhizome / bulb / tuber (average length and width based on 25 numbers)
- g) No. of seeds per fruit / pod
- h) No. of cloves/bulb
- i) No. of fingers / rhizomes per plant
- j) Number of flowers / per plant

- k) Flower yield / ha
- l) Number of berries / fruits / fingers per bunch

XI. Weather Data

- a) Rainfall during the crop period and its distribution
- b) No. of rainy days
- c) Drought spells during the crop period
- d) Crop stage at which it was subjected to drought / flood
- e) Temperature (max. and min.) at different stages of crop
- f) Other weather abnormalities, if any
- g) Indicate whether the weather conditions were optimum to the crop

XII. Farm Machinery including plant protection equipment

- a) Inventory of the farm machinery available with the host farmers and village
- b) Efficiency of the farm machinery relative to the farmers' own practices
- c) Area / quantity covered by each machine
- d) Source, capacity (in H.P.) and cost of the machinery
- e) Access to mechanics and spare parts in the village or nearby town
- f) Farmers opinion in the use of farm machinery
- g) Any other information

XIV. Critical observation of the crop production practices adopted by farmers

Reasons for not adopting certain recommended practices, new practices, adopted, causes for yield difference between normal and actual yield obtained and suggestions for improving the productivity of crops may be indicated.

ANNEXURE - III

BIOMETRICAL OBSERVATIONS OF IMPORTANT CROPS

1. Initial plant population / m² (Number of hills)
2. Final plant population / m² (Number of hills)
3. Plant height (cm) at
 - i) 30 days after planting
 - ii) 60 days after planting
 - iii) 90 days after planting
 - iv) Harvest
4. Tiller number / m²
 - i) 20 days after planting
 - ii) 35 days after planting
 - iii) 50 days after planting
5. Productive tillers / m² (a)
6. No. of grains / spike lets (b)
7. Per cent of mature grains (c)
8. 1000 grain weight (g)(d)
9. Estimated grain yield (kg / ha)

$$\frac{(a \times b \times c \times d)}{10000}$$

10. Recorded grain yield (kg / ha)
11. Reasons for the difference in yield, if any
12. Straw yield (kg / ha)

Groundnut

- Initial plant population / m²
- Final plant population at harvest / m² (a)
- Number of primary branches / plant at flowering
- Number of filled pods / plant at harvest (b)
- 100 pod weight (g) (c)
- Estimated pod yield (kg / ha)

$$\frac{(a \times b \times c)}{10}$$

- Recorded pod yield (kg / ha)
- Reasons for the difference in yield, if any
- Haulm yield (kg / ha)

Pulses

- Initial plant population / m²
- Final population at harvest / m² (a)
- Number of primary and secondary branches / plant at flowering
- Number of filled pods / plant at harvest (b)
- Number of seeds / pod (c)

1000 grain weight (g) (d)

Estimated seed yield (kg / ha)

$$\frac{(a \times b \times c \times d)}{100}$$

Reasons for the difference in yield, if any

Bhusa yield (kg / ha)

Sugarcane

Initial plant population/m²

Tiller number / m²

i) 30 days after sprouting

ii) 60 days after sprouting

iii) 90 days after sprouting

iv) 120 days after sprouting

Number of harvestable canes / m² (a)

Average weight of the harvestable cane (kg) (b)

Estimated cane yield (t/ha)

(a x b x 10)

Recorded cane yield (t / ha)

Reasons for the difference in yield, if any

Juice brix at maturity

Foliage

Colour

Density

Turmeric

Variety

Spacing

Initial plant population / ha (based on 10 m² area)

Final plant population / ha (based on 10 m² area)

No. of days taken to sprouting on rhizomes from sowing

Plant height (cm) at monthly interval up to harvest (based on 10 randomly selected plants)

No. of leaves / plant at monthly intervals (based on 10 randomly selected plants)

Leaf length & width (cm) (based on 10 randomly selected plants) at monthly intervals

Symptoms of maturity

No. of days taken to harvest from sowing

No. of mother rhizomes / plant (g) (based on 10 randomly selected plants)

Fresh weight of rhizomes / plant (g) (based on 10 randomly selected plants)

Fresh rhizomes yield per ha (q / t) (based on 10 m² area)

Dry rhizomes yield / ha (q) (based on 10 m² area)

Curing percentage

Grades

Mother rhizomes (%)

Finger rhizomes (%)

Small pieces (%)

Tomato / Brinjal

Initial plant population / ha (based on 10 m² area)

Final plant population / ha (based on 10 m² area)

Plant height (cm) (based on 10 randomly selected parts) at 30

days after transplanting

60 days after transplanting

90 days after transplanting

No. of branches / plant (based on 10 randomly selected plants) at

60 days after planting

90 days after planting

Days taken for first flower appearance

Days to 50 % flowering

Per cent fruit set (based on 100 flowers)

Days taken from flowering to fruit maturity

Maturity indices

Fruit shape (based on 10 randomly selected fruits in 1st & 2nd harvests)

Fruit weight (g) (based on the average of 50 fruits)

Per cent seed content

Per cent pulp content

No. of fruits and weight / plant (kg) (based on 10 randomly selected plants)

Yield (t / ha) (based on 10 m² area)

Flesh thickness (mm) (based on 10 randomly selected fruits)

Bhendi

Variety

Initial plant population / ha (based on 10 m² area)

Final plant population / ha (based on 10 m² area)

Plant height (cm) at (based on 10 randomly selected plants) at

30 days after sowing

60 days after sowing

90 days after sowing

fruit harvest

No. of branches / plant (based on 10 randomly selected plants) at

60 days after sowing

90 days after sowing

fruit harvest

Days taken for first flower appearance

Days taken for 50 % flowering (based on 10 m² area)

Days taken from flowering to pod harvest (based on 50 randomly selected flowers)

No. of fruits / pods / plant (based on 10 randomly selected plants)

Pod length and girth (cm) (based on 100 pods of 1st & 2nd harvest)

Number of pickings

Pod yield/plant (g) (based on 10 randomly selected plants)

Pod yield (t / ha) (based on the yield of 10 m² area)

No. of seeds / pod (based on 100 pods)

Pod to seed ratio

Seed yield (kg / ha) (based on 10 m² area)

Chilli

1. Variety
2. Initial plant population / ha (based on 10 m² area)
3. Final plant population / ha (based on 10 m² area)
4. Plant height & spread (cm) (based on 10 plants selected randomly) at
 - 30 days
 - 60 days
 - 90 days
 - 120 days
 - 150 days
 - 180 days
 - final harvest
5. No. of branches / plant (based on 10 randomly selected plants) at
 - 60 days
 - 90 days
 - 120 days
 - 150 days
 - 180 days
6. Days taken for first flower appearance after transplanting
7. Days taken to 50 % flowering
8. Per cent fruit set (based on 100 randomly selected flowers)
9. Maturity indices
10. No. of pods / plant (based on 10 randomly selected plants in all the pickings)
11. Pod yield (g / plant) (based on randomly selected plants)
 - a. Green pods / plant (g)
 - b. Ripe pods / plant (g)
 - c. Dry pods / plant (g)
12. Dry chilli yield (t / ha) (based on 10 m² area)
13. Curing percentage
14. Pod length & width (cm) (based on 100 randomly selected pods)
 - a. Green mature
 - b. Ripe
 - c. Dry
15. Per cent seed content (based on 100 randomly selected dry pods)
16. Per cent shell content weight (based on 200 g randomly selected pods)
17. Per cent non-edible stalk (based on 200 g randomly selected pods)
18. Fruit weight (g) (based on 100 randomly selected pods)
 - a. Green mature
 - b. Ripe
 - c. Dry

Note: For other crops, if any, similar observations are to be recorded. Reasons for the difference in estimated and recorded yield may be discussed critically.

ANNEXURE – IV
PLANT PROTECTION
PART – A
(Pertains to Host farmer)

1. Name of the host farmer
2. Name of the village
3. Name of the crop
 - a) Variety
 - b) Area(ha)
4. Previous crop sown
 - a) Variety
 - b) Area(ha)
5. Seed Treatment
 - a) Fungicide/ Insecticide / bio agent used
 - b) Source
 - c) Dosage
 - d) Method of treatment
 - e) Cost/ha
6. Diseases/ Insect pests Observed
stage of the crop
Name of the disease or insect pest or any other pests (rodents/ birds/nematodes) (Mention the common, scientific and vernacular name of the causal organism/ insect pest).
Symptoms /nature of damage of insect pests/ diseases (mention separately)
- 7
 - a) Control measures adopted
 - b) If fungicide/ insecticide / bio agent is used, mention dosage and time of application, no. of applications, whether applied alone or in combination.
 - c) Control measures suggested (mention the fungicides/insecticides along with dosage, time of application, number of applications, frequency of application and cost per ha.)
 - d) Type of sprayer / duster used
Own or hired (If hired, mention rental charges and source)
Labour used (cost /ha)

ANNEXURE – IV
PLANT PROTECTION
PART-B
(Pertains to the village)

1.
 - a) No. of exhibits prepared for information centre with plant diseases and insect pests (mention separately for diseases and pests)
 - b) Name of the diseases/ insect pests for which exhibits prepare for information centre (write in detail about these in the plant protection record)
 - c) Response of the farmer for these exhibits / information centre
 - d) No. of farmers visited
2.
 - a) No. of charts / posters prepared regarding insect pests and plant diseases to display in exhibitions / group discussions etc.
 - b) Names of the diseases and insect pests displayed.
 - c) Response of the farmer for these charts and posters
3. Survey on
 - a) Adoption of recommendations on control measures for crop diseases / insect pests by local farmers in the village.
 - b) Incidence / occurrence of different diseases / insect pests and different crops in the villages. Precautions being taken by farmers while spraying
 - c) Any case(s) of poisoning (humans / animals) being reported in area while spraying.
4.
 - a) Constraints / problems faced by the farmer regarding plant protection operations / application of pesticides/availability of pesticides and plant protection equipment *etc.*
 - b) Any other specific problems of the farmer regarding plant protection measures which are not mentioned above.
5. Facilities for minor repairs to the plant protection equipment (available or not)
6. Critical observations on the plant protection measures adopted by the farmer (reasons for not adopting certain recommended practices / new practices adopted)
7. Normal and actual yield obtained by the plant protection measures and suggestions for improving the productivity of the crops by adopting the plant protection measures.
8.
 - a) Awareness about Economic Threshold Levels of the pests.
 - b) Whether any farmer is following.
9.
 - a) Knowledge about rodents/ birds/ nematode pests and their damage
 - b) Knowledge about control measures of non-insect pests
10. Knowledge about precautions to be taken while spraying /dusting of the pesticide.
11. Knowledge about the correct preparations of spray fluids of pesticides.
12. Knowledge about the presence of weed flora on the occurrence of pests and diseases on crop plants.
13. Knowledge about the compatibility of various pesticides.
14. Demonstrations of preparation of spray fluids (fungicides and insecticides, Bordeaux mixture, Bordeaux paste, neem decoction, etc.)
15. Knowledge about weather parameters of disease incidence/pest outbreak.
16. Knowledge about post-harvest treatments of farm produce (stored grain pests and diseases).

PLANT PROTECTION

Collection of information on Insecticides, fungicides and herbicides available with local input dealers.

[illegible]

Strength: 35%EC / 10%SC etc

At least 30 chemicals (not trade names) – 10 insecticides, 10 fungicides / bactericides, 5 herbicides, 5 plant growth regulators

ANNEXURE – V
RURAL ECONOMICS
AGRO-ECONOMIC SURVEY

1. Identification

Village

Mandal

District

Date of Survey

1.1 Location and Infrastructure

a) Topography:

b) Boundaries:

c) Infrastructure available:

Infrastructure facilities available in the village

S. No.	Item	If in the village (No.)	Distance from the village (km)
i)	Mandal head quarters		
ii)	Revenue division head quarters		
iii)	District head quarters		
iv)	Post office		
v)	Telegraph office		
vi)	Railway station		
vii)	RTC bus station		
viii)	Primary Health Centre		
ix)	Veterinary Health Centre		
x)	All weather motorable road		
xi)	Primary / middle school		
xii)	High school / College		
xiii)	Godown / ware house		
xiv)	Cold storage facility		
xv)	Commercial bank / Regional Rural Bank		
xvi)	Primary Agril. co-operative Credit Society (PACS)		
xvii)	Regulated market / Commodity exchange		

xviii)	e-seva / mee-seva centre		
xix)	Agro-industry		
xx)	O/o Agricultural Extension Officer		
xxi)	Agricultural Research Station		
xxii)	Other important centres		

Source: Gram Panchayat Office

1.2 Demographic particulars

Demographic particulars of the village ('000 nos.)

S. No.	Population	Census Year		Increase / decrease over 2001 (%)
		2001	2011	
i)	Males			
	a) Adults			
	b) Children (below 15 years)			
	Sub-total			
ii)	Females			
	a) Adults			
	b) Children (below 15 years)			
	Sub-total			
	Grand Total			
iii)	Sex ratio: (Females per 1000 males)			
iv)	Others			
v)	Literacy status			
	a) Male			
	Up to Primary level			
	Primary level to High school level			
	Intermediate to degree level			
	Above degree level			
	a) Female			
	Up to Primary level			
	Primary level to High school level			
	Intermediate to degree level			
	Above degree level			

Source: Gram Panchayat Office

1.3 Occupational distribution

Particulars of occupational distribution of the Village

S. No.	Particulars	2001	2011	Increase / decrease over 2001 (%)
i)	No. of cultivators			
ii)	No. of agricultural labourers			
iii)	No. of non-agricultural workers			

Source: Gram Panchayat Office

2. Land utilization, Irrigation and Cropping pattern

2.1 Soil type (area in ha)

Black	()	Red	()
Chalka	()	Others	()

2.2 Land utilization

Land utilization particulars of the village (area in ha)

S. No.	Particulars	2011	2001	Increase / decrease over 2001 (%)
i)	Geographical area			
ii)	Forests			
iii)	Barren and uncultivable land			
iv)	Land put to non-agricultural use			
v)	Cultivable waste			
vi)	Permanent pastures and other grazing land			
vii)	Land under misc. tree crops and groves			
viii)	Current fallow land			
ix)	Other fallow land			
x)	Net area sown			
xi)	Area sown more than once			
xii)	Gross cropped area			
xiii)	Cropping intensity			

Source: Gram Panchayat Office

2.3 Irrigation (Source –wise)

Irrigation particulars of the village

S. No.	Source	Area Irrigated (ha)	
		<i>Kharif</i>	<i>Rabi</i>
i)	Canals		
ii)	Tanks		
iii)	Wells		
iv)	Tube wells		
v)	Others		
	Total		
	Net Area Irrigated		
	Gross Area Irrigated		
	Area Irrigated More Than Once		
	Irrigation intensity		

Source: Gram Panchayat Office

Problems of irrigation, drainage and soil management, if any:

2.4 Structural distribution of land holdings

Particulars of landholdings in the village

S. No.	Farm size (ha)	Number	% to total	Area (ha)	% to total	Per capita area (ha)
i)	Less than 1.00 (Marginal)					
ii)	1.01 – 2.00 (Small)					
iii)	2.01 – 4.00 (Semi-Medium)					
iv)	4.01 – 10.00 (Medium)					
v)	≥ 10.00 (Large)					
	Total					

Source: Gram Panchayat Office

2.5 Cropping pattern

Area under different crops (ha)

Season / Crop	Rain fed	Irrigated dry	Irrigated
<i>Kharif</i>			
1.			
2.			
<i>Rabi</i>			
1.			
2.			
Summer			
1.			
2.			

Source: Gram Panchayat Office

3. Supply of Resources

3.1 Seed

3.1.1 Extent of area covered under HYV and Local varieties

Crop	HYV	Local
1.		
2.		
3.		
4.		
Total		

Source: Gram Panchayat Office/Local Agricultural Officer/DAATT Center

3.1.2 Source from which HYV seed obtained

Source / Agency / Institution	Quantity obtained	Area covered
1.		
2.		
3.		
4.		

Source: Gram Panchayat Office and Local Agricultural Officer

3.1.3 Indicate the difficulties faced by farmers in getting HYV

3.2 Manures and fertilizers

3.2.1 Particulars of manures and fertilizers applied in the village

Crop	Manures		Fertilizers			Bio-fertilizers		Total cost (RS.)
	Quantity applied (t)	Price/cart load (Rs.)	Fertilizers Quantity (kg) and Price per hectare (Rs.)	Price (Rs.)	Quantity (N,P & K) (kg/ha)	Quantity (kg/ha)	Price (Rs.)	
1.								
2.								
3.								
4.								
5.								

Source: Gram Panchayat Office and Local Agricultural Officer

3.2.2 Difficulties experienced in securing manures and fertilizers, if any

3.3 Plant protection chemicals

3.3.1 Quantity and price of plant protection chemicals used in the village

Crop	Insecticides		Fungicides		* Others	
	Quantity	Price	Quantity	Price	Quantity	Price
1.						
2.						
3.						
4.						

* Others: bactericides, nematocides, herbicides etc.

Source: Gram Panchayat Office and Local Agricultural Officer

3.3.2 Difficulties experienced in securing plant protection chemicals, if any

3.4 Agricultural Labour

3.4.1 Estimate the supply of labour units per annum:

3.4.2 Estimate the demand for labour units based on the per crop and per hectare: (Details given in appendix)

3.4.3 Whether the labour is adequate or deficit, comment:

3.4.4 Wage rates for labour (Rs/day)

Operation	Men	Women	CPD	TP
1. Land preparation				
a) Ploughing				
b) Levelling				
c) Others				
2. Nursery preparation and sowing				
3. Transplanting				
4. Weeding				
5. Inter cultivation				
6. Plant protection				
7. Harvesting				
8. Threshing				
9. Others				

* CPD – Cattle pair day, TP: Tractor power

Source: Gram Panchayat Office and Local Agricultural Officer

3.5 Agricultural credit

3.5.1 Institutional Sources

i) Disbursement of Crop loans (Rs/ha)

Crop	Co-operatives		Commercial		RRB	
	SF	RI	SF	RI	SF	RI
1.						
2.						
3.						

(SF - Scale of Finance, RI – Rate of interest, RRB – Regional Rural Bank)

ii) Disbursement of Medium term loans (Rs/ha)

Purpose wise	Co-operatives		Commercial Bank		RRB	
	Amount Eligible (Rs)	RI	Amount Eligible (Rs)	RI	Amount Eligible (Rs)	RI
1.						
2.						
3.						

iii) Disbursement of Long term loans

Purpose-wise	Amount Eligible (Rs)	RI	No. of installments
1.			
2.			
3.			

3.5.2 Non-institutional Sources

i) Major Sources:

ii) Problems in availing non-institutional loans

iii) Purpose-wise loan amount & Rate of interest from non-institutional source

Purpose-wise	Amount Eligible (Rs)	RI (%)	No. of installments
1.			
2.			
3.			

Source: Non-Institutional Sources & Borrowers

4. Village industries

- What are the different agro-based industries existing in the village?
- Indicate further scope of set up of any other type of agro-based industry

5. Prepare an appropriate plan for the agro-economic development of the village taking into account of all the resources**6. Marketing of agricultural produce:**

- Quantity sold in Villages:
- Quantity sold in nearby Regulated Market
- Quantity procured by any Government Agency

7. Agricultural Product Prices**Prices of different agricultural products (Rs./q)**

Produce	Prices		
	Minimum Support Prices (MSP)	Farm Harvest Prices (FHP)	Prices in nearby Regulated market
1.			
2.			
3.			

8. Processing facilities available in the village**9. Number of farmers availed market finance/pledge loan?****10. Major sources of marketing information to farmers**

ANNEXURE – VI

FARM HOLDING SURVEY

1. General

Village

Name of the host farmer

Main occupation

Subsidiary occupation

2. Details of Family

Family particulars of the host farmer

Name	Age	Relationship to head	Literacy level	Occupation	
				Main	Subsidiary

3. Farm Labour

3.1 Family labour available for farm use (No.)

Male:

Female:

3.2 Permanent labour engaged (No.)

Seasonal / 3.1 Annual	Number	Purpose	Payment	
			Cash	Kind

4. Land holding

4.1 Details of land holding (ha)

Item	Rainfed	Irrigated	Irrigated Dry	Total area
Owned				
Leased in				
Leased out				
Present value per ha				
Land revenue / cess per ha				

4.2 Total extent of operational holding (ha):

Rainfed:

Irrigated:

Irrigated dry:

4.3 Relative advantages and disadvantages of land with regard to soil, drainage and irrigation:

5. Season-wise crops cultivated on the farm:

Crops	Area (ha) Previous Year			Area (ha) Current Year			% Change over previous year		
	Kharif	Rabi	Summer	Kharif	Rabi	Summer	Kharif	Rabi	Summer

6. Agricultural loans

S. No.	Type of loan	Agency	Purpose	Amount (Rs.)	RI	Amount repaid (Rs.)	Loans out-standing (Rs.)	Remarks

- Do you feel that the credit available is sufficient and timely? Yes or No
If not, indicate problems and suggestions
- Mention the scale of finance extended for different crops by the bank.
- Compare the scale of finance with cost of cultivation and comment

7. Crop Insurance

- Insurance premiums paid:
- Compensation received:

7.1 Crop wise details of insurance claims cleared during the last five years

S.No.	Year	Crop	Area(ha)	Sum insured	Premium paid	claims	Remarks

Remarks: Reasons for claiming the insurance (Drought/Flood/Pest outbreak, if any):

Give your suggestions for effective implementation of crop insurance scheme?

8. Livestock

8.1 Particulars of livestock

Kind	No	Breed	Age	Homebred / Purchased	Presentvalue	Remarks

8.2 Do you wish to increase (or) change the existing types of livestock? Yes or No. If yes, what changes you would like to bring?

8.3 Indicate the additional resources required and associated problems of livestock

9. Fixed Assets

9.1 Particulars of Fixed Assets and Depreciation

Kind	No.	Present Value	Life	Year of purchase / construction	Purchase value		Depreciation		Remarks
					Rate	Amount	Rate	Amount	
Implements and machinery									
1									
2									
3									
4									
5									
6									
Farm buildings									
1									
2									
Irrigation equipment									
1									
2									
Total Depreciation									

9.2 Indicate whether the existing implements and machinery are adequate: Yes or No

- If not, indicate the items required
- What are the financial and maintenance problems?

- Whether sufficient service (repair) facilities are available in the village for the implements and machinery?
- If not, where do they get the machinery repaired?

9.3. Do you have adequate facilities to store farm produce? Yes/No

- If no, what are the problems / alternatives adopted?

9.4 Irrigation: Is the existing water availability sufficient for the present cropping system? Yes/No.

If no, what changes do you propose in the existing cropping system?

10. Market intelligence

Are you receiving any information (related to both production & marketing) in advance of the crop season (to plan the crop-wise area, and about MSPs and prices of commodities in nearby regulated market).

If so, what is the source of information?

Radio /TV/ News Paper/ Market Yard / Neighbours / Agricultural Department / Others (Specify)

11. Cost of cultivation (Give separately for major crops) **(Rs./crop area under cultivation)**
If the host farmer cultivates, the student has to compute cost of cultivation of another major crop from any other farmer in the village.
11. A. Labour costs

S.No.	Operation	Owned labour					Hired labour					Wage rates					Amount
		TP	CPD	M	W	C	TP	CPD	M	W	C	TP	CPD	M	W	C	
1.	Land preparation																
a.	Removal of stubbles																
b.	Ploughing																
c.	Harrowing																
d.	Leveling																
e.	Puddling																
f.	Trimming of bunds																
g.	Forming ridges and furrows																
h.	Others																
2.	Application of manures																
a.	Carting																
b.	Spreading																
3.	Sowing / Transplanting																
4.	Fertilizer application																
5.	Earthing up																
6.	Inter cultivation																
7.	Weeding																
8.	Irrigation																
9.	Wrapping and propping																
10.	Plant protection																
11.	Harvesting																
12.	Threshing and winnowing																
13.	Bagging and transportation																
	Total																
Note: TP – Tractor Power		CPD – Cattle Pair Day					M – Men					W – Women					C – Children

11 B. Material costs

S. No.	Item	Quantity		Unit value (Rs.)	Total Value	Per cent to total cost (S.No.12)
		Owned	Purchased			
1.	Seed (kg)					
2.	FYM (q)					
3.	Manures (q)					
4.	Fertilizers (kg)					
	I.					
	ii.					
	iii.					
5.	Plant protection chemicals l / g)					
	i					
	ii					
	iii					
6.	Irrigation					
7.	Others (if any)					
	Total B					
11.C	Interest on working capital Total operational cost (A+B+C)					
11.D	Fixed Costs					
1.	Land revenue					
2.	Depreciation					
3.	Rental value of owned land / leased in land					
4.	Interest on fixed capital					
	Total Fixed Costs					
	Total Cost of Cultivation (TCOC) (11.A + 11.B + 11.C + 11.D)					

12. Disposal of farm produce

Are you disposing the crop produce according to market information? (Yes /No) If yes, mention the market places where you are disposing?

Particulars of farm produce sold

Name of Produce	Quantity retained (q)	Quantity sold in village market (q)	Quantity sold in nearby regulated market (q)

- ☐ Reasons for selling the produce in village market & regulated market
- ☐ Whether the local regulated market has e-NAM facility
- ☐ Whether the market price received is above MSP?
- ☐ Do you feel that the price received by you is remunerative? Yes or No.
If no, what price do you expect?
- ☐ Do you feel that available market facilities are sufficient? Yes or No
If no, what are the problems you face in marketing? Give suggestions

13. Returns from crop enterprise

Yield and returns particulars

Name of the crop	Area	Season	Main product		By product		Total value (Rs.)
			Quantity (kg)	Unit Value (Rs.)	Quantity (kg)	Unit Value (Rs.)	

14. Returns from livestock enterprises

Name of Livestock enterprise	Number	Total Maintenance Cost per year	Total Returns (Rs.)	Net Returns (Rs)

ANNEXURE VII

ALTERNATE FARM PLAN

The student should prepare the alternate farm plan after critically evaluating the existing farm plan studied under farm holding survey for the host farmer. The student has to go through the following methodology to prepare alternate farm plan from existing farm plan duly following the partial budgeting technique.

1. Study the existing farm plan: The student has to study the existing farm plan considering the following aspects:
 - ☐ Resource position or inventory with the farmer
 - ☐ Nature of crops and varieties suitable in that area
 - ☐ Costs and returns of different crops
 - ☐ Managerial skills of the farmer in respect of the production of different crops
 - ☐ Access to credit facilities
2. Identify the weakness / defects in the existing farm plan. Study the possibility of various risk factors like pests and disease incidences, drought, cyclones, floods etc., in the study area while preparing the alternate farm plan.
3. Incorporate the scientific modules to overcome the defects in existing plan like adopting seed treatment, correct doses of fertilizers & pesticides, use of machinery, scientific irrigation water management, change in the production technology etc.
4. Preparation of alternate farm plan duly incorporating scientific improvements in the existing plan, at least for two crops.
5. Compute the incremental income due to alternate (scientific) farm plan over existing plan by employing Partial Budgeting technique

Examples of Partial budgeting

Example 1: In the studied farm holding survey of host farmer with reference to cultivation of crop 'X', two loopholes or defects are identified viz., the host farmer has not practiced seed treatment and he is applying excess quantity of nitrogen (urea) fertilizer than the scientific recommended dosage. So, these two defects were adjusted as per the scientific recommendations in the alternate farm plan. With the introduction of seed treatment in the alternate plan, the pesticide application cost will be reduced during the course of crop production programme. Further, the decline in fertilizer (urea) dosage is compensated by the slight increase in organic manures application to meet the nutrient management of the crop. The details are presented through table below.

Table: Existing & Alternate farm plans for Crop 'X' – Comparative Analysis (1.25 acres)

Operational Costs	Existing Plan (Data from farm holding survey) Rs/1.25 acres	Alternate Plan Rs/1.25 acres
Seed	400	400
Seed treatment	---	200
Nursery	250	250
Land preparation	400	400
Transplanting	1400	1400
Manures	2175	3000
Fertilizers	3500	2500
Plant Protection	4050	3100
Irrigation	100	100
Weeding	200	200
Harvesting	450	450
Yield (qtls)	37.5	39.0
Price = Rs. 35 / q		

Partial budgeting technique:

Alternate Plan over Existing Plan

Added returns (AR): Grain yield increased by 1.5q = $1215 + (35) = 1250/-$ (Include returns from straw also)

Reduced costs (RC): Decrease in Fertilizers cost = 1000/-

Decrease in Plant protection cost = 950/-

Total Reduced costs = 1950

Reduced returns (RC): --

Added costs (AC): Seed treatment = 200/-

Cost of manures = 825/-

Total Added costs = 1025/-

Incremental income = (AR + RC) – (RR + AC) Incremental

Income = (1250 + 1950) – (0 + 1025) = 2175/-

Conclusion: By incorporating these changes in the existing farm plan, the farmer will get an incremental income of Rs. 2175/-

Students may also go through the following (hypothetical) examples to prepare Alternate farm plans for the host farmer)

Example 2: Increase in profitability of ground nut through application of fungicides for controlling tikka leaf spot.

Debit (AC+RR)		Credit (AR+RC)	
1. Added cost Application of 400 gms of Carbandezim + 500 gms of Mancozeb	Rs 500	1. Reduced cost	Rs 0
2. Reduced returns	Rs 0	2. Added Returns due to increase in output	Rs 1500
Total	Rs 500		Rs 1500

$$\begin{aligned}
 \text{Incremental income} &= (\text{AR} + \text{RC}) - (\text{RR} + \text{AC}) \\
 &= 1500 - 500 \\
 &= \text{Rs } 1000
 \end{aligned}$$

Conclusion : By using the fungicides to control the tikka leaf spot, incremental income is increased by Rs. 1000/-

Example 3: Substitution of sunflower crop for groundnut

Item	Existing situation (Rs/ha)	Alternate situation (Rs/ha)
	Groundnut	Sunflower
1. Human labour	1000	900
2. Bullock Labour	500	400
3. Seed cost	2000	1000
4. Manures	800	900
5. Fertilizers	1200	1100
Total	11500	12000

Debit (AC+RR)		Credit (AR+RC)	
1. Added cost	Rs.100	1. Added Returns	Rs.500
2. Reduced returns	0	2. Reduced cost Human labour Bullock labour Seed cost Fertilizers	Rs.100 Rs.100 Rs.1000 Rs.100
Total	Rs.100		Rs.1800

$$\begin{aligned}
 \text{Incremental income} &= (\text{AR} + \text{RC}) - (\text{RR} + \text{AC}) \\
 &= 1800 - 100 \\
 &= \text{Rs.1700/-}
 \end{aligned}$$

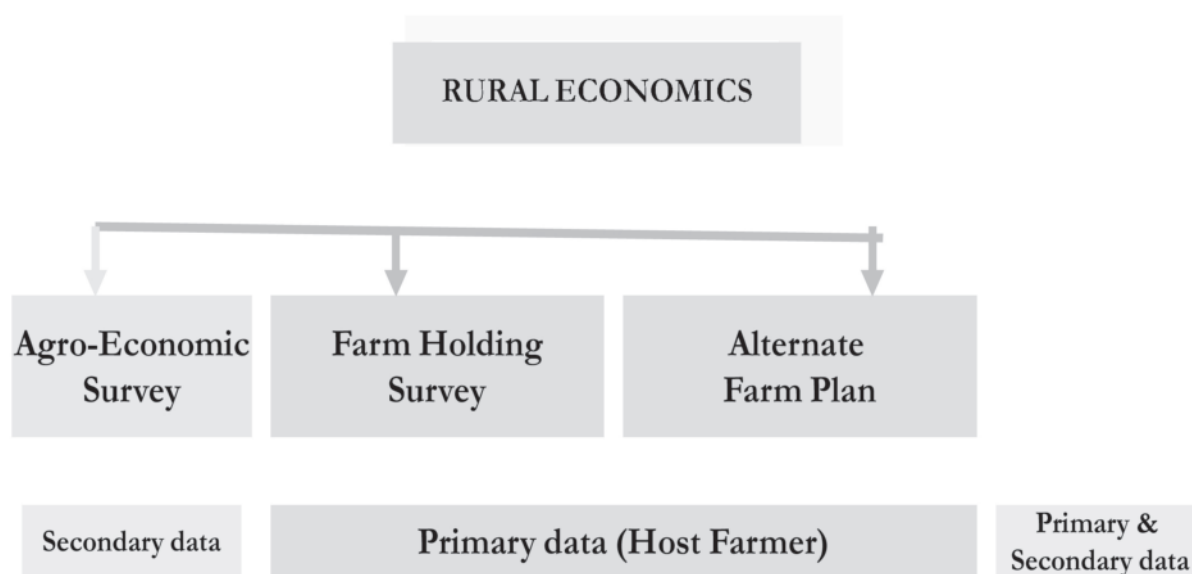
Conclusion:

By shifting from groundnut to sunflower, the income can be increased by Rs.1700/- per ha.

Appendix for Rural Economics

1. **Agro-Economic survey** - Village level data (Secondary data)
(Gram Panchayat Office/MPDO/Line departments/DAATTC, ARS, Local Agricultural Officer etc)
2. **Farm holding survey** – Case study of host farmer (Primary data)
Major crops (at least 2) to be covered
3. **Alternate farm Plan** - Case study of Host farmer (Primary data) studied earlier for crops under farm holding survey

- ✓ Simple farm planning - Preparation of alternate farm plan
- ✓ Estimation of incremental income (Partial budgeting technique)



Appendix for Agro-Economic Survey

3.1.2. Sources from which HYV seeds are obtained: Private Input Agencies, APSSDC, Cooperative Organization, Co-farmers, Self retainment of seeds

3.2.2 and 3.3.2.: Difficulties in securing agricultural inputs (seeds of HYVs, manures, fertilizers, pesticides etc.,) may include,

- Distance
- No interaction with private dealers
- Huge profit margin in private transactions
- No credit basis
- No assurance in quality or genuineness of inputs supplied
- Government arrangements not in time
- Hoarding by private dealers to create artificial scarcity and to rise prices
- Others if any, specify

3.4.1 to 3.4.3.

- Assume total population of the village (Male+Female): 1000
- Assume potential labour in the village (16-60 years of age) : 70%
- Calculate potential labour units: $(1000 \times 70)/100 = 700$
- Conversion factor: 2 men = 3 women (based on labour efficiency)
- Men labour units = $(700 \times 2)/5 = 280$
- Women labour units = $(700 \times 3)/5 = 420$ Man Working Days (MWD)
- Average number of Man Working Days (MWD) in an agricultural year in any region (Single cropped area) : 130 MWD
- Avg. no. of working days in an agricultural year in any region (Double cropped/Inter cropped area) : 190 MWD

Supply of labour

Total labour units available (Supply of labour) = Potential labour X No. of Man work days

- Supply of labour : Total labour units available in single cropped area = $700 \times 130 = 91000$ MWD
- Supply of labour : Total labour units available in double/Inter cropped area = $700 \times 190 = 133000$ MWD

Demand for labour

Calculate MWD for each crop (operation-wise): 1 MWD = 8 hrs/day

Operations (1, 2....n)	MWDs
Crop 1 (eg. Paddy)	
1	
2	
3	
Total	
Crop 2	
1	
2	
3	
Total	

Demand for labour (Prepare for each crop) = Area under each crop * MWDs required for each crop

Crops	Area (ha)	MWD/ha*	Total MWD
Crop 1	100	120	12000
Crop 2	150	100	15000
Crop 3	90	110	9900
Total			36900

*** Computed from above table**

Supply of labour units: 91000 MWD (Single cropped area) **Demand for labour :** 36900 MWD

Surplus: Supply of labour – Demand for labour = (91000 – 36900) = 54100 MWD

Indicate how surplus is utilized in the village / If shortage, how the labour resource is managed

Non-institutional Loans

Major source: (Private money lender/Commission agents/Local trader/Co-farmer/Relatives/Friends)
Problems

- Prompt repayment insisted even at times of distress sales
- No postponement of repayment even at times of genuine crop failures
- High rates of interest
- Insist the farmers to sell the produce to them (loan supplier) only & not in market yard
- Retainment of mortgaged land/machinery/buildings/gold etc
- Liquify the assets of farmers for recovery of loans mercilessly
- Others, if any

4. Scope to set up any new agro-based industry

- Demand for the product
- Assessment of raw material availability
- Labour availability (skilled & unskilled) (by consulting VAOs)
- Prices offered for the product by the nearest rivalry firms
- Scope for getting credit / capital resources
- Marketing channels
- Government policies & programmes relating to the particular agro-based industry
- Export opportunities
- Infrastructural facilities available

5. Agro-economic development plan for the village (Based on the available resources & interaction with progressive farmers)

- Present crop scenario & allied enterprises
- Scope for diversification (Farming Systems Approach)
- Scope to set up new agro-based industries (Public/Private)

- Scope to increase employment opportunities
- Strengthening both backward & forward linkages
- Rural youth pursuing agricultural education
- Stakeholders in the village and their interaction (Line departments, NGOs, Private Input Agencies, Electricity dept)
- Grass root level planning of agri-business with farmer-centered approach
- Research-Extension-Farmer Linkages
- Possible scope for supplying requisite farm inputs (seeds, fertilizers, pesticides etc)
- Possible scope to improve irrigation scenario (WUAs, Stakeholders participation with due emphasis on demand driven/participatory irrigation management)
- Possible technological interventions needed to increase irrigation efficiency (SRI, Micro irrigation & others, if any)
- Scope to restore water logged induced soil salinity situation (Sub-surface drainage system)
- Scope for promoting seed village concept, organic farming

Appendix for Farm Holding Survey

Depreciation: Straight line method of the following formula should be followed to compute annual depreciation of the asset:

Annual depreciation = [(Original Cost – Junk Value) / Expected useful life of asset] Example: Tractor

1. **Original cost of tractor** : Rs. 500000
2. **Expected life** : 15 years
3. **Junk value** : Rs.40000
4. **Annual depreciation** (Straight line method): = (500000-40000)/15 = Rs.30667/-

If the host farmer could not give information about Junk value of the asset and its expected useful life, then employ the following rates of depreciation to compute annual depreciation from initial cost of the asset.

Rates of depreciation

- **Bullocks** : 10%
- **Buildings** :
 - *Pucca buildings* : 2-5%
 - *Katcha buildings* : 5-10%
- **Implements & Machinery**
 - *Ploughs & harrows* : 10%
 - *Water lifts* : 5%
 - *Tractor* : 5%
 - *Harvester* : 20% or 2000 crop ha. harvested
 - *Thresher* : 16% or 4 MT grain harvested

- *Crow bar* : 10%
- *Sickle* : 100%
- **Fencing** : 5%
- **Wells**
 - *Tube well* : 10-12%
 - *Pucca well* : 3%
 - *Katcha well* : 15-20%
- **Pucca drains & Irrigation channels:** 5%

Example: Tractor

1. **Original cost of tractor:** Rs. 500000
2. **Rate of Depreciation:** 5%
3. **Annual depreciation:** = $(500000 * 5/100) = \text{Rs.}25000/-$
11. **Cost of cultivation of major crops (Host farmer)**

- **Data to be collected for the entire area under crop cultivation.** Say, if the crop area of host farmer(s) is 10 acres or 4.5 acres or even 70 cents, collect the data for the entire area under cultivation and not on the basis of per acre or per hectare.
- **If there is only one crop being cultivated by the host farmer, the student shall select second crop from the neighbour farmer in the same village and present the cost of cultivation along with cost concepts and income measures.**
- At the end, convert the Total Cost of Cultivation (TCOC) to Rs/ha (1 ha = 2.5 acres)
- In 11.A. – Only labour costs should be included
- In 11.B. – Only cost of the material/input should be included
- **11.C. Interest on working capital**

= (Labour costs + Material costs) * ST loan interest rate(%) * (Half of crop period/12) Say, if ST loan interest rate is 7% and crop period is 4 months, then Interest on working capital = (Labour costs + Material costs) * (7/100) * (2/12)

✓ **11.D.2 Depreciation:** Sum of Depreciation of all assets (from Table 6)

✓ **11.D.3 Rental value of owned/leased in land**

= Rental value of land in that area per year / Number of crops per year

= $12000/3 = \text{Rs.}4000$

- **11.D.4 Interest on fixed capital (excluding land)**

= [(Present value of all assets excluding land) * LT loan interest rate (%) or Interest on fixed deposits] / Number of crops per year

= [(Present value of all assets excluding land) * 10/100] / Number of crops per year

Example: Assume the farmer is having three assets, Asset 1, Asset 2 and Asset 3 Procedure: Asset 1 (Tractor)

1. **Original cost of Asset 1 :** Rs. 30000
2. **Expected life :** 10 years

3. Years of usage: 7
4. Junk value : 1000
5. Annual depreciation: (Straight line method)

$$= \frac{[(\text{Original Cost} - \text{Junk Value}) / \text{Expected useful life of asset}]}{}$$

$$= (30000-1000)/10 = 2900/-$$
6. Total depreciation of asset 1 : $= 2900 * 7 = 20300/-$
7. Present value of asset 1 (Tractor) $= 30000-20300 = 9700/-$

Likewise, estimate present value of all other assets (Asset 2 and Asset 3) and summate all the present values. Say, it is Rs. 84000/-

Interest on fixed capital = $\frac{[(\text{Sum of present values of all the assets excluding land}) \times (10/100)]}{\text{No. of crops per year}}$

$$= \frac{[84000 \times (10/100)]}{3} = 2800$$

- **Total Cost of Cultivation (TCOC) : 11A + 11B + 11C + 11D**
- **Compute Cost of Production(COP) (Rs/ctl) =TCOC/Total production**
- **Suggest measures, if any, to reduce Cost of Cultivation or Cost of production of crops**
- **Work out cost concepts :** Cost A1, Cost A2, Cost A2+FL, Cost B1, Cost B2, Cost C1, Cost C2 and Cost C3 (latest concepts recommended by Commission for Agricultural Costs and Prices)
- **TCOC should be equal to Cost C2**

Case studies

Case 1: The following is a hypothetical example for computing Cost of Cultivation of Crop 'X' in an area of 1.25 acres.

Cost of cultivation of 'x' crop (1.25 acres)																
Work out for Total area of the crop cultivated by the host farmer																
11.A. LABOUR COSTS																
Operations	Owned labour (No)					Hired labour (No)					Wage rate/labour (Rs/day)					Amount (Rs)
	TP	CPD	M	W	C	TP	CPD	M	W	C	TP	CPD	M	W	C	
Nursery								2					125			250
Land preparation						2		2			100		100			400
Transplanting				2					12					100		1400
Manures			1					2					125			375
Fertilizers			1					3					125			500
Plant Protection								2					150			300
Irrigation			1										100			100
Weeding								2						100		200
Harvesting			2					1					150			450
Sub-Total			5	2				12	12		--	--	--	--	--	
TOTAL LABOUR COSTS	$= (1*125) + (1*125) + (1*100) + (2*150) + (2*100) = 850$					$= (2*100) + (2*125) + (2*100) + (2*125) + (3*125) + (2*150) + (2*100) + (1*150) + (12*100) = 3125$										3975

Interest on working capital

$$= (\text{Labour costs} + \text{material costs}) * \text{ST loan interest rate}(\%) * (\text{Half of crop period}/12)$$

$$= (\text{Labour costs} + \text{material costs}) * (7/100) * (\text{Half of crop period}/12)$$

$$\text{From Tables 11.A and 11.B: } = (3975+8950) * (7/100) * (2/12) = \mathbf{150.79/-}$$

Fixed Costs

Item	Formulae	Value (Rs)
Land revenue		200
Depreciation (say one asset with the farmer-tractor)	(Original Cost – Junk Value)/Expected = Useful life of the Asset	3000
Rental value of owned land	Rental value of land in that locality per year /Number of crops cultivated per year	= 12000/3 = Rs.4000
Interest on owned fixed capital	(Present value of all assets excluding land)* (10/100)]Number of crops cultivated per year	= 2800
TOTAL FIXED COSTS		10000

$$\text{TOTAL COST OF CULTIVATION} = \mathbf{11.A+11.B+11.C+11.D = 23075.79}$$
$$\mathbf{(3975+8950+150.79+10000)}$$

Cost concepts: The Commission for Agricultural Costs and Prices (CACP) was basically setup as the Agricultural Prices Commission (January, 1965) to advise the Government on price policy of major agricultural commodities with a view to evolving a balance and integrated price structure in the perspective of the overall needs of the economy and with due regard to the interests of the producer and the consumer. Since March 1985, the Commission has been known as Commission for Agricultural Costs and Prices. The commission provides recommendations to the Government for announcing Minimum Support Prices to 25 agricultural commodities. The cost concepts defined by CACP are given below:

Cost A1 = Value of purchased material inputs (seed, insecticides and pesticides, manure, fertilizer), hired human labour, animal labour (hired and owned), machinery labour (hired and owned), depreciation on farm implements and farm buildings, irrigation charges, land revenue cesses and other taxes and interest on working capital.

Cost A2 = Cost A1 + rent paid for leased-in land.

Cost A2+FL = Cost A2 + imputed value of Family labour.

Cost B1 = Cost A1+ interest on value of owned capital assets (excluding land).

Cost B2 = Cost B1+ rental value of owned land (net of land revenue) and rent paid for leased-in land.

Cost C1 = Cost B1 + Imputed value of Family labour.

Cost C2 = Cost B2 + Imputed value of Family labour.

Cost C3 = Cost C2 + 10% of Cost C2 (on account of managerial functions performed by farmer).

Computation of cost concepts: For the above hypothetical example, cost concepts are worked out as shown below.

Note that, the cost concepts should be expressed finally with reference to a technical unit i.e., Rs/ha.

COST CONCEPTS

$$\text{COST A1} = \text{Owned Bullock labour} + \text{Owned machinery labour} + \text{Hired human labour} + \text{Hired bullock labour} + \text{Hired machinery labour} + \text{Imputed value of owned seeds} + \text{Purchased value of seeds} + \text{Nursery} + \text{Land preparation} + \text{Transplanting} + \text{Imputed value of owned manures} + \text{Purchased manures} + \text{Fertilizers} + \text{Plant Protection} + \text{Irrigation} + \text{Weeding} + \text{Land revenue} + \text{Interest on working capital} + \text{Depreciation}$$

Items	Value (Rs/1.25 acres)
Hired human labour	2725
Hired machinery labour	400
Imputed value of owned seeds	100
Purchased value of seeds	300
Manures	1800
Fertilizers	3000
Plant protection chemicals	3750
Land revenue	200
Interest on working capital	150.79
Depreciation	3000
Total (Cost A1)	15425.79 = (Rs. 30851.58/ha)

** Do not include family labour data for above operations . But, include owned bullock & machinery labour data*

$$\begin{aligned}\text{Cost A2} &= \text{Cost A1} + \text{rent paid for leased-in Land.} \\ &= 15425.79 + 0 = 15425.79/- (= \text{Rs } 30851.58/\text{ha})\end{aligned}$$

$$\begin{aligned}\text{Cost A2+FL} &= \text{Cost A2} + \text{imputed value of Family Labour.} \\ &= 15425.79 + 850 = 16275.79/- (= \text{Rs } 32551.58/\text{ha})\end{aligned}$$

$$\begin{aligned}\text{Cost B1} &= \text{Cost A1} + \text{interest on value of owned (fixed) capital assets (excluding land)} \\ &= 15425.79 + 2800 = 18225.79/- (= \text{Rs } 36451.58/\text{ha})\end{aligned}$$

$$\begin{aligned}\text{Cost B2} &= \text{Cost B1} + \text{rental value of owned land (net of land revenue) and rent paid for leased-in land.} \\ &= 18225.79 + 4000 + 0 = 22225.79/- (= \text{Rs } 44451.58/\text{ha})\end{aligned}$$

$$\begin{aligned}\text{Cost C1} &= \text{Cost B1} + \text{Imputed value of Family Labour} \\ &= 18225.79 + 850 = 19075.79/- (= \text{Rs } 38151.58/\text{ha})\end{aligned}$$

$$\begin{aligned}\text{Cost C2} &= \text{Cost B2} + \text{Imputed value of Family Labour} \\ &= 22225.79 + 850 = 23075.79/- (= \text{Rs } 46151.58/\text{ha})\end{aligned}$$

$$\text{Cost C2} = \text{TCOC}$$

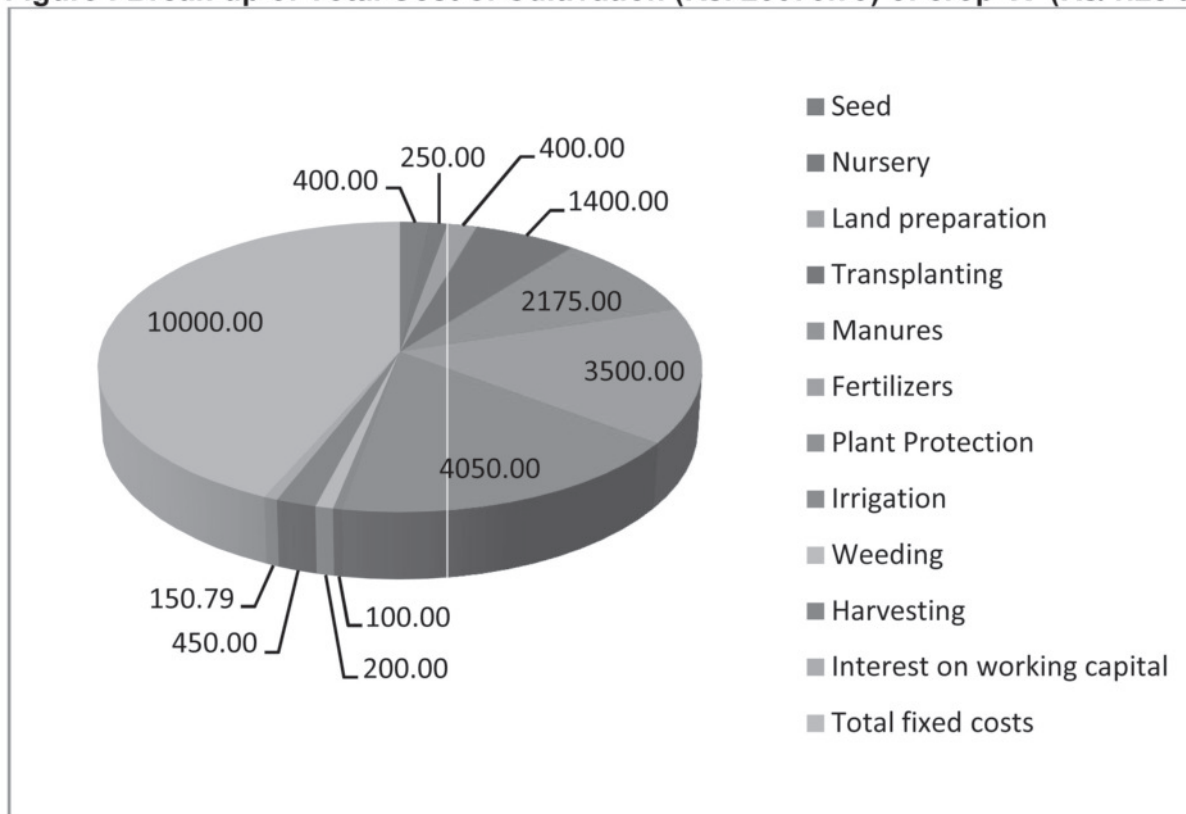
$$\begin{aligned}\text{Cost C3} &= \text{Cost C2} + 10\% \text{ of Cost C2 (on account of managerial functions performed by Farmer).} \\ &= 23075.79 + (0.10 \times 23075.79) = 25298.37/- (= \text{Rs } 50596.74/\text{ha})\end{aligned}$$

Table : Break up of total cost of cultivation of crop X (1.25 acres)

S.No	Items	Rs/1.25 acres	Rs/ha
	I. OPERATIONAL COSTS		
1	Seed	400.00	800.00
2	Nursery	250.00	500.00
3	Land preparation	400.00	800.00
4	Transplanting	1400.00	2800.00
5	Manures	2175.00	4350.00
6	Fertilizers	3500.00	7000.00
7	Plant Protection	4050.00	8100.00
8	Irrigation	100.00	200.00
9	Weeding	200.00	400.00
10	Harvesting	450.00	900.00
11	Interest on working capital	150.79	301.58
	TOTAL OPERATIONAL COSTS	13075.79	26151.58
	II. FIXED COSTS		
1	Land Revenue	200.00	400.00
2	Depreciation	3000.00	6000.00
3	Rental value of owned land	4000.00	8000.00
4	Interest on fixed capital	2800.00	5600.00
	TOTAL FIXED COSTS	10000.00	20000.00
	TOTAL COSTS (OPERATIONAL COSTS+ FIXED COSTS) = TCOC	23075.79	46151.58
	Production/Output	37.5 qtls	75.0 qtls
	Cost of Production (Rs/qty)(Total Costs/Production)	615.35	615.35
	GROSS RETURNS	31375.00	62750.00
	NET RETURNS	8299.21	16598.42
	Rate of Return (Net returns/Total costs)	0.36	0.36

Inference: By practicing this enterprise (crop X) in 1.25 acres, the farmer gets Rs. 0.36 net profits for every one rupee invested in the production programme.

Figure : Break-up of Total Cost of Cultivation (Rs. 23075.79) of crop 'X' (Rs/1.25 acres)



11. Cost - effective production measures (Suggestion to reduce cost of cultivation)

- Use farmers' own seed (of previous season) in the production programme (straight varieties)
- Adoption of seed treatment
- Employ more of family labour (working hours) as a substitute to hired labour
- Involvement of farm women in agricultural operations
- Use of modern agricultural implements and machinery
- Adoption of INM, with more emphasis on organic manures
- Soil-test based fertilizer application (macro and micro nutrients)
- Adoption of IPM with more emphasis on biological control and use of herbal products
- Adoption of IWRM technologies, especially micro-irrigation
- Strengthen the cooperative farming (large-scale economies)
- Avail different production subsidies being offered by the Government
- Avail loans from the Government financial institutions at cheaper rates of interest.
- Farmers should follow crop rotation
- Adoption of scientific packages for cultivation of crops viz., selection of good quality seed, time of sowing/planting, maintenance of optimum plant population, growing of trap crops to reduce pests and disease menace etc

12. Returns from crop enterprise

Crop	Area	Season	Main Product		By-Product		Gross returns (Rs/-)
			Quantity	Value	Quantity	Value	
x	1.25 acres	Kharif	50 bags (1 bag = 75 kg)= 37.5 qtls	Rs.810/qrtl =Rs.30375/-	2 cart loads	Rs. 500/ Cart load = Rs.1000	Rs.31375/-

Income measures (Rs. /1.25 acres): Note that, the following income measures should be worked out for the area under crop cultivation. Later they have to be expressed with reference to a technical unit ie., Rs/ha

Gross returns: Rs. 31375

Farm business income: (Gross returns – Cost A1) = 31375 – 15425.79
= 15949.21 = **(Rs. 31898.42/ha)**

Owned farm business income: (Gross returns – Cost A2) = 31375 – 15425.79
= 15949.21 = **(Rs. 31898.42/ha)**

Net income: (Gross returns – Cost C3) = 31375 – 25298.37 = 6076.63 = **(Rs. 12153.25/ha)**

Intensive income: Net income + Rental value of owned land + Interest on fixed capital
= 6076.63 + 4000 + 2800 = 12876.63 **(Rs. 25753.26/ha)**

Farm investment income = Farm business income – Imputed value of family labour
= 15949.21 – 850 = 15099.21 (= **Rs 30198.42 /ha**)

Rate of return = Net returns over Cost C2 / Cost C2 = (Gross returns – Cost C2) / Cost C2
= (31375 – 23075.79) / 23075.79
= 8299.21 / 23075.79 = 0.36

Diagrams/ Charts to be drawn in the Agro-Economic Survey, Farm Holding Survey & Alternate Farm Plan (Hand drawn)

1. Map of the selected village showing the distance of infrastructural facilities from the *village*.
2. Population statistics of the selected village in 2011 and 2001 -Histogram
3. Occupational distribution in the village – Pie diagram
4. Structural distribution of land holding - Histogram/Bar diagram.
5. Land utilization particulars in the village – Pie chart
6. Irrigation sources of the village – Bar diagram
7. Area under crops in the village in different seasons – Pie charts
8. Quantum of agricultural Credit - By different agencies – Pie chart
9. Extent of area under high yielding varieties and local varieties in respect of major crops – Bar diagram
10. Farm map, location of the holdings of the host farmer.
11. Cropping scheme of the host farmer – Pie diagram
12. Costs and returns (two crops) of major crops – Histograms
13. Break up of Cost of Cultivation (two crops) – Pie charts
14. Alternative plans vs. Existing plans for host farmer for two crops - Bar diagrams.

EXTENSION PROGRAMME

It is impossible to teach practical extension in the class room. The most effective practical training in Extension Education can only be imparted if the students are made to stay in the village for a period of at least one semester, so that they will have opportunities to learn, practice the techniques and methods of Extension Education in real village atmosphere.

During their stay, the students will be required to work with farmers as the field extension workers under the 'direct supervision of scientist (TOT). To help the students in learning extension techniques, they will be involved in the following extension programmes.

1. Identification of major agricultural problems of the village through Participatory Rural Appraisal(PRA)techniques
2. Gap analysis and preparation of action plan for participatory extension teaching methods
3. Organization of participatory extension teaching methods such as method demonstrations, group discussions, *Rythu Sadassu* and exhibition
4. Maintenance of Agricultural Information Corner in the village
5. Study of Public and Private Agricultural Extension Information sources and their critical analysis
6. Study of on-going Central/State sponsored rural development/ extension programmes/ schemes
7. Training Need Assessment of the farmers and conduct of training programme
8. Documentation of Indigenous Technical Knowledge (ITK) and Farmer Innovations
9. Study of Farmers groups (RMGs, CIGs, Farmers Associations, FPOs) and Self Help Groups (SHGs) in the village
10. Documentation of success stories of farmers in the village

DETAILED INSTRUCTIONS FOR CONDUCT OF EXTENSION PROGRAMMES

1. Identification of major agricultural problems of the village through Participatory Rural Appraisal (PRA) Techniques

For identification of village agricultural problems, the students as a group allotted to a village shall collect information from different sections of the farmers using Participatory Rural Appraisal (PRA) Techniques - transect walk, time line, trend analysis, resource & social mapping, seasonality, matrix ranking, venn diagram and problem tree analysis. Before using these techniques students must build up rapport with the farmers. They have to clearly state the purpose of practicing these techniques to the farmers. These techniques will help the student to identify agricultural problems/ constraints/ indigenous technical knowledge (ITK)/training needs of farmers. Students shall record at least eight (8) techniques along with diagrams, explanation given by farmers, interpretation/ inference, problems (general and specific) identified in crop production, plant protection, harvesting, post harvesting, marketing etc.,

2. Gap analysis and preparation of action plan for participatory extension teaching methods (Annexure - VIII)

Each student shall collect information on two (2) major crops from five (5) farmers (2 marginal, 2 small and one big farmer including host farmer) separately in the village as per prescribed proforma (Annexure-VIII). It enables the students as a group to find out the gaps in adoption, reasons for gaps. Accordingly the students of the village shall prepare action plan for organizing various participatory extension teaching methods/ activities to reduce the gaps in the adoption of recommended technologies in major crops.

3. Organization of participatory extension teaching methods such as method demonstrations, group discussions, *Rythu Sadassu* including role-play and exhibition

Based on the gap analysis, action plan shall be prepared under item 2, the students shall carry out the participatory extension teaching methods viz., method demonstrations (5 nos.), group discussions (2 nos.), *Rythu Sadassu* including role-play and exhibition under the guidance of Scientist (TOT) or Scientist in-charge of RAWEP as a group.

a) Conduct of method demonstrations

The students need to conduct five (5) method demonstrations to teach the farmers certain new skills and new technologies developed which are necessary and found gap in the adoption of recommended farm practices, for example mixing of pesticides with correct dosages, control of insects, pests and diseases, preparation of raised seed beds for nurseries etc. By conducting method demonstrations, lot of interest will be created among the villagers on improved practices and adopting those in their filed.

The Students need to conduct these method demonstrations to a group of about 20-30 farmers covering marginal, small and big farmers systematically in a step by step manner as learnt earlier by procuring all the material required in advance duly giving publicity in the village.

Students need to write record on method demonstrations covering the following points:.

- ✓ Date (s) of conducting method demonstrations(s) Purpose of conducting the method demonstration(s)
- ✓ Planning aspect of conducting the method demonstration(s) Methods adopted for publicizing the demonstration(s) Rehearsal of the method demonstration(s)
- ✓ Procedure followed while conducting the demonstrations(s) Number of farmers attending the demonstration(s)
- ✓ Reaction of farmers after conducting the method demonstration

b) Organization of group discussions

The students shall organize group discussion to solve the agricultural problems identified by them under Item 1 and 2. They must prepare well on some of the selected topics of interest to the farmers in the village and organize group discussion preferably during evening hours or any convenient time with the help of the host farmers and other village leaders. The students should prepare teaching aids well in advance based on the topics they would like to discuss. While preparing for the discussions, they should check up the physical facilities made available for conducting the discussions and make advance arrangements for informing the farmers as well as deciding about the place, time and date in consultation with the farmers as well as Scientist (TOT). In these discussions, they may distribute some of the leaflets published by the A.N.G.R. Agricultural University. If the students want assistance of any specialist for these discussions, a request may be made to the Coordinator of DAATTC/ Head of the research station in advance so that arrangements could be made to depute the required specialist to attend the group discussions and assist the students. The student speakers should motivate the farmers for attending the meeting by highlighting the merits of the discussions in solving their own problems in economic terms.

At the end of the group discussion an appeal is to be made to the farmers to implement the solution commonly agreed upon. The students shall write the following in the record

- ✓ Date(s) and place(s) of conduct of group discussion
- ✓ Problem selected for group discussion and recognition of the problem Definition and diagnosis of problem
- ✓ Selection of the leader and physical arrangements made

- ✓ Solutions offered by the farmers along with farmers names
- ✓ Critical analysis of each solution and finally selected solution on consensus basis
- ✓ Action plan for implementing the solution
- ✓ Farmers reaction on the group discussion

c) Organization of *Rythu Sadassu*

Rythu Sadassu is organized interaction between scientists and farmers. *Rythu Sadassu* provides an opportunity for farmers for asking questions on the problems encountered by them in growing different crops and in practicing agriculture including allied aspects.

Students shall organize *Rythu Sadassu* exclusively or in combination with agricultural exhibition under the guidance of Scientist (TOT)/ Scientist in charge of RAWEP. Specialists from DAATTC / KVK / Research Station are to be invited for this purpose along with the local State Department officers. At the beginning of the *Rythu Sadassu*, the students have to perform role play on any important problems or gaps identified in item no. 1 and 2.

Students shall record the particulars of date, venue, purpose, planning, scientists and other extension officers participated, no. of farmers participated, questions raised by the farmers and answers given by the scientist, farmers reaction and with regard to role play, purpose of role play, students involved, roles assumed, description and farmers reaction towards role play etc.

d) Organization of agricultural exhibition

Simple but effective exhibition can be arranged in villages using information material available in the research station / KVK / DAATTC and using the locally available materials like plant specimens, models, charts and photographs. This should preferably be organized on the day of *Rythu Sadassu*. All the students shall contribute in preparing the exhibits and need to mention in the record giving details of all exhibits and individual contribution.

Students shall write the particulars of date, venue, purpose, planning, teaching aids and live specimens displayed (self and group), organizing aspects, no. of farmers participated, farmers reaction etc.

4. Maintenance of agricultural information corner in the village

It is common experience that new farm information rarely reaches the farmers. In order to provide farm information to the farmers, the students shall maintain one information corner at a commonly accepted place during their stay in the village. The information corner shall include village information, soil types & characteristics, crop varieties and their characteristics, management practices followed by farmers, recommended practices, gaps, pests and diseases, nutritional deficiencies, organic farming, natural resource management, IPM, post-harvest management, value addition, market intelligence, prices of crop produce, cost of cultivation particulars etc., All the students have to contribute in this activity considerably. In addition, students shall maintain visitors' register and their feedback.

This has to be decided during the first week of the RAWEP itself in consultation with the Scientist (TOT). Information corner provides an opportunity to students for communicating new agricultural information and field problems to the villagers in simple and effective way through well maintained information corner. Students are responsible for maintenance of information corner. The students will have to prepare simple teaching aids like charts, posters and collect specimens on agricultural problems identified in their field visits and display the same in the information corner. The information corner should be maintained at a place central to the village, where large number of villagers pass by or gather. The information displayed need to be changed frequently based on their observation in the field and also based on the problems and gaps identified in item no 1 and 2.

A brief report on the information corner shall include date(s), information displayed, teaching aids used, number of farmers visited and the opinion expressed by the visitors should be maintained.

5. Study of public and private agricultural extension information sources and their critical analysis

Farmers are receiving information on farm technology from different sources. Each student has to collect information from five (5) farmers separately as per the prescribed proforma (Annexure-IX). Each student shall write in the record, the information collected from five farmers along with his/ her critical analysis obtaining the information from different sources with suitable illustration

6. Study of on-going Central/ State sponsored Rural Development/ Extension Programmes/ schemes operating in the village

The students shall study and record any two on-going central/ state sponsored rural development / extension programmes/ schemes like Soil Health Card Scheme, National Mission for Sustainable Agriculture (NMSA), Pradhan Mantri Krishi Sinchai Yojana (PMKSY), Paramparagat Krishi Vikas Yojana (PKVY), Rashtriya Krishi Vikas Yojana (RKVY), National Agriculture Market (e-NAM), Micro Irrigation Fund (MIF), Rainfed Area Development Programme (RADP), National Watershed Development Project for Rainfed Areas (NWDPRA), Pradhan Mantri Fasal Bima Yojana (PMFBY), Livestock Insurance Scheme, Gramin Bhandaran Yojana, Andhra Pradesh Drought Mitigation Programmes (APDMP), Farmer Field School (FFS), etc., regarding its background, objectives, year of initiation, salient features of the programme / scheme, methodology / approach for identification of beneficiaries in the village, financial details, immediate benefits realized, employment generation, extension approach followed, feedback from beneficiaries and non- beneficiaries, operational problems and suggestions for improving the modalities of programme/ scheme. At the end students shall write their comments on the functioning of these programmes.

7. Training Need Assessment (TNA) of farmers and conduct of training programme

a) Training Need Assessment (TNA) of farmers

TNA is a pre requisite for organizing any need based training programme for farmers. TNA unearths the training needs as perceived by the farmers. The extent of importance of the training need should also be measured to prioritize the topic on which the training is to be planned. Before planning for a training programme, each student should take up the TNA of five (5) farmers separately in the prescribed Performa (Annexure X). The data collected by all the students in a village need to be pooled and analyzed. Based on the pooled results, the students as a group need to conduct need based training programme under the guidance of the scientist in-charge of RAWEP with the involvement of the scientists from DAATTC/ KVK/ ARS.

b) Conduct of training programme

The training programme should be based on the needs assessed in major crops. The students need to prepare the objectives of the training programme, content to be covered in the training, resource persons, preparing training schedule and fixing the date and venue, method demonstrations to be conducted, teaching aids to be used, advance intimation to the farmers including village sarpanch, local leaders, state department officials, inviting the scientists with the guidance from Scientist (TOT)/ in-charge of the RAWEP. An exhibition can be arranged if necessary.

The students shall write the particulars of title of the training programme, date and place of the training programme, purpose of the training programme, planning aspect, procedure followed while conducting the programme, names of the scientists and topics covered by them, no. of participant farmers, publicity before and after and reaction of the farmers towards the training programme.

8. Documentation of Indigenous Technical Knowledge (ITK) and Farm Innovations

a) Indigenous Technical Knowledge (ITK)

The term Indigenous Technical Knowledge may be denoted mainly as a tacit type of knowledge that is evolved within the local (grassroots) community and has been passed on from one generation to another,

encompasses not only local or indigenous knowledge, but also scientific and other knowledge gained from outsiders. Indigenous Knowledge (IK) is the participant's knowledge of their temporal and social space. Indigenous knowledge as such refers not only to knowledge of indigenous peoples, but to that of any other defined community. Indigenous Technical Knowledge (ITK) is specifically concerned with actual application of the thinking of the local people in various operations of agriculture and allied areas.

Each student shall record one ITK adopted by the farmers in the village in agriculture or allied areas. Particulars of name of the farmer, profile of the farmer, name of the ITK practice, purpose, method of application, dosage, time of application, rationale behind ITK, extent of adoption by other farmers in the village, constraints in adoption and opinion of the farmers towards ITK etc. Students must bring these ITKs to the notice of the scientists of research station/ KVK/ DAATTC and record the scientific reasoning of these ITKs documented along with the opinion of the student on ITK.

b) Farm Innovations

As practitioners, farmers deal with various problems in their micro agro-ecological settings on their farms. They innovate to dovetail recommended technologies and practices to suit to their resources and farming situations. Also farmers require an assemblage of technologies that have both forward and backward linkages. In the process, the farmers either due to necessity or learning through exposure, tend to come out with newer ideas and innovate in their own way introducing farm innovations. Many times, we come across farmers who think 'out of box' and practice agriculture differently and unconventionally. There is a need to identify such farmer-led innovations and understand the context in which they are applied. Some farmers practice farming differently from others with the inputs received directly from the scientists or using advanced ICTs.

Each student need to identify the farm innovations in the village and document their innovations covering profile of the farmer including recent passport size photo, name, address, phone number (mobile, landline), email ID, age (completed years), educational qualification, landholding (in ha), farming experience (in years), name of the crops/ livestock/ other enterprises practiced by the farmer, social recognition (like member, leader, president etc in social institutions); Nature of the innovation (description of innovation), problem statement (nature and intensity of the problem addressed), genesis of idea, sources of information relevant to the innovation, original innovation or modification of any existing technology; process of technology development (conceptualization of idea, scientific rationale about the innovation, experimentation/ trial conducted, technical support during the experimentation period, supporting data for the innovation, any resource mobilization from outside agencies/ organizations for the development of technology, relative advantages of innovation (like adaptability, eco-friendliness, sustainability, gender friendliness, economical viability, benefit-cost ratio etc); replication and promotion (horizontal spread of innovation and number of farmers adopting), socioeconomic implications, presentation of innovation in scientific forum, publication on the innovation in farm journals, media coverage of the innovation, display of innovation in exhibitions/ kisan melas, income generated out of this innovation by the innovator, feedback from farmers and other agencies, recognition (institutional acceptance of the innovation, recognition in the form of honours, certificates/ awards etc.); supporting documents (action photographs, printed materials/ electronic materials like CD, video clippings etc, photo copies of certificates of honours), etc.

9. Study of Farmers groups (FPOs/ CIGs/ Farmers Clubs/ Farmers Associations) and Self Help Groups (SHGs) in the village

The age-old practice of extension-farmer contact on one-to-one basis, though very effective, is expensive and unsustainable as the sole means of reaching farmers with agricultural technology. New methods emphasize the passing on of agricultural technology to farmers in organized groups (farmer groups). A farmer group is a collection of farmers interacting with one another towards achieving a common goal. Usually, the interaction between the members of the group is more than with those outside the group. There are several farmer groups functioning formally and informally in the village and they include Farmer Producers Organization (FPOs)/ Farmers Clubs (FCs)/ Commodity Interest Groups (CIGs)/ Farmers Associations (FAs) etc.

Farmer Producer Organization (FPO) is collectivization of producers, especially small and marginal farmers, into producer organizations. FPO has emerged as one of the most effective pathways to address the many challenges of agriculture most importantly, improved access to technology, inputs and markets. The Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India has identified FPO to be registered under the special provisions of the Companies Act, 2013 as the most appropriate institutional form to mobilize farmers and build their capacity to collectively leverage their production and marketing strength.

Farmers Club is a grass root level informal forum of farmers in the village. Such Clubs are organized by rural branches of banks with support and financial assistance from NABARD for mutual benefit of banks and the farmers.

Commodity interest groups/ Farmer Interest groups were promoted under Under NATP – Innovation technology dissemination project to form the farmers in groups around a commodity. All ATMA districts are promoting the farmers to form into groups around some common interest or around the commodity called Commodity interest groups/ Farmer Interest groups.

Farmers Associations (FAs) include Watershed Committees/ Association, Livestock Breeders Association/ Dairy Cooperatives, Water Users Association, Vana Samrakshana Samithis, etc. Watershed Committees/ Association take up activities related to natural resources management, soil moisture conservation, water harvesting, plantations etc. The Livestock Breeders Associations are to a great extent registered bodies of the livestock owners. Their common interest is in the overall management of their cattle that include their health, breed improvement, milk and milk products. Water Users Association are formed under major, medium and minor irrigation projects. They basically manage the water resources for irrigation with the aim of equity and efficiency. Vana Samrakshana Samithis are formed under Joint Forest Management to protect the forest lands and their cover. They also take up forest development activities like plantation. These are confined to forest areas and they have been provided with rights over minor forest produce annual yields from forest etc.

The concept of self help is very old, probably as old as our civilization. But these self help groups were formed more to tackle social/ common problems than for socio-economic reasons. Self- help means to grasp their potentialities, discover resources, accept responsibility for their life and live it in the way they decide. Self-help means starting a process of change from being a passive participant to becoming an active participant in one's own life. Each student shall select one farmer group and one Self Help Group (SHG) and record the information.

The student shall record information on any one of the farmer group's title, category (Agriculture/ Horticulture/Animal Husbandry/Etc), purpose, group process, facilitating agency, year of establishment / registration, organizational structure, backward and forward linkages, capacity building, outcome (Includes the facilitation of marketing, reduction in cost of cultivation, increased yields, etc.), impact (direct and indirect changes occurred.), recognitions (If any), students observation and feedback (Includes lessons learnt etc.) and include supporting photos.

The information on SHG to be included in the record should consist of name of the SHG, purpose and objectives, no. of members, names of the members, general information and organizational chart, activities undertaken, frequency of meetings, participation of members , cooperation and coordination among members, benefits due to SHG formation, impact of the SHG (income before and after, additional employment, opportunities created, standard of living increase or decrease, decision making ability, innovations, risk taking ability , leadership ability), functioning of SHG (include information on credit disbursement and loan repayment), problems faced by the members related to inputs and resources, credit disbursement, loan repayment, enterprise, marketing of produce, management of enterprise, remarks and suggestions for effective functioning of SHG

10. Documentation of a success story of farmer/ entrepreneur and development of a short video film

Success stories highlight the success being achieved with the involvement of human beings. Each student shall document and write one success story of a farmer or an agripreneur with the adoption of improved agricultural technologies/ enterprise recommended by the University or any organization as per the format (Annexure XI) and need to develop a short video film for 3 minutes and submit the same CD/ DVD for evaluation.

ANNEXURE – VIII
GAP IN ADOPTION AND PROPOSED EXTENSION STRATEGY FOR IMPROVING THE PRODUCTIVITY
/ INCOME FROM AGRICULTURAL CROPS

Name of the farmer :
Village :

Crop:

S.No	Items of package	Existing practice (Farmer practice)	Recommended practice	Gap in adoption	Specific reasons for the gap	Farmer proposed extension strategy**
1.	Land preparation					
2.	Sowing □ Time □ Method					
3.	Varieties					
4.	Seed rate (per ha)					
5.	Seed treatment					
6.	Organic manure (t/ha)					
7.	Fertilizer / nutrient (kg/ha) □ Basal (N+P+K) □ Top dress					
	Total					
8.	Method of fertilizer use □ Basal (N+P+K) □ Top dress					
9.	Micro nutrient (Specify) □ Basal □ Foliar Application					
10.	Pest management					
11.	Disease management					
12.	Weed management □ Mechanical □ Herbicide					
13.	Water management □ Number of irrigations □ Method of irrigation					
14.	Land management □ Salinity /acidity □ Water logging					
15.	Method of harvesting					
16.	Post harvest handling					
17.	Any other					
18.	Average yield □ Grain □ Fodder					

Note 1 : Gap analysis has to done for two major crops raised by the farmer(s)

2 : If any practice not covered in proforma, the student can include in the table

□ Specific reasons for the gap : lack of awareness / knowledge / skill / finance / availability of inputs / conviction /motivation / marketing / non-suitability (inappropriateness) of recommendation / non-availability of recommendation / traditional practice is the best or any other

□ Farmer proposed extension strategy could be – creating awareness through mass media / training / result demonstration / skill teaching / method demonstration / field visit / exhibition / group discussion or anyother.

ANNEXURE – IX
STUDY ON AGRICULTURAL INFORMATION SOURCES

Name of the farmer

Village

Mandal

District

S.No.	Information source (s)	Extent of utilization				
		Regularly	Occasionally	Rarely	Never	Rank*
I.	Formal					
1.	Assistant Director of Agriculture / Agriculture Officer / AEO/MPEO					
2.	Gram Sarpanch/ Special Officer					
3.	Bank Officers					
4.	ANGRAU Scientists					
5.	ICAR scientists					
6.	Cooperatives					
7.	Market committees					
8.	School teachers					
9.	NGOs / Voluntary organizations					
10.	Call Centres					
	(a) Kisan Call Center					
	(b) State Level Call Centre / Farmers Call Centre of ANGRAU					
	c) Reliance Foundation, Annadata, AKPS and others (Pl. specify)					
II.	Informal					
1.	Family member					
2.	Neighbourers					
3.	Friends & Relatives					
4.	Progressive farmers/ Innovative farmers/ Master Trainers					
5.	Input agencies					
6.	Private input Dealers					
7.	Agri-clinics					
III.	Mass Media					
1.	News papers & Newsletters					
2.	ANGRAU Publications					
a)	<i>Vyavasaya panchangam</i>					
b)	<i>Vyavasayam</i> monthly magazine					

c)	Diagnostic bulletins and other publications of ANGRAU					
3.	Other periodicals / magazines (Pl. specify)					
4.	Department Information bulletins/ Diaries/ Calendars					
5.	Journals					
8.	Radio					
9.	T.V.					
10.	Audio and Video CDs/DVDs					
11.	Film shows					
12.	Mobile applications (Pl. Specify)					
13.	Mobile advisories					
14.	Information kiosks					
15.	Internet including websites					
16.	Youtube videos					
17.	Others (pl. specify)					

* Ranking shall be given for each category separately (i.e. formal, informal and mass media) as perceived by the farmers. Simultaneously student shall get information on problems with regard to public and private Agricultural Extension Systems

Annexure X
Training Need Assessment of Farmers

Name of the farmer : Village :
Mandal : District :
Age : Land holding (in Ha.) :

Please indicate the areas and assessment of training need of the farmers (Please Tick)

Sl. No	Topic	Needs assessment			Please mention the crops
		Very Important Need	Important Need	Less Important Need	
I. Crop Production					
1.	Weed management				
2.	Cost reduction technologies				
3.	Cropping systems				
4.	Crop diversification				
5.	Integrated farming systems				
6.	Micro irrigation/drip/sprinkler				
7.	Nursery management				
8.	Integrated crop management				
9.	Efficient water management techniques				
10.	Contingency crop planning				
II. Soil health and fertility management					
1.	Soil test based fertilizer application				
2.	Soil and water conservation measures				
3.	Integrated nutrient management				
4.	Management of problematic soils				
5.	Micro nutrient deficiency in crops				
6.	Soil and water testing				
III. Plant Protection					
1.	Integrated pest management				
2.	Integrated disease management				
3.	Bio control of pest and diseases				
4.	Rodent management				
IV. Horticulture					
1.	Production of low volume and high value crops				
2.	Off season vegetables				
3.	Nursery raising				
4.	Export potential vegetables				
5.	Grading and standardization				
6.	Protective cultivation (Green houses, shade net, etc.)				
7.	Terrace gardening				
8.	Mulching				
9.	Post harvest management of crops				
V. Farm Machinery					
1.	Maintenance of micro irrigation systems				
2.	Repair & maintenance of farm machinery and implements				

ANNEXURE - XI
ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY
AGRICULTURAL COLLEGE _____

RURAL AWARENESS WORKS EXPERIENCE PROGRAMME
CERTIFICATE

Certified that this is a bonafide record of practical work done and data collected by Mr/Kum/Smt. _____ I.D.No. _____ in Rural Awareness Works Experience Programme of final year B.Sc. (Hons) Agriculture course during the first / second semester of academic year _____.

Signature of the Chairman

Signatures of the Advisory Committee

1. Chairman of the Advisory Committee :

2. Scientist (TOT) / Scientist In-charge :

3. Associate Dean's Representative :

4. Host farmer :

5. Representative from Department of Agriculture :

ANNEXURE-XII

PERFORMANCE SHEETS

Performance sheet-1 (a) (Internal evaluation)

Name of the College: _____ Name of the RAWEP centre: _____
 Periodical evaluation of Crop Production Semester and Year _____ :

S.No.	Name of the student	1 st Month	2 nd Month	3 rd Month	4 th Month	Total (50 m)
		14 (m)	14 (m)	14 (m)	8 (m)	

Signature of the members of the Advisory Committee

Chairman Scientist (TOT) Assoc. Dean's Representative Rep. from Dept. of Agriculture

Performance sheet-1(b)
(External evaluation)
Crop Production

Name of the College:

Name of the RAWEP centre:
Semester and year:

S.NO	Name of the student	I.D. NO	Technical component of crop production (60 M)	Comparison with recommended management practices (10 M)	Information on the observations on crops (10 M)	Reasons for adoption & non-adoption of the recommended management practices (10 M)	Comments of the students about I) Crop growth, variety, yield etc. II) Skill, knowledge & practice III) Technical feasibility etc (10 M)	Total (100 M)	Reduced to 50 M

Signature of the Evaluators:
1.

2.

3.

Signature of the Head of Dept. of Agronomy

PERFORMANCE SHEET - 2 (a)

(Internal evaluation)

Name of the College:
Periodical evaluation of Plant Protection

Name of the RAWEP centre:
Semester and Year :

S.No.	Name of the student	1 st Month	2 nd Month	3 rd Month	4 th Month	Total (50 m)
		14 (m)	14 (m)	14 (m)	8 (m)	

Signature of the members of the Advisory Committee

Chairman

Scientist (TOT)

Assoc. Dean's Representative

Rep. from Dept. of Agriculture

PERFORMANCE SHEET – 2 (b)
(External evaluation)
Plant Protection

Name of the college: _____
Name of the RAWEP centre:
Semester and Year _____

S.No.	Name of the student	I.D.No.	Technical component of the crop production report (60 m)	Comparison with recommended management practices (10 m)	Information on the observations on crops (10 m)	Reasons for adoption and non-adoption of the recommended management practices (10 m)	Comments of the students about plant protection aspects (5m)	Information of fungicides / insecticides / herbicides and procedure for marketing agrichemicals (5M)	Total (100 m)	Reduced to 50 m
1	2	3	4	5	6	7	8	9	10	11

Signature of the evaluators

- 1.
- 2.
- 3.

Signature of the Head of the Dept. of Entomology / Plant Pathology

PERFORMANCE SHEET - 3 (a)
(Internal evaluation)

Name of the College:
Periodical evaluation of Rural Economics

Name of the RAWEP centre:
Semester and Year :

S.No.	Name of the student	1 st Month	2 nd Month	3 rd Month	4 th Month	Total (50 m)
		14 (m)	14 (m)	14 (m)	8 (m)	

Signature of the members of the Advisory Committee

Chairman

Scientist (TOT)

Assoc. Dean's Representative

Rep. from Dept. of Agriculture

PERFORMANCE SHEET – 3 (b)

(External evaluation)

Rural Economics

Name of the college

Name of the RAWEP centre:
Semester and Year:

S.No.	Name of the student	I.D.No.	Agro-Economic survey of the village allotted to the student (25 M)	Farm holding survey for two crops (45 M)	Alternate farm plan for two crops (30M)	Total (100 m)	Reduced to 50 m	Remarks
1.	2.	3.	4.	5.	6.	7.	8.	9.

Signature of the evaluators

1.

2.

3.

Signature of the Head of the Dept. of Agril. Economics

PERFORMANCE SHEET - 4 (a)

(Internal evaluation)

Name of the College:
Periodical evaluation of Extension Programme

Name of the RAWEP centre:
Semester and Year :

S.No.	Name of the student	1 st Month	2 nd Month	3 rd Month	4 th Month	Total (50 m)
		14 (m)	14 (m)	14 (m)	8 (m)	

Signature of the members of the Advisory Committee

Chairman

Scientist (TOT)

Assoc. Dean's Representative

Rep. from Dept. of Agriculture

PERFORMANCE SHEET – 4 (b)
(External evaluation)
Extension Programme

Name of the college

Name of the RAWEP centre:
Semester and Year:

S.No.	Name of the student	I.D.No.	Identification of major agricultural problems of the village through (PRA) techniques (20 m)	Gap analysis and preparation of action plan for participatory extension teaching methods (10 m)	Organization of participatory extension teaching methods (25 m)	Maintenance of agricultural information Corner (10 m)	Study of public and private agricultural extension information sources and their critical analysis (5 m)
1.	2.	3.	4.	5.	6.	7.	8.

Study of on-going Central/ State sponsored Rural Development/ Extension Programmes/ schemes operating in the village (5 m)	Training Need Assessment of the farmers and conduct of training programme (10 m)	Documentation of Indigenous Technical Knowledge (ITK) and Farm Innovations (5 m)	Study of Farmers groups (FPOs/ CIGs/ Farmers Clubs/ Farmers Associations) and Self Help Groups (SHGs) in the village (5 m)	Documentation of a success story of farmer/ entrepreneur and development of a short video film (5 m)	Total (100 m)	Reduced to 50 m
9.	10.	11.	12.	13.	14.	15.

Signature of the evaluators

- 1.
- 2.
- 3.

Signature of the Head of the Dept. of Agricultural Extension

PERFORMANCE SHEET - 5 (a)

(Internal evaluation)

Name of the College:		Name of the RAWEP centre:				
Periodical evaluation of Research Station/ KVK/ DATTTC activities		Semester and Year :				
S.No.	Name of the student	1 st Month 14 (m)	2 nd Month 14 (m)	3 rd Month 14 (m)	4 th Month 8 (m)	Total (50 m)

Signature of the members of the Advisory Committee

Chairman Scientist (TOT) Assoc. Dean's Representative Rep. from Dept. of Agriculture

PERFORMANCE SHEET - 5 (b)

(Internal evaluation)

Name of the College: _____ Name of the RAWEP centre: _____
 Research Station / KVK / DAATTTC activities _____ Semester and Year _____ :

S.No.	Name of the student	I.D.No.	The details of experiments, design, staffing pattern of the research station, technical programmes of the scientist, observations recorded and also the comments of the student (30 m)	Viva – Voce (20 m)	Total (50 m)
1	2	3	4	5	6

Signatures of the members of Advisory Committee

Chairman

Scientist (TOT)

Assoc. Dean's Representative

Rep. from Dept. of Agriculture

ANNEXURE-XIII
GUIDELINES FOR EVALUATION OF DIFFERENT COURSES

1. Crop Production

a)	Internal evaluation (50 marks)	
b)	External evaluation	
	i. Technical component of the crop production report student shall write information for a minimum of two crops and one additional crop (24 + 24 + 12 marks) The split up of 24 marks is mentioned hereunder a) 1 to 12 items @ marks each (2 x12)	60 marks 24 marks
	ii. Comparison with recommended management practices a) For two crops 2 x 4 b) Over and above 1 crop	10 marks 8 marks 2 marks
	iii. Information on the biometrical observations of crops as outlined in Annexure III	10 marks
	iv. Reasons for adoption and non-adoption as outlined in part (ii)	10 marks
	v. Comments of the students about the crops	10 marks
	a. Crop growth, variety, yield etc.	4 marks
	b. Skill and knowledge	4 marks
	c. Technical feasibility	2 marks
	TOTAL	100 Marks
	Total 100 marks have to be reduced to 50 marks	

2. Plant protection

a)	Internal evaluation (50 marks)	
b)	External evaluation	
	1. Technical component of the plant protection 2. Comparison with the recommended management practices 3. Information on observation of crops 4. Reasons for adoption and non-adoption of the recommended management practices 5. Comments of the students about plant protection aspects 6. Information of fungicides / insecticides / herbicides and procedure for marketing agrichemicals	60 marks 10 marks 10 marks 10 marks 5 marks 5 marks
	TOTAL	100 Marks
	Total 100 marks have to be reduced to 50 marks	

3. Rural Economics

a)	Internal evaluation (50 marks)	
b)	External evaluation	
	a. Agro-economic survey (Total 10 items) 5 items @ 3 marks each (1 to 5) = 15 marks 6 th Item = 4 Marks 4 items @ 1.5 mark each (7 to 10) = 6 marks	25 Marks
	b. Farm holding survey ☐ General Information ☐ First Crop ○ Cost of Cultivation ○ Cost Concepts ○ Income Measures ☐ Second Crop ○ Cost of Cultivation ○ Cost Concepts ○ Income Measure ☐ Graphical Representation	45 Marks 5 Marks 5 Marks 5 Marks 5 Marks 5 Marks 5 Marks 5 Marks 10 Marks
	c. Alternate Farm Plans ☐ First Crop ○ Existing & Alternate Plans ○ Partial Budgeting ○ Interpretation ☐ Second Crop ○ Existing & Alternate Plans ○ Partial Budgeting ○ Interpretation	30 Marks 5 Marks 5 Marks 5 Marks 5 Marks 5 Marks 5 Marks
	TOTAL	100 Marks
	Total 100 marks have to be reduced to 50 marks	

4. Extension Programme

a)	Internal evaluation (50 marks)	
b)	External evaluation	
1.	Identification of major agricultural problems of the village through Participatory Rural Appraisal (PRA) techniques 8 PRA techniques X 2 = 16 M Interpretation/ inference – 4 M	20 marks
2	Gap analysis and preparation of action plan for participatory extension teaching methods 5 farmers X 2 M	10 marks
3	Organization of participatory extension teaching methods such as method demonstrations, group discussions, <i>Rythu Sadassu</i> including role-play and exhibition 5 Method demonstrations X 2 = 10 M 2 Group discussions X 2½ = 5 M 1 <i>Rythu Saddasu</i> including role play (3+2) = 5 M 1 Exhibition = 5 M	25 marks
4	Maintenance of agricultural information corner in the village 10 nos. X 1 M	10 marks
5	Study of public and private agricultural extension information sources and their critical analysis 5 farmers including critical analysis X 1 M	5 marks
6	Study of on-going Central/ State sponsored Rural Development/ Extension Programmes/ schemes operating in the village 2 programmes including comments X 2½ M	5 marks
7	Training Need Assessment (TNA) of the farmers and conduct of training programme Training Need assessment (5 farmers X1 M) – 5 M Training programme – 5 M	10 marks
8	Documentation of Indigenous Technical Knowledge (ITK) and Farm Innovations ITK – 2 M + Comments- ½ M= 2 ½ M Farm innovation – 2 M +Comments – ½ M=2½ M	5 marks
9	Study of Farmers groups (FPOs/ CIGs/ Farmers Clubs/ Farmers Associations) and Self Help Groups (SHGs) Farmer group – 2 ½ M SHG – 2 ½ M	5 marks
10	Documentation of a success story of farmer/ entrepreneur and development of a short video film Write up – 3 M Short video film – 2 M	5 marks
	TOTAL	100 Marks
	Total 100 marks have to be reduced to 50 marks	

**INTERNSHIP / IN-PLANT TRAINING /
INDUSTRIAL ATTACHMENT
PROGRAMME**

INTRODUCTION

The Student READY programme envisage the introduction of Internship programmes in all the Universities in the agricultural curriculum as an essential prerequisite for the award of the degree to ensure adequate practical training. The Internship will include precisely prescribed programmes of work across various roles in agribusiness industries with a provision for adequate supervision, reporting and evaluation at the end. This programme shall be introduced in the fourth year of undergraduate curriculum.

An internship is a form of experiential learning method that helps the students (interns) in practical application of the knowledge gained and theory learned in the classroom environment in a professional environment with a hand holding support for overall skills development. Internships give students the opportunity to gain valuable applied experience and make connections in professional fields they are considering for career paths; and give employers the opportunity to guide and evaluate talent. And bridge the gap between student's theoretical knowledge and industrial requirements for better employability of students.

Differences between an Internship and a Job

	INTERNSHIP	JOB
Purpose	For learning experience in professional environment	work experience and building career
Salary	May/may not be paid however academic credit will be given to the student	paid
Duration	Typically lasts between 5-15 weeks	No specific start or end time/date
Employer Role	Mentors the students and is able to show them the 'business side' of the theoretical class room concepts	supervisor role and monitor for better results
University Role	Faculty helps supervise students as well as guide and prepare them for the internship.	No faculty interaction during the job.

Students who complete an internship will have the opportunity to:

- ✓ Try out different job roles.
- ✓ Increase their marketability.
- ✓ Develop skills and apply knowledge.
- ✓ Acquire job search skills.
- ✓ Build Agribusiness industry networking contacts.

PURPOSE

Technology and globalization are ushering an era of unprecedented change. The need and pressure for change and innovation is immense. To enrich the practical knowledge of the students, in-plant training is mandatory. In this training, students will have to study a problem in industrial perspective and submit the reports to the university. Such in-plant trainings will provide an industrial exposure to the students as well as to develop their career in various agribusiness industries.

OBJECTIVES

Internship / In-Plant Training / Industrial attachment is meant to correlate theory and actual practices in the agribusiness industries with the following objectives:

- ✓ To give students the opportunity to apply the knowledge and skills they have acquired on campus in a real-life work situation.
- ✓ To provide students with opportunities for practical, hands-on learning from practitioners in the students' areas of specialization.
- ✓ To expose students to a work environment, common practices, employment opportunities and work ethics in their relevant field.
- ✓ To enhance the employability skills of the students.
- ✓ To provide opportunities for students to be offered jobs in the organizations in which they undergo their Industrial Training.

AREAS OF FOCUS

Students shall be encouraged to take internship in any following focused areas of their interest:

Seed Industries	Organic farms	Agriculture logistics
Food processing units	Startups in agriculture	Farm machinery
Pesticide industries	Vegetable and fruits procurement companies	Irrigation equipment firms
Fertilizer industries	procurement companies	Tobacco industries
Bio fertilizer industries	Agriculture finance/credit (Banks/NBFC)	ICT technology firms in Agriculture
Farmer producer organizations	Tissue culture labs	Firms working on Innovative technologies like Drones, robotics, IoT, Big data in agriculture
Rural development projects	Biotechnology labs	
Precision farming	Seed farms	Government sector like FCI, eNAM, CWC etc
Retail sector	Rural Advertising firms	

Job roles shall be identified as described under by considering the student's employability:

- ✓ Marketing roles
- ✓ Knowledge dissemination roles
- ✓ Production roles
- ✓ Procurement roles
- ✓ Researcher roles
- ✓ Analyst roles
- ✓ Technocrat roles
- ✓ Assistant roles
- ✓ Field level roles

CREDITS AND DURATION

Internship / In-Plant Training / Industrial attachment shall carry 6 credit hours for a duration of six weeks.

ELIGIBILITY

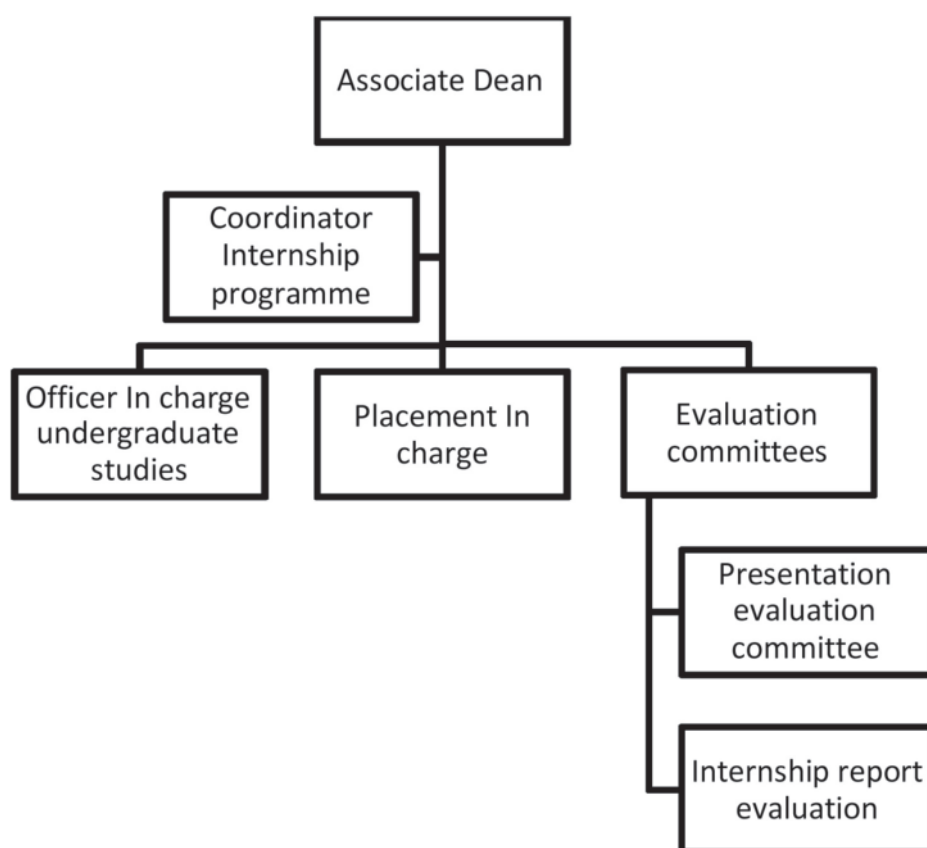
To get the eligibility for registering the Internship programme, the student should have passed all the courses of II year and should not have more than three backlog courses of III year.

REGISTRATION

The registration for Internship shall be done along with RAWEP registration at the respective colleges within three days. Registration shall not be permitted beyond three days under any circumstances.

ROLES AND STRUCTURE OF THE PROGRAMME

The organisation structure of the programme at the college level shall be as under, there shall be a separate coordinator internship programme nominated for said programme. The roles at each level are detailed below :



Associate Dean

- ✓ Shall identify a competent coordinator for Internship programme
- ✓ Shall monitor the programme at all the levels
- ✓ Shall see that all the students have applied for internships with various organisations
- ✓ Shall constitute evaluation committee for presentation
- ✓ Shall identify faculty for evaluation of project reports from concern departments college (Each faculty shall note give more than 25 project reports for evaluation)

Coordinator of the Internship programme

- ✓ Placement Incharge of the concerned college will act as coordinator for the programme
- ✓ Shall act as the course incharge of the programme
- ✓ Shall coordinate with students through Associate Dean Representatives of the RAWEP for their placements as well as the following activities pertaining to internship.
- ✓ Collection of the application from student and process the applications.
- ✓ Orientation about the programme to the students
- ✓ Liaison with mentor for leave application process
- ✓ Resolving any dispute between the students and mentor.
- ✓ Collection of all the reports/Mentor evaluation cum internship certificate/ Internship weekly report
- ✓ Coordination with evaluation committee for evaluation of the students reports and presentations
- ✓ Preparing Grade point reports of the course.

Seminar Presentation evaluation committee

- ✓ Committee shall be formed with three members and one among them is the Internship coordinator.
- ✓ Committee shall evaluate the presentations as per the guidelines
- ✓ Prepare evaluation sheets for all the students and submit to internship coordinator for further processing

Internship reports evaluators

- ✓ Faculty for evaluation of project reports from concern departments college
- ✓ Each faculty shall note give more than 25 project reports for evaluation
- ✓ Prepare evaluation sheets for all the students and submit to internship coordinator for further processing

GUIDELINES FOR STUDENTS UNDERGOING INDUSTRIAL TRAINING

The student is responsible to ensure that all matters relating to the Internship Programme are conducted in an ethical, conscientious, trustworthy and committed manner. The students should follow the following guideline in word and spirit for successful completion of the Internship:

Before The Internship

1. Students shall identify their work areas of interest and role of work based on their interest and more particular in areas where they would like to build their career in later stage of their life.
2. Students shall identify their areas of interest and role well in advance and apply for a suitable organization, submit an application form through the Officer (Training / placements) to the organization concerned one semester before the Internship Programme commences.
3. Students can also directly approach various agribusiness organization of their choice for getting an internship. But the offer from the agribusiness industries should be in line with the university rules.
4. Submit one copy of the offer letter for the internship to the Advisor/ Internship programme coordinator. Students are not allowed to change their Internship after obtaining the approval and confirmation from the Organization and university.

5. To complete the Internship process within the specified time based on the Internship Programme schedule of the University.
6. To ensure that the Internship is not performed in a family-owned company so as to avoid conflict of interest.

During Internship

1. Once the student has joined the training place, he / she must send a mail to the programme coordinator that he / she has joined the training from _____ in the industry (Name) _____ and forward his / her contact nos., E-mail ID and the contact nos. of the mentor allotted by the organization to whom the student shall report.
2. During the training, students will be given 3-4 practical problems by the offering organization in which they are undergoing training. In case the organization do not give them the problems, the students will themselves formulate minimum three problems and maximum four problems and carry out detailed study on them and recommend the optimum solution based on their theory knowledge. The problems identified should be of graduate level.

Examples:

- a) If a student has been allotted a internship in marketing of Bio-fertilizer, the student should identify various crops the product can be applied, understand the farmer usage pattern, acceptability among the farmer community, understand the reasons for the same. How it be sold in new areas or new crops.
 - b) If a student has been allotted a internship project in Seed processing unit, the student should focus on understand how the processing of the seeds is going on, wide varieties are being processed, how is it different from actual theoretical study they have made during their under graduation. Any specific problem like low out put, seed quality, chemical treatment done, how germination percentage is calculated, packaging is done, is unit ideal during off season etc. If any gaps are observed students shall identify and propose problems to solve them.
 - c) If a student has been allotted to food processing industry student need to study in detail how the perishables are procured from farmers, being handled, what is the process under gone, materials used, packaging is being done. And identify any product improvement, process improvement, packaging etc can be made by applying their knowledge and propose solution for the same.
 - d) If a student is working with Farmer producer organization, the students should study about all the activities there organization has taken up to strengthen up the organization. What types of crops they are producing, should propose area like how they can collectively market, process, bargain to by inputs, etc by identifying their problems.
3. To maintain discipline and abide by all rules and regulations enforced by the organization and to ensure FULL attendance during the Internship duration.
 4. To carry out the internship in an ethical and professional manner and to uphold the reputation of University at all times.
 5. To maintain confidentiality and to not disseminate / share any information related to the organization to third parties.
 6. To be responsible for maintaining the security of properties belonging to the organization
 7. Student will be expected to keep a internship weekly dairy, written log of experiences gained, value of these experiences, and their importance in the internship program in the dairy. It is suggested that at least once in each week the Mentor and the student will discuss the “how and whys” of the week’s activities.

End of the Internship

1. After completion of Internship it is the students responsibility to approach the reporting authority (mentor) at organisation collect the completely filled Mentor Evaluation Sheet Cum Internship Completion Certificate.
2. Immediately after reporting the college the student should submit the completely filled Mentor Evaluation Sheet Cum Internship Completion Certificate along with the internship report for the advisor for evaluation and Internship weekly dairy.
3. Upon completion of these programme, students are expected to demonstrate the following graduates attributes relevant to their projects, Knowledge, Problem analysis, Development of solutions, Conduct investigations of complex problems, Modern technology application, Individual and Team Work, Improved Communication, Project Management skills, Finance understanding.

LEAVE RULES

The nature of leave admissible to the students is as follows.

- ✓ One casual leave for every three weeks of duration of Internship shall be permitted.
- ✓ Special leave for five days for the duration of the Internship on medical grounds only be allowed
- ✓ Leave will not be granted as a matter of right.
- ✓ Leave shall be availed with prior intimation and permission from both the Institute Head and reporting authority at the organization.

DISCIPLINARY PROCEDURES DURING INTERNSHIP PROGRAMME

- ✓ Within the Internship period, the student is wholly responsible to the organization where he or she has been placed. This means that the student must observe specified office hours, and must adhere to all rules and regulations of the organization, just like the other staff within the organization, during the entire training period.
- ✓ Students should see that Internship Programme is conducted in an ethical, conscientious, trustworthy and committed manner.
- ✓ Internship in an ethical and professional manner and to uphold the reputation of University at all times.
- ✓ Students should be well groomed, properly dressed and adhere to the dress code of the organization they working with.
- ✓ Students particularly working in production environment should follow all the safety and security measure prescribed for the working environment by the organization and take all the measures to not to damage any apparatus, equipment etc.
- ✓ Students are strictly instructed not to operate any machinery or vehicle without the supervision of the operator.
- ✓ Students who need to frequently travel as part of their assignment need to take all safety measures.

Termination of the Internship

Any of the following acts of students shall lead to termination of the internship and in this situation the decision of the Head of the institute shall be final.

- ✓ A student will not leave the course/internship location before its completion without prior approval of the Head of the Institute and the mentor of the organization.

- ✓ Any serious complaints from the internship offering organization shall terminate the internship.
- ✓ Any indisciplinary act of student at the internship providing organization shall lead to termination of the Internship.

In above circumstance the student need to repeat the course for fulfilling essential prerequisite for the award of the degree.

EVALUATION

Evaluation within the Internship context aims to evaluate the student's work quality and appropriateness to the field of Agriculture with reference to the learning outcomes of the Internship Programme. Students should be evaluated by Faculty coordinator (Internship). Evaluation methods used may consist of the following: Internship report writing and seminar Presentation by the student.

Report Writing

1. The Internship report must include the following:
 - (a) The basic history/introduction of the industry.
 - (b) The sequence of operations followed/ systems for the production.
 - (c) The layout of various workshop/floors or the labs and admin section of the industry. (if applicable)
 - (d) The major equipment used for the production
 - (e) The infrastructure available.
 - (f) The movement of material (raw, semi-finished and finished product), if applicable
 - (g) The formulation of 3 to 4 practical problems.
 - (h) Data required formulating the problems.
 - (i) Analysis of the data
 - (j) Suggestions made based on the analysis of the data.
 - (k) Recommendations.
 - (l) Certificate from the industry for the period of training undergone.

The final report must be at-least 25 to 30 pages for the student undergoing 45 days training. In case no. of students undergoing training in the same industry are more than one, each student will prepare his / her report separately detailing various roles undergone by them during the period.

Seminar Presentation

The students will present his Internship report though seminar, which will be held by an expert committee constituted by the college as per norms. The presentation shall be restricted to 10 slides and not more than four minutes for each student. The evaluation through seminar presentation will be based on the following criteria.

- a) Quality of material presented.
- b) Effectiveness of presentation.
- c) Depth of knowledge and skills.

Application for Internship Programme

Student's Name _____ ID No : _____

Phone: _____ Email: _____

Cooperating Business Firm's Name _____

Mentor Name and Designation _____

Telephone Number _____ Email: _____

Period of Internship from Date _____ To Date _____

Deviation in duration of six weeks, if any mention reasons for the same : _____

-
- a) Students Role in organization During Internship
 - b) Nature of work
 - c) The type of work/services the organization is engaged in (describe briefly):
 - d) Please state your objectives in choosing this internship.
 - e) Expected Learning's from the proposed Internship.
 - f) Amount of stipend Agreed by the cooperating organization Rs. _____

Signature of the Intern Internship Approved/Internship NOT Approved

APPROVAL SIGNATURES

Faculty Internship Advisor

Date

Associate Dean

Date

Offer Letter of Internship

Date:

Student Name

College address

Dear (Student name):

We are happy to inform that we have accepted your application for of an internship position as (Title) in the (Department Name) at a pay rate (if applicable) of stipend. For a period of six weeks starting from Date: _____ to Date _____. You have been allotted (Mentor Name) and contact no. _____ as your mentor and job role, duties and assignments for this position will be those described to you in your orientation.

Other Terms and conditions (if any) :

With regards,

(Authorized signatory)

(Designation)

Letter to the Mentor

To

Date :

The (Name of the Mentor) (Address)

Sir,

We are happy to hear from (Student name) that your esteemed organization has offered the internship from date _____ to date _____ for duration of Six weeks. In this regard we would like to inform you the guidelines issued by the university to student that have to be followed for successful completion of internship. The brief abstract of the guidelines are:

1. During the training, students will be given 3-4 practical problems by the offering Agribusiness organization in which they are undergoing training. In case the Agribusiness organization do not give them the problems, the students will themselves formulate minimum three problems and maximum four problems and carry out detailed study on them and recommend the optimum solution based on their theory knowledge.
2. Student to maintain discipline and abide by all rules and regulations enforced by the organization and to ensure FULL attendance during the Internship duration.
3. Student to carry out the internship in an ethical and professional manner and to uphold the reputation of University at all times.
4. Student to maintain confidentiality and to not disseminate / share any information related to the organization to third parties.
5. Student to be responsible for maintaining the security of properties belonging to the organization
6. Student will be expected to keep a weekly, written log of experiences gained, value of these experiences, and their importance in the internship program. It is suggested that at least once in each week the Mentor and the student will discuss the "how and whys" of the week's activities.
7. To complete the Internship process within the specified time based on the Internship Programme schedule of the University.
8. A student will not leave the course/internship location before its completion without prior approval of the Head of the Institute and the mentor of the organization.
9. Any serious complaints from the internship offering organization shall terminate the internship.
10. Any indisciplinary act of student at the internship providing organization shall lead to termination of the Internship.
11. If, the organization insists for any specific dress code and other safety apparatus, the organization shall arrange the same.
12. Leave rules during Internship
 - a) One casual leave for every four weeks of duration of Internship shall be permitted.
 - b) Special leave for five days for the duration of the Internship on medical grounds only be allowed
 - c) Leave will not be granted as a matter of right.
 - d) Leave shall be availed with prior intimation and permission from both the Institute Head and reporting authority at the organization.

This for your information, in case of any correspondence during the internship period please contact (Name of the coordinator) (Mobile No) (Mail ID).

With regards,

(Signature of Institute Head/ Internship coordinator of college)

Declaration Form from the Student

To

(The Institute Head), (Address)

I _____ (Name of Student) S/o _____
 _____ R/o _____ have understood
 that the University and the mentoring organization have worked to develop an internship program that is
 used from building my career and meets the essential prerequisite for the award of degree. Therefore, if
 the intern (student) has successfully completed the intern program, appropriate credit will be granted by
 the University. Understanding the importance of the program I shall abide to following guidelines in word
 and spirit:

1. I shall maintain full discipline and abide by all rules and regulations enforced by the organization and to ensure FULL attendance during the Internship duration.
2. I shall carry out the internship in an ethical and professional manner and to uphold the reputation of University at all times.
3. I shall maintain confidentiality and to not disseminate / share any information related to the organization to third parties.
4. I shall be responsible for ensuring the security of properties belonging to the organization by following the organization guidelines during internship and see that no damage is caused due to my act.
5. I will not leave the course/internship location before its completion without prior approval of the Head of the Institute and the mentor of the organization.
6. I shall be well groomed, properly dressed and adhere to the dress code of the organization I am working with.
7. While working production environment I shall follow all the safety and security measure prescribed for the working environment by the organization and take all the measure to not to damage any apparatus, equipment etc.
8. I shall not operate any machinery or vehicle without the proper supervision of the operator/Trained personal.
9. While travelling as part of their assignment I shall take all safety measures.

I declare that I shall take up internship in ethical and professional manner and to uphold the reputation of University at all times and I shall obey for any disciplinary action taken against me as per the university rules for breach of above guidelines and regulations.

(Signature of Student)

(Date)

Internship weekly dairy

(Please use one sheet for every week of work done)

Student's Name _____ ID No : _____

Cooperating Business Firm's Name _____

Mentor Name and Designation _____

Period of Internship from Date _____ To Date _____

Date	Place of work	Brief description of Work done	Specific remarks

Remarks and suggestion of Mentor:

Signature of Student
DateSignature of Mentor
Date

Format of Internship Report

The following titles must be incorporated in the final industrial training report:

S No	Content	Number of pages
1.	Preface/Acknowledgement	1
2.	Certificate with Signatures and Seal of the mentor	1
3.	Contents/Index	1
4.	Introduction about the organization	2-3
5.	Schedule of work/Problems identified	3-4
6.	Brief outline of the week's activities	3-4
7.	Work Done / Observations/Data collected/dataanalyzed	3-4
8.	Specific Assignment / Project Handled/Solution identified	3-4
9.	Learning after Training	2-3
10.	Summary	2-3

Note : The final report must be at-least 25 to 30 pages for the student undergoing 45 days training. In case no. of students undergoing training in the same industry is more than one, each student will prepare his / her report separately detailing various roles undergone by them during the period. The final report should be inline with the student's internship weekly dairy.

Mentor Evaluation Sheet Cum Internship Completion Certificate

Name of Student/Internee

Date

A. Rating of Student Characteristics

Using the rating scale, please evaluate the following characteristics for the above-named student. If the student made noticeable improvement in any of the characteristics during his/her program, also place a check mark in column 2.

Rating Scale **1 = Excellent** **3 = Average** **5 = Unsatisfactory**
 2 = Very Good **4 = Fair**

Characteristics	Rating	Remarks
Ability to learn	_____	_____
Interest in learning	_____	_____
Success of completing responsibilities	_____	_____
Ability to perform without supervision	_____	_____
Willingness to receive guidance	_____	_____
Relationships with other employees	_____	_____
Dependability and reliability	_____	_____
Judgment	_____	_____
Personal appearance	_____	_____
Enthusiasm	_____	_____
Courtesy	_____	_____
Overall performance	_____	_____

B. General Questions

1. If applicable, did this student/internee earn the wages he/she received?
2. What characteristics did you like most about this student?
3. In what ways can the student improve himself/herself?

4. In considering the student's total program, what were the *Strong Points* Weak Points
5. Circle the number that best gives an overall evaluation of this internship.
1. Outstanding 2. Excellent 3. Good 4. Fair 5. Poor

Any specific remarks from the mentor,

Leaves availed during Internship:

From date to date

Nature of leave

This is to certify that _____ (student Name) has done his internship from date _____
to date _____ and the students work at the organization has been Satisfactory/unsatisfactory.

Mentor Signature

Designation

Date

Seminar Presentation evaluation committee

Name of Student/Internee _____ ID No. _____

SNo	Criteria	Maximum marks	Marks allotted
1	Quality of material presented.	25	
2	Effectiveness of presentation / Communication	25	
3	Depth of knowledge and skills	25	
4	Understanding about the problem/ Problemsolving ability	25	
	Total marks	100	

Remarks if any,

SIGNATURES

Internship Coordinator_____
Date_____
Committee member 1_____
Date_____
Committee member 2_____
Date

Advisor/ Course In charge Evaluation Sheet

Name of Student/Internee

ID No.

1. In considering the student's total program, what were the
Strong Points *Weak Points*
2. Would you recommend a similar program in the organization for other students?
Yes *No*
3. Is the students overall internship experience justify the university essential prerequisite for the award of degree?
Yes *No*

If No, mention the reasons?

4. Suggestions for improvement and other comments.
5. Evaluate the following criteria by giving the number that best gives

Criteria	Maximum marks	Marks scored
1. External Mentor evaluation(Outstanding-30, Excellent-25, Good-20, Fair- 15, Poor-10)	30	
2. evaluation Internship diary	10	
3. evaluation Internship report	40	
4. evaluation Internship presentation(Reduce the 100 marks of committee to 20 marks)	20	
Total Marks	100	

Tick the following as submitted by student:

External supervisor evaluation form submitted Internship diary submitted

Internship report submitted Internship presentation

Internship credits Approved/Internship credits NOT Approved

APPROVAL SIGNATURES

Internship Coordinator_____
Date_____
Associate Dean_____
Date

EXPERIENTIAL LEARNING PROGRAMME (ELP)

INTRODUCTION

As per the Fifth Dean's committee recommendations, the revised curriculum for the B.Sc.(Hons) Agriculture degree programme is under implementation from the academic year 2016-17. The Indian Council of Agricultural Research has recommended a new initiative called the "Student READY" (Rural Entrepreneurship Awareness Development Yojana) programme which aims to provide rural entrepreneurship awareness, practical experience in real-life situation in rural agriculture and creating awareness to undergraduate students about practical agriculture and allied sciences. The programme will help in building confidence, skill and acquire technical knowledge of the locality and thereby prepare the pass-outs for self-employment. It also aims to provide opportunities to acquire hands-on-experience and entrepreneurial skills. The programme has been conceptualized for building skills in project development and execution, decision-making, individual and team coordination, approach to problem solving, accounting, quality control, marketing and resolving conflicts etc., with end to end approach.

Experiential learning is one of the components of student READY programme with business curriculum-related endeavour. It aims at developing a cadre of skilled professionals who can create their own enterprises. Therefore, the course design of experiential learning is aimed at competence development through knowledge in all aspects of enterprise management so that the agriculture graduates can have complete understanding of field problems, project development and execution of their enterprise.

Experiential Learning (EL) helps the student to develop competence and capability, capacity building, acquiring skills, expertise and confidence to start their own enterprise and turn into "*Job Creators instead of Job Seekers*". It provides the students an excellent opportunity to develop analytical and entrepreneurial skills, knowledge through meaningful hands on experience and confidence in their ability to design and execute the project work. The programme has carefully calibrated activities which help the students to explore and discover their own potential.

OBJECTIVES

The objectives of the experiential learning programme are:

1. To promote professional skills and knowledge through hands on experience.
2. To promote self-employment opportunities and entrepreneurship developmental skills in the field of agricultural and allied sciences through integration of basic knowledge and conceptual aspects.
3. To build confidence and ability to work in project mode.
4. To generate trained and skilled manpower for self-employment and entrepreneurship development.
5. To acquire enterprise management capabilities in commercialization of technologies.
6. To earn through value addition technologies available locally through integration of integrated farming, food safety, agriculture market and good agriculture practices.
7. To explore wider opportunities in integration of different agricultural on-farm practices and devices for income generation.
8. To integrate education with entrepreneurship for employment generation, so that agriculture students may become job providers rather than job seekers.

PROGRAMME OF WORK

The experiential learning programme will be offered for one semester (180 days or 24 weeks) during the final year with a weightage of 0+20 credit hours. The students will have adequate experience in planning and managing an enterprise in totality starting from procurement of raw material to processing, production, packaging and storage of products, organizing resources and utilities, sale of products, maintain accounts and analyze profits. Finally, students will present their work along with a report of their performance.

As the programme is enterprise oriented, students and faculty (Manager of the concerned unit) are expected to attend the activities of the enterprise even on institutional holidays with total commitment, and without any time limit or restriction of working hours for ELP. The student who joins the unit has to perform the duties or functions as suggested by the Manager of the enterprise.

- ✓ A unit of E.L shall have 15 - 20 students
- ✓ Unique I.D.s will be generated for each student, which is a mandate for ELP funding and other transactions
- ✓ All ELPs must run continuously in revolving fund mode.
- ✓ Manager of ELP should maintain the records.
- ✓ If any unit is not running, the reasons for failure should be furnished
- ✓ Returns / Investment should be calculated
- ✓ Skill development (Hands On Training) and Entrepreneurship Development are the objectives of ELP
- ✓ Delegation of powers (Financial powers and administrative powers) and office orders should be as per the instructions issued by the University.
- ✓ Revolving fund will be given to each unit separately. Revolving Fund may be created to EL unit with the usual procedure followed in the University.
- ✓ Separate cash books have to be maintained at each EL unit by the Managers. Whenever Unit Manager transfers or retires, the cashbook and other registers pertaining to the unit should be handed over to the successor.
- ✓ Paradigm shift is needed i.e., from “production oriented” to “Business mode”.
- ✓ Day wise activity should be recorded for total period and Daily memorandum sheet has to be maintained
- ✓ Ranking will be given to EL units both at college and University level.
- ✓ The profit sharing should be in new ICAR pattern and it must be uploaded once in six months.
- ✓ “Domain Competence” for each college should be identified and developed.
- ✓ Feedback of each student towards ELP should be obtained at the end of the course and documented.
- ✓ All ELP units should be displayed in the University website.
- ✓ Execution-Documentation-Submission is mandate for each ELP unit.
- ✓ Each ELP unit should run on a single name throughout its existence. The name of EL units should not be changed.
- ✓ All the enterprises of ELPs have to be registered.
- ✓ Financial assistance from banks is permitted
- ✓ Records have to be maintained for all the transactions of the enterprise.
- ✓ For each E.L unit a group leader shall be identified
- ✓ The data, information etc., as given in the programme has to be collected and analysed by the student.

CREDITS

Twenty credits are recommended for EL programme of 180 days duration. The students will have adequate experience in planning and managing an enterprise in totality starting from procurement of raw material to processing, production, packaging and storage of products, organizing resources and utilities, sale of products, maintain accounts and analyze profits. Finally, students will present their work along with a report of their performance.

Distribution of credits as per the EL Activity

S.No.	EL Activity	No. of Credits
1	Developing a Business Plan/ Project Proposal	1
i	Identification of the product to be manufactured	
ii	Market Survey	
iii	Analysis of the existing status of the identified product and targeted market and customer	
iv	Innovativeness and Creativity	
v	Preparation of the project proposal with supply chain of inputs, personnel plan, production plan, finance plan, etc. and its preparation	
2	Plan for the Production	1
i	Organization of resources	
ii	Organizing utility	
iii	Sequential grouping of activities	
iv	Packaging and storage	
v	Product pricing – physical inputs, man-hours, depreciation, etc.	
vi	Time management	
3	Production	15
i	Regularity in production	
ii	Adhering to production plan	
iii	Product quality assessment	
iv	Maintenance of production records	
v	Team work	
4	Sales	2
i	Sales strategy	
ii	Sales volumes	
iii	Assessment of sales performance	
iv	Profit generated including C/B ratio, payback period, etc.	
5	Documentation and Report Presentation & Evaluation	1
i	Personnel Management	
ii	Preparation of final report	
iii	Oral performance	
	Total	20

DURATION

The EL programme is to be offered for 180 days period in the final year. As the EL programme is enterprise oriented, it will be without any break. Students and faculty are expected to attend the activities of the EL on all days. Total commitment is expected from the faculty and the students. The EL programme shall be run all the year round by making groups and rotating activities of the final year students.

ATTENDANCE

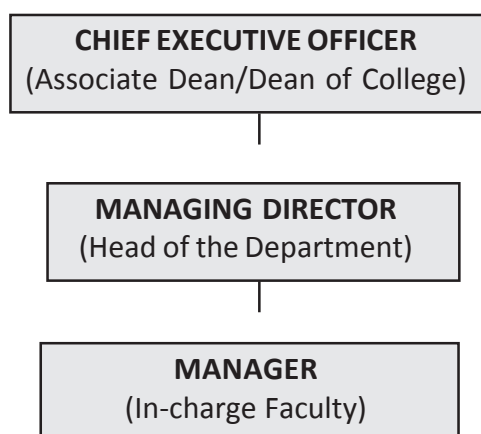
The minimum attendance required for this programme is 85%. The attendance of a student will be maintained at the EL unit. The attendance particulars shall be communicated to the Chief Executive Officer by the Manager of the EL unit every week. The students will be eligible for the final evaluation of EL only when the attendance requirement is met with. Any student in the event of recording shortage of attendance, has to re-register the EL when offered next.

ELIGIBILITY

To get the eligibility for registering the EL programme, the student should have passed all the courses of II year and should not have more than three backlog courses of III year. The assignment/allotment of the EL programme shall be based on merit of the student at the end of V Semester.

ORGANIZATIONAL SET-UP OF THE EL UNIT:

To give the real experience and flavor of an enterprise to the students and other organizations, each EL unit shall have the organizational set-up as follows:



The above organogram depicts the hierarchy of the enterprise. Advisors from the private sectors can also be engaged for consultation for the programme, production and sales profitability. The Head of the department where EL unit is proposed should identify suitable faculty member with commitment as Manager of the EL programme. Another faculty member should also be identified to assist the manager.

REGISTRATION AND ORIENTATION

The registration of ELP shall be done at the respective colleges within three days. Registration and general orientation will be arranged on the first day followed by general session on various aspects of enterprise management on the second day, and departmental orientation on the third day. Registration shall not be permitted beyond three days under any circumstances. During the programme there will be no formal lectures, however wherever necessary, some briefing may be done. The orientation on enterprise management will be given in the following aspects.

- ✓ Concept of EL
- ✓ Objectives
- ✓ Organizational aspects

- ✓ Plan of work – Formulation of Business plan, organization of production, sale strategy, marketing, etc.
- ✓ Records to be maintained
- ✓ Reports to be submitted
- ✓ Attendance requirement
- ✓ Discipline

SCHEDULE OF ACTIVITIES UNDER EL PROGRAMME

The EL programme will continue for 180 days (24 weeks) without any break. Accordingly the number of days can be adjusted for different activities based on the academic calendar given by the university. The schedule of the work is as follows. The duration and activities of EL can be adjusted proportionately for 24 weeks.

S. No.	EL Activity	No.of Days
1.	Orientation	3
2.	Developing a Business Plan	10
3.	Training in Advanced Skills	10
4.	Plan for the Production	10
5.	Production & Sales	135
6.	Documentation and Reports	10
7.	Presentation and Oral Examination	2
	Total	180

PROGRAMME MONITORING

The programme will be continuously monitored by the Manager and MD. The CEO will receive the information about the EL unit regularly and monitor personally once in a month. The sales part of all the units in the college will also be continuously monitored by the CEO. The sales of all EL products will be arranged in the most prominent place in the college or in market to attract the customers.

Faculty Responsibilities

CEO

- ✓ Arrange for registration and general orientation of the EL programme
- ✓ Approve the arrangements made for training students in advanced skills
- ✓ Assess the feasibility of the business plans developed in all units in coordination with experts in the field
- ✓ Monitor the enterprise activities of each unit on monthly basis
- ✓ Render help in solving administrative problems of the unit
- ✓ Convene meetings with the internal evaluation committee of each EL unit in the college to ensure the profitability of the EL unit
- ✓ Approve the schedule of the examination

MD

- ✓ Orientation of the students for EL activities
- ✓ Identify resource persons in the relevant field
- ✓ Scrutiny of business plan/ project proposals and submission to CEO
- ✓ Monitor EL programme of their unit twice a week
- ✓ Issue letters of correspondence for interaction with other enterprises/ institutes
- ✓ Conduct of examination and evaluation
- ✓ Scrutiny of EL unit records

Manager

- ✓ Arrange to coordinate all pre-EL activities timely
- ✓ Orientation of the EL activities of their discipline to the students
- ✓ Record the attendance of the students and ensure the participation of the student for 8 hours per day
- ✓ Identify the resource persons in the relevant field and arrange for guest lectures
- ✓ Identify and arrange for student's training in entrepreneurial advanced skills after approval from CEO
- ✓ Guide students in developing business plan/ project proposals
- ✓ Plan for survey and accompany students for receiving effective market information, if needed
- ✓ Conduct the primary assessment of the business plan and give report to the MD
- ✓ Help the students in development of production plan
- ✓ Guide the students in production
- ✓ Guide the students for quality analysis
- ✓ Lead the students for marketing and sale of products
- ✓ Monitor all enterprise activities daily
- ✓ Guide the students for record keeping and enterprise economics
- ✓ Inform MD and CEO about the progress of EL unit
- ✓ Propose the examination schedule and organize evaluation & examinations.

Review Meeting

- ✓ Shall be conducted every month (First or third Monday/ Saturday)
- ✓ All group leaders and students of the E.L. units in the college shall be present the progress of their modules.
- ✓ Innovations have to be identified during the review meetings
- ✓ CEO is the in-charge of conducting the review meetings of all the EL units of the college.

Schedule for review meeting

- ✓ Attendance / dairy of student - 30 minutes
- ✓ Presentation by group leaders - 2 hours
- ✓ Planning, innovation and improvements - 1 hour
- ✓ Finalization of the programme - 1 hour

Devolution of powers:

CEO

- ✓ Overall responsibility for successful functioning of all EL units in the college
- ✓ Sanction power up to Rs 1,00,000/- each time
- ✓ Responsible for overall coordination and monitoring

MD

- ✓ Responsible for over all progress of the EL unit
- ✓ Monitoring and evaluation of the programme
- ✓ Sanction power up to Rs 50,000/- each time

Manager

- ✓ Responsible for day to day activities of the EL unit
- ✓ Report to the MD about the functioning of the EL unit
- ✓ Sanction power up to Rs 25,000/- each time

Separate account for each EL unit will be created and maintained by the CEO. The unit shall function in corporate mode for local purchase. Purchase Committee shall consist of Manager, one faculty member and one student from EL unit and the Committee shall function in a manner that high quality product is purchased at competitive price.

PROFIT SHARING

The profit will be shared by the students, department and the faculty involved in the programme. The profit share will be as follows:

1. Students	– 75%
2. Department	– 10%
3. Faculty/ Manager/and other staff	–15%

involved in the ELU execution

If the EL unit is found to register loss, remedial measures should be taken by the monitoring team. If it is not rectified, it should be closed immediately.

GUEST FACULTY/LECTURES

- ✓ Guest lectures shall be delivered on topics having direct relevance to the EL activity and by those who have run a commercial unit (public or private) for a minimum of five years.
- ✓ Guest lecturers will be paid suitable honorarium up to Rs. 2000 for a session of three hours otherwise Rs. 1000 will be paid.
- ✓ A provision of Rs. 50,000 per EL unit for the first year will be made for the first year. In subsequent years, the provision may continue out of the income of the EL unit.

EVALUATION

The following is the breakup of marks for evaluation of students through internal and external methods. Internal evaluation (for 180 marks out of 200 marks) will be done by the committee constituted by the Associate Dean consisting of concerned EL manager, Managing Director and two faculty members nominated by the Associate Dean of which one must be from Agricultural Economics department. The students will be evaluated regularly throughout the programme by this committee. For the external evaluation of ELP (for 20 marks out of 200 marks), committee has to be constituted by the Associate Dean consisting

of one identified entrepreneur, CEO (Associate Dean) nominee and one faculty member from the Agricultural Economics department. With a weightage of 10 marks for each credit, each student will be evaluated for 200 marks for 20 (0+20) credits.

S.No.	Description	Marks
1	Business planning and designing	10
2	Planning for production	10
3	Organization of production, quality, & schedule adherence	120
4	Sales	20
5	Student performance (Class assessment, regularity, etc.)	10
6	Report writing & records	10
7	Oral Examination (External)	20
	Total	200

FACULTY TRAINING

EL being a new initiative, it is proposed that the faculty involved be provided orientation-cum-training in project development, business plan development, managing the project, marketing and agribusiness strategy at one of the premier business schools or through eminent business training professionals or successful entrepreneurs. For this purpose appropriate financial allocation will be made initially by the university or from ICAR. In subsequent years, such training may be arranged out of the share of Department of income of EL unit.

REVOLVING FUND

- ✓ Minimum amount of Revolving fund to each proposed EL unit was given during 2018-19 by redistributing the currently available AELP revolving fund of each college.
- ✓ For ICAR sponsored EL units, any revolving fund over and above Rs. 4.00 lakh will have to be refunded after completion of two years of release of funds.
- ✓ For ICAR sponsored EL units, revolving fund would be provided in the first year. In subsequent two years, the grant for maintenance of equipment purchased for the EL programme would be provided @ 7% of the equipment cost per year. The requirement of more funds should be met out of the 10% share of the department out of the income generated from the EL unit.
- ✓ Revolving fund shall not be used for any purpose other than EL unit.
- ✓ Revolving fund will be used exclusively for meeting recurring expenditure only for EL unit.
- ✓ While Revolving fund will remain with the EL unit.
- ✓ Revolving fund and entire budget shall be at the disposal of CEO of the unit and total devolution of power as indicated in the general guidelines will have to be followed.
- ✓ Department's share of any amount earned out of ELU will be used exclusively for EL faculty capacity building, adding further infrastructure, attendance of concerned faculty and students in seminar and for no other purposes.

REWARDS

Every year, Education Division of ICAR will make assessment of the EL units based solely on the production, quality and income generated, and the best performing EL unit shall be given Rs. 1.00 lakh additional support which will be utilized exclusively for capacity building of the faculty including participation of the faculty involved in EL unit in national and international conferences, etc. On the same lines university also will make assessment to select best performing EL unit

MODULES FOR EXPERIENTIAL LEARNING

The modules included in the Report are suggestive and college would have freedom to modify/develop new modules looking into the marketing potential in the region, following strictly the principles enunciated for each module. The students will register for any one of the modules, of (0+20 credit hours) listed below:

- ✓ Production Technology for Bio-agents and Bio-fertilizers
- ✓ Seed Production and Technology
- ✓ Mushroom Cultivation Technology
- ✓ Soil, plant, water and seed Testing
- ✓ Poultry Production Technology
- ✓ Hybrid Seed Production Technologies
- ✓ Floriculture and Landscaping
- ✓ Food Processing
- ✓ Commercial Horticulture
- ✓ Agriculture Waste Management
- ✓ Organic Production Technology
- ✓ Commercial Sericulture

In addition to these ELP modules, other important modules may be given to the students by the concerned colleges. Indian Council of Agricultural Research has already provided financial help for establishment of two or more Experiential Learning units in each State Agricultural University and the universities to plan accordingly.

Activities

- ✓ To conduct hands-on training and entrepreneurship skills among outgoing UG students interested in the field of Agriculture & allied branches.
- ✓ To conduct special training in frontier areas of agriculture for undergraduate degree students for establishing an enterprise and its management.
- ✓ To explore possibility of expanding scope/ federating students into business group and for industrial sectors.

This would impart skills among students in preparation of project feasibility and implementation reports for establishment of production units, procurement of raw materials, production of value added product enriched manure, production of briquettes from loose biomass, production of agricultural products under greenhouse, packaging and storage of value added products, conduct manufacturing and production techniques, organize resources and utilities, sale of product, quality control, instrumentation for taking care of practical exercise, proper methods and procedures for maintenance of records including inventory of materials, maintenance of accounts, management of the enterprise and learning distribution techniques and marketing. Students will be trained in:

- ✓ Pre-investment and pre-feasibility study
- ✓ New project identification
- ✓ Project feasibility and market study
- ✓ Identification of profitable industrial project opportunities
- ✓ Preparation of project profiles

- ✓ Preparation of techno-economics feasibility reports
- ✓ Identification and selection of plant and machinery
- ✓ Manufacturing process and equipment required
- ✓ General guidance for establishment, repair and maintenance of renewable energy gadgets
- ✓ Technical and commercial counseling
- ✓ Investment decision making
- ✓ Corporate diversification planning
- ✓ Forecasting financial aspects by estimating the cost of raw material, formulating the cash flow statement, projecting the balance sheet etc.
- ✓ Marketing and distribution of processed products.
- ✓ Federating into business group

DOCUMENTATION OF RECORD OF THE EXPERIENTIAL LEARNING PROGRAMME

A manual on each experiential unit should be developed separately by all the EL units depicting the day to day activities from day one to the last day of each student in their EL unit. Each student should submit this manual as a record or report duly incorporating their strategies, activities, achievements, observations, experiences and opinions about the performance of their EL unit in terms of developing a business plan, production, sales and other related components.

The Annexure I with necessary modifications may be used for evaluation. The student who records a grade point of less than 5.0 or who secured grade point of and above but obtained below 50 per cent of marks shall be deemed to have failed and 'F' shall be indicated in the grade report. The student who had failed has to re-register the entire ELP when offered next by paying the necessary fee. The GPA shall be sent to the university by the Associate Dean within 15 days of completion of ELP.

MAJOR STRENGTHENING OF THE INFRASTRUCTURE THROUGH ELP

Civil Works

(A) Building

- ✓ Covered platform for housing machine and temporary storage of raw and finished product
- ✓ Workshop for maintenance and repairing of different system
- ✓ Workshop for dry processing and packaging space
- ✓ Storage room for finished products
- ✓ Cabins for supervisors and record keeper
- ✓ Laboratory space for quality control and for performing various activities

(B) Equipments and Working Utensils

- ✓ General Utilities
- ✓ Equipment for raw material preparation
- ✓ Equipment for testing
- ✓ Equipments for analyzing quality etc.
- ✓ By-products handling equipments

- ✓ Laboratory equipments
- ✓ Control equipments i.e. temperature, relative humidity and air flow rate
- ✓ Equipments for quality control of value added products
- ✓ Equipments for packaging and storage

AREAS FOR PROPOSING EXPERIENTIAL LEARNING UNITS (ELU)

Experiential Learning Units (ELU) may be proposed in the following areas:

Agriculture Mechanization

- ✓ Hand, Animal drawn and power operated Farm Machines and Equipments / implements and tools: Repair and maintenance
- ✓ Establishment of Custom Hiring Centers
- ✓ Mechanization for on farm applications
- ✓ Mechanization for Horticulture Crops
- ✓ Farm Tractor System and its Overhauling
- ✓ Pesticides Application Equipment and Tools
- ✓ Land Development and Grading Machines

Animal Husbandry and Veterinary Sciences

- ✓ Feed and Fodder management
- ✓ Densification techniques for fodder: Pellet, Briquettes and Cubs

Agricultural Cooperatives/ Cooperation

- ✓ Construction of Godowns for procurement, Storage and distribution
- ✓ Farm inputs dealer and Fertilizer Distribution Practices training

Crop Improvement

- ✓ Paddy Breeding and Production
- ✓ Wheat Production
- ✓ Coarse Cereals Production
- ✓ Oilseed and Pulses Production
- ✓ Sugarcane Breeding and Production
- ✓ Cotton Production
- ✓ Integrated Farming Systems
- ✓ Good Agricultural Practices
- ✓ Crop Improvement in Banana

Food Processing

- ✓ Cereal and Pulses processing
- ✓ Fruits and Vegetables Processing
- ✓ Chocolate and confectionary manufacturing
- ✓ Domestic Product processing
- ✓ Drying of Agriculture and Horticulture Products

- ✓ Fisheries & Sea product processing
- ✓ Development of Consumer Products
- ✓ Plantation (Tea, Coffee, Cashew) processing
- ✓ Fresh-cut flowers Processing
- ✓ Food Packaging
- ✓ Functional Foods and Nutraceuticals

Agricultural Extension

- ✓ Management of KVKs/Knowledge Centers/ ICT enabled KVK
- ✓ ARYA, MERA GOAN MERA GAURAV, FARMER FIRST; new initiatives

Fertilizers and Integrated Nutrient Management

- ✓ Soil testing Labs
- ✓ Fertilizer Labs
- ✓ Micro-Nutrients Labs
- ✓ Soil Health Cards and Soil Testing

Horticulture

- ✓ Nurseries & Green Houses
- ✓ Land Scaping and Area Expansion
- ✓ Floriculture Production
- ✓ Vegetables Production
- ✓ Fruits Production
- ✓ Coconut Production
- ✓ Tissue Culture management
- ✓ Commercial Horticulture
- ✓ Protected Cultivation of High Value

Horticulture Crops

- ✓ Precision Farming of Floriculture and Exotic Vegetables
- ✓ Development of Quality planting Material

Information Technology

- ✓ Development of ICT Facilities
- ✓ ICT Enabled Agriculture
- ✓ E-Sensors and Micro Processed Based Tools
- ✓ Artificial Intelligent and Robotics based wireless sensors and controls
- ✓ ICT for Weather Forecasting

Integrated Pest Management

- ✓ Establishment of IPM Labs
- ✓ Pest Surveillance and Management Techniques

Innovative Programmes

- ✓ Conservation Agriculture
- ✓ Secondary Agriculture
- ✓ Precision Agriculture
- ✓ Hi-Tech Agriculture
- ✓ Specialty Agriculture
- ✓ Poly House/ Net House/ Glass House Management
- ✓ Greenhouse Design and Control
- ✓ Aeroponics system
- ✓ Hydroponics for Growing Plants
- ✓ Mushroom Production
- ✓ Honey Bee Keeping
- ✓ Waste water Treatment
- ✓ Integrated Land Use Planning
- ✓ Small Dams: Planning, Construction and Maintenance
- ✓ Integrated Watershed Management

Marketing & Post Harvest Management

- ✓ Godowns & Warehouses Management
- ✓ Setting Up/Strengthening of Marketing infrastructure
- ✓ Cold Storages & Cold Chains Development

Sericulture

- ✓ Cocoon Production

Micro/Minor Irrigation

- ✓ Shallow Wells/Dug Wells Irrigation
- ✓ Tube wells Operation and Maintenances
- ✓ Percolation Tanks and Diggis for Water Storage
- ✓ Minor Irrigation Works
- ✓ Farm Ponds; Construction and management
- ✓ Sprinkler & Drip Irrigation
- ✓ Techniques for Canopy under Canopy
- ✓ Rainwater Harvesting Structures
- ✓ Water and Fertigation Management in micro irrigation
- ✓ Closed circuit Trickle Irrigation System
- ✓ Sustainable practices in Surface and Subsurface Micro Irrigation

Natural Resource Management

- ✓ Water Conservation Structures & Watershed Development
- ✓ Soil Treatment Techniques (Acidic, Alkali, Waterlogged)
- ✓ Land Reclamation Techniques

Non-Farm Activities

- ✓ Agri Business Centers
- ✓ Post Harvest Processing Facilities

Organic Farming / Biofertilizer

- ✓ Production of Bio Fertilizer/ Bio agents and Bio Pesticides
- ✓ Composting and Vermi Composting
- ✓ NADEP and PROM set up
- ✓ Organic and Natural Farming and Marketing of Organic Products
- ✓ Waste Recycling and Resource Recovery System
- ✓ Zero Budget Farming

Seed & Planting Material

- ✓ Seed Testing Labs
- ✓ Seed Processing, Storage and Distribution Centers
- ✓ Seed Production and Technology
- ✓ Seed Certification
- ✓ Tissue Culture set up
- ✓ Seed Conditioning set up

Renewable Energy Sources

- ✓ Solar Cooking (Direct/Focusing, Indirect/ Box, Advanced type; Steam cooker, solar oven, parabolic type, Separate collector and Cooking chamber type)
- ✓ Solar Water Heater (Collector coupled to storage tank, Collector cum storage, Direct natural circulation type solar water heater, Indirect natural circulation)
- ✓ Solar Distillation (Horizontal basin type: single effect & double effect, Tilted tray)
- ✓ Solar Drying (Direct as well as indirect type solar dryer, Natural convection & Forced convection, Green house type)
- ✓ Commercial Solar Tunnel Dryer
- ✓ Solar Space Heating (Active heating: Solar air Collector and solar liquid collectors, Passive heating: Direct gain type, Thermal storage wall, Attached Sun Space: Trombe wall, water wall, Thermal storage roof system, Connective loop system)
- ✓ Solar Refrigeration and Air-Conditioning (Absorption Cycle with liquid absorbents, Absorption cycle with solid absorbents, Absorption cycle with solid absorbents, Vapors compression cycle and natural passive cooling)
- ✓ Solar Pond: For Electricity generation & thermal uses.
- ✓ Solar Furnaces for Industrial Process Heat (Single len, multiple len, single paraboloid direct type, heliostat type: vertical & horizontal optical axis)

- ✓ Solar Greenhouse Technology (Attached type, free standing & pit type).
- ✓ Solar Thermal Power Generation; Centralized tower system, Distributed farm concept type system
- ✓ Solar Photovoltaic Technology: Water pumping (Shallow well and Deep well)
- ✓ Solar Photovoltaic Technology: Lighting (Domestic: Solar lantern, Street lighting, community centre application: For lighting &TV, Refrigeration)
- ✓ Solar Photovoltaic Technology; Power generation: Small stand alone (Few to 1000 watts), large stand alone (1000 w to 3000 w) and central generation system (multi MW production)
- ✓ Biomass Densification and Pyrolysis set up
- ✓ Biomass Gasification and Application set up
- ✓ Improved Cook stoves and Furnaces manufacturing set up
- ✓ Energy Audit in Agro Industries

PROFORMA FOR SUBMISSION OF PROJECT PROPOSAL UNDER EXPERIENTIAL LEARNING

1. Name of the University:
2. Title of the Experiential Learning Unit:
3. Name of the College with Address:
4. Organizational set up of the Unit:

	Name	Contact details (Designation, Mobile No., Email)	Responsibilities
Chief Executive Officer			
Managing Director			
Manager			
Faculty			
Guest faculty			

5. Scope and Objective: (Please justify scope for skill learning and employability):

6. Production Plan/Activity Chart: (Month-wise operational activities)

Particulars													
Orientation													
Developing a Business plan													
Training in Advance Skills													
Plan for the production													
Production													
Sales													
Documentation and Reports													
Presentation and Oral Examination													

7. Infrastructure Requirement:

A. Civil Work

S.No.	Activity	Civil work	Cost	Justification	Present Status

Note: Facilities not available may only be demanded

B. List of tools/equipment

S.No.	Activity	Item	Cost	Justification	Present Status

8. Production Targets

S.No.	Activity	Material produced	Quantity

Note: Production plan for 10 students

9. Economics: (Tentative)

(Accounts shall be maintained regularly)

S.No.	Activity	Production Cost	Gross Income	;Net profit	Profit share/ student	Profit share of department

10. Marketing Strategy/ Plan including Product Sale:

11. Risk Assessment:

S.No.	Risk identified	Action proposed

12. Monitoring and Evaluation of the EL Unit:

(Give details of inbuilt mechanism)

13. Student Evaluation:

(Attendance, Targets etc)

14. Credit hours /Syllabus:

15. Prospective Private Enterprises for Proposed Partnership:

S.No.	Name of the Agency	Type of Collaboration

16. Product, Production and Marketing related legal aspects, if any:

17. Budgetary Requirements:

(Provide list with item wise cost and other details as Annexure)

S.No.	Particulars	Amount (Rs. in lakh)	Brief Justification
A. Recurring			
i.	Faculty training		
ii.	Guest lectures		
iii.	Operational expenses (Manpower etc.)		
iv.	Others (Pl specify)		
	Total Recurring		
B. Non-recurring			
v.	Equipments		
vi.	Works (repair, renovation etc.)		
vii.	Others (raw material etc.)		
	Total Non recurring		
C. Revolving Fund			
viii.	Name of the item		
	Total Revolving Fund		
Grand Total (A+B+C)		(In Figures)	
		(In Words)	

18. Proposed funding from other sources:

S.No.	Particulars	Amount (Rs. in lakh)	Purpose

19. Attach a brief profile of the core faculty with reference to this programme:

20. Any other information:

If Yes please tick (?) if No please (X)

- i. Submission of Demand/ Proposal as per format ☐
- ii. UC/AUC of Previous Financial Year ☐
- iii. Printed Annual Reports as per format ☐
- iv. Head Wise Expenditure in Annexure ☐
- v. Present status of EL Units in the University ☐

Signature: _____

Name: _____

Designation: _____

Address: _____

Date: _____

Place: _____

OTHER RECOMMENDATIONS OF ICAR

- In case of Horticulture and Forestry disciplines, in-house preparation such as preparation of root stock, etc. should be undertaken by the faculty at least six months in advance to enable development of planting material by the students.
- In case of Home Science, a maximum of three units per college will be given considering the 2 years of entrepreneurship development in UG course curriculum. The other two units will be provided after performance assessment of the three units.
- Each college will prepare a Pert Chart in the project proposal.
- In case the college finds any research institute or private sector industry which can extend the EL programme to the students, the financial support will be considered to that institute/industry for operationalization of the programme.
- Budget indicated is on the basis of cost index of 2010. It may necessitate increase in allocation to the extent of 10% of the projected amount.
- A Certificate should be issued for the completed EL course to the students.
- Any module adopted under EL programme should have a minimum potential of income approximately Rs. 10,000 per month per student as well as engage the student concerned throughout the period for 8 hrs a day for the entire duration and then only, the objective of this programme would be served.
- ICAR should support initially the creation of three EL units in two colleges under each discipline of AU. Arrangement may also be made to train the students from other colleges of the AU in the units developed in the colleges of the same or neighboring AU in the State.
- A business graduate may be engaged in providing knowledge and skills to students in development of business plan and marketing skills.

Annexure - I

EL Unit evaluation

Evaluation of technical, business and marketing aspects of EL Unit and record, assignment etc.,

S. No.	Name of the student	I.D. No.	Business planning and designing (10 marks)	Planning for production (10 marks)	Organization of production, quality & schedule adherence (10 marks)	Sales (10 marks)	Student performance (Class assessment, regularity, etc.) (10 marks)	Report writing & records (10 marks)	Oral Examination (External) (20 marks)	Total (200 marks)	Grade point 10.00

CEO

Entrepreneur

Managing Director

Manager:

ANNEXURE - II
DIARY OF THE STUDENT

Experiential Learning Programme report for the week from _____ to _____

1. Name of the Student _____

2. I.D.No. _____

3. Name of the College _____

4. Name and address of the EL unit / Industry _____

5. Abstract work: (indicate in brief the activities of week)

Abstract of work done

Week Days

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

6. New Experience gained during this week and experience or skills that I would like to gain

7. Period of absence from work and reasons for absence Days _____ Hours _____

Signature to the student

8. Comments of the Advisory Committee

9. Date of receipt of the diary by the Manager _____

10. Date of communication of comments, if any, to the student _____

Signature of the Manager

ANNEXURE - III

ACHARYA N.G.RANGA AGRICULTURAL UNIVERSITY

AGRICULTURAL COLLEGE _____

EXPERIENTIAL LEARNING PROGRAMME

Certificate

Certified that this is a bonafied record of practical work done and data collected by Mr/Kum/
Smt. _____ I.D.No. _____ during second semester of final year
B.Sc(Ag) course during the academic year

_____.

Signature of the Manager

ANNEXURE – IV

PROFORMA FOR RANKING ELP UNITS

1. Name of the EL unit :
2. Name of the College :
3. Name of the Unit Manager :
4. Name of the Managing Director :
5. Number of students : (First semester + second semester = Total)

Each EL unit will be assessed for 100 marks with quantitative and qualitative parameters as well as student feedback by giving weightages of 50, 40 and 10 marks respectively. The details of the measurement are hereunder.

A. Quantitative Assessment (50 marks)

The committee members are requested to assess the following two quantitative parameters viz., Average Profit share (both semesters) of each student in the unit during the year as well as the percent increase in the average profit share of each student over the average Profit share of each student of the unit till last year by giving weightages of 40 marks and 10 marks respectively. Percent increase in average profit share of each student over the average profit share of each student of the unit till last year has to be considered from 2nd year of establishment of the unit. For the first year of establishment of the unit, the average profit share of each student during the year has to be considered for total 50 marks.

1.	Total income generated during the year in Rs. _____ Average Profit share (both semesters) of each student in the unit during the year in Rs. _____ (Keeping in view of the present performance of the EL units in the university, the following range for scoring is designed. It can be modified by taking approval from Dean of Agriculture as and when required.) <table><tr><td>Average Profit (both semesters) share of each student</td><td>Marks</td></tr><tr><td>Rs.3,000 and below</td><td>20 marks</td></tr><tr><td>Rs.3,001– 5,000</td><td>25 marks</td></tr><tr><td>Rs.5,001 – 10,000</td><td>30 marks</td></tr><tr><td>Rs.10,001 – 20,000</td><td>35 marks</td></tr><tr><td>Rs.20,000 above</td><td>40 marks</td></tr><tr><td colspan="2">(During first year, the above scoring will be 25,30,35,40 and 50 marks)</td></tr><tr><td colspan="2">(50 marks for the first year and 40 marks from 2nd year onwards)</td></tr></table>	Average Profit (both semesters) share of each student	Marks	Rs.3,000 and below	20 marks	Rs.3,001– 5,000	25 marks	Rs.5,001 – 10,000	30 marks	Rs.10,001 – 20,000	35 marks	Rs.20,000 above	40 marks	(During first year, the above scoring will be 25,30,35,40 and 50 marks)		(50 marks for the first year and 40 marks from 2 nd year onwards)		
Average Profit (both semesters) share of each student	Marks																	
Rs.3,000 and below	20 marks																	
Rs.3,001– 5,000	25 marks																	
Rs.5,001 – 10,000	30 marks																	
Rs.10,001 – 20,000	35 marks																	
Rs.20,000 above	40 marks																	
(During first year, the above scoring will be 25,30,35,40 and 50 marks)																		
(50 marks for the first year and 40 marks from 2 nd year onwards)																		
2.	Percent increase in Average Profit share of each student over the average Profit share of each student of the unit till last year in Rs. Average Profit share of each student during the year - Average Profit share of each student of the unit till last year X100 Average Profit share of each student of the unit till last year (10 marks) <table><tr><td>Percent increase in Average Profit share of each student</td><td>Marks</td></tr><tr><td>30 and below</td><td>06 marks</td></tr><tr><td>31- 60</td><td>08 marks</td></tr><tr><td>61 to 100 and above</td><td>10 marks</td></tr><tr><td colspan="2">(Applicable from 2nd year of establishment)</td></tr></table>	Percent increase in Average Profit share of each student	Marks	30 and below	06 marks	31- 60	08 marks	61 to 100 and above	10 marks	(Applicable from 2 nd year of establishment)								
Percent increase in Average Profit share of each student	Marks																	
30 and below	06 marks																	
31- 60	08 marks																	
61 to 100 and above	10 marks																	
(Applicable from 2 nd year of establishment)																		
		TOTAL																
		50 marks																

B. Qualitative Assessment (50 marks)

The committee members are requested to assess the following qualitative parameters based on the report submitted by the EL Manager as well as their presentation for ranking the EL unit both at college level as well as at university level. There are 10 items and each item has to be measured on five point continuum viz., Excellent, Very good, Good, Average and Below average with scores of 5,4,3,2 and 1 respectively. The maximum possible score for qualitative assessment is 50 and minimum score is 10. The final total score has to be reduced to 40.

S.No.	Item	Excel- lent (5)	Very good (4)	Good (3)	Ave- rage (2)	Below average (1)
1.	Managerial assistance in the unit					
2.	Involvement of students in Human Resource Management					
3.	Quality of production strategies					
4.	Quality of marketing strategies					
5.	Quality of financial strategies					
6.	Quality of extension strategies					
7.	Innovations brought in the enterprise					
8.	Up scaling of enterprise					
9.	Hands on experience to the students					
10.	Sustainability of the enterprise					

C. Student's feedback

The Experiential Learning Programme is meant for developing entrepreneurial skills among agri-graduates as job providers than job seekers. In this context, the students were asked to give their feedback (as per proforma) in terms of the skills gained during the period of Experiential Learning Programme. There are 20 items and each item has to be measured on five point continuum viz., Excellent, Very good, Good, Average and Below average with scores of 5,4,3,2 and 1 respectively. The maximum possible score for qualitative assessment is 100 and minimum score is 20. The final total score has to be reduced to 10.

**Total score = Quantitative assessment (50 marks)+ Qualitative assessment (40 marks)
+ Student feedback (10 marks)
= 100 marks**

Marks obtained for the EL unit =

Signatures of the committee members

- 1.
- 2.
- 3.

ACHARYA N.G.RANGA AGRICULTURAL UNIVERSITY

**PERFORMANCE REPORT OF THE EL UNIT TO BE SUBMITTED BY THE
EL MANAGER FOR RANKING**

1. Name of the EL unit :
2. Name of the College :
3. Name of the unit Manager :
4. Name of the Managing Director:
5. Number of students :
6. Names of the students with ID numbers. (semester wise separately)

S.No.	Name of the student	ID. No.
1		
2		
.		
.		
.		

The EL manager is requested to highlight the following areas as bullet points only

1. Production strategies adopted for producing quality goods/services
 - a)
 - b)
 - c)
2. Advertising strategies adopted for Marketing of Product/Service
 - a)
 - b)
 - c)
3. Human Resource Management strategies adopted for effective utilization of students
 - a)
 - b)
 - c)

4. Natural resources utilized in running the enterprise

a)

b)

c)

5. Core activities in which students were involved

a)

b)

c)

6. Critical innovations brought out in the enterprise during the period

a) In Production:

b) In Marketing:

c) Others (if any):

7. Efforts in up scaling the EL unit

a)

b)

c)

8. Critical areas in which hands on experience gained by the students

a)

b)

c)

9. Critical contributions of the manager at different phases of running the enterprise

a)

b)

c)

10. Dates of submission of the progress reports to the Associate Dean

a)

b)

c)

Counter signed by Managing Director

Signature of the EL Manager

ACHARYA N.G.RANGA AGRICULTURAL UNIVERSITY
EXPERIENTIAL LEARNING PROGRAMME

STUDENT FEEDBACK FORM

The Experiential Learning Programme is meant for developing entrepreneurial skills among agri-graduates as job providers than job seekers. In this context, you are requested to give your feedback in terms of the skills gained during the period of Experiential Learning Programme. There are 20 items and each item has to be measured on five point continuum viz., Excellent, Very good, Good, Average and Below average with scores of 5,4,3,2 and 1 respectively. The maximum possible score for qualitative assessment is 100 and minimum score is 20. (Student identity not required). The Managing Director of ELP unit has to collect the feedback forms during the oral examination of the students in both the semesters and the same has to be submitted to the committee constituted for ranking of ELP units.

1. Name of the College :
2. Name of the EL unit :
3. Name of the unit Manager :
4. Name of the Managing Director :

S.No.	Item	Excel- lent (5)	Very good (4)	Good (3)	Ave- rage (2)	Below average (1)
1.	SWOT analysis of enterprise					
2.	Formulation of objectives and goals					
3.	Leadership and guidance					
4.	Human Resource Management					
5.	Production management					
6.	Risk management					
7.	Monitoring and evaluation skills					
8.	Financial management					
9.	Marketing management					
10.	Communication skills					
11.	Presentation and writing skills					
12.	Team working					
13.	Interpersonal skills					
14.	Time management skills					
15.	Creative thinking					
16.	Self-confidence and Self-motivation					
17.	Exploring the opportunities					
18.	Experiential learning					
19.	Situational analysis					
20.	Institutional assistance					

PROCEDURE FOR RANKING THE EL UNITS

The ranking of EL units will be done on yearly basis by combining the performance of the each EL unit in both the semesters of an academic year. A committee has to be constituted by the Associate Dean to rank the EL units at college level. All the EL managers at college level have to submit the PERFORMANCE REPORT OF THE EL UNIT for the total academic year (combing both the semesters) and as per the above proforma and have to give presentation before the committee. The Committee will rank all the EL units based on quantitative and qualitative parameters as well as student feedback by giving weightages of 50, 40 and 10 marks respectively and select one unit for university level ranking.

After receiving the one selected EL unit from each college, the Dean of Agriculture will constitute a committee for ranking the EL units university level. All the selected EL unit managers from all the colleges will be called for presentations at University head quarters before the committee. The committee will rank the EL units at university level.

Intenship



ELP

