Manual on
Rural Agricultural Work Experience (RAWE)

I. Introduction

The Rural Agricultural Work Experience (RAWE) is a compulsory course offered in Vital Semester to B. Sc. (Hons.) Agriculture students primarily to understand the rural situations, status of Agricultural technologies adopted by farmers, prioritize the farmers problems and to develop skills & attitude of working with farm families for alround development in rural area.

2. Objectives of the Programme

1. To provide an opportunity to the students to understand the rural setting in relation to agriculture and allied activities.
2. To get the students familiar with socio-economic conditions of the farmers and their problems..with reference to agricultural development.
3. To impart diagnostic and remedial knowledge to the students relevant to real field situations through practical training.
4. To develop communication skills in students using extension teaching . methods in transfer of technology.
5. To develop confidence and competence to solve agricultural problems.
6. To help students to acquai3t with on-going extension and rural development programmes.

3. Year of start of RAWE

1996

4. Number of students participated in RAWE ----- 680 since inception

5. Time of offering RAWE ---- June-July (main crop season) each 'year.

6. Credit hours ----- 20 Cr. Hours

7. Duration ----- 135-140 working days

8. Programme under on-station training
A. **Agronomy**

1. Input use efficiency, crop productivity trends.
2. Crop diversification possibilities
3. On-farm water management, watershed management
4. Integrated farming system, precision agriculture, conservation Agriculture.

B. **Soil Science**

1. Natural resource management
2. Diagnosis and management of problem soils
4. Identification of major and minor element deficiency symptoms in field crops/horticultural crops.
5. Soil & water quality, residue management.
7. Soil Fertility mapping.

C. **Plant Physiology**

1. Physiological disorders in crops.

D. **Horticulture**

a) Vegetables

   1. Nursery techniques
   2. Crop Management —, Vegetables and spices.

b) Fruit crops

1. Layout and planting techniques of major crops. Training and pruning of crops.
2. Marketing and value addition.
3. Orchard management.
4. Fruit based land use system; Multi-layer cropping.

c) Floriculture

1. Management practices of flower crops Rose, gladiolus, chrysanthemum.
2. Landscape gardening.

E. **Plant Breeding and Genetics and Seed Technology**

1. FLD
2. Visit to crop improvement experiments to get acquainted with -
   a) On-going varietal trails.
   b) Breeding methods.
   c) Screening techniques
   d) Methods of recording data
   e) Improved varieties, their salient features.
3. Seed organizations (public and private) in seed production.
4. Seed production of different crops undertaken by the University, seed production techniques.
5. Harvest and post-harvest handling of seeds, methods of harvesting, threshing, drying, cleaning, grading and storage.
6. Seed quality testing/Seed certification.
7. Seed distribution and marketing.
8. Hybrid seed production.

F. Entomology
1. Field-plot inspection-general instructions finding out clues for diagnosis.
   Study of symptoms of major plant crop diseases
2. Identification/diagnosis of major insect-pests, damage symptoms in field, fruit, vegetable and ornamental crop plants.
3. Biopesticides & their use.

G. Plant Pathology
1. Field-plot inspection –general instructions finding out clues for diagnosis study of field and plant pattern of damage and symptoms.
2. Diagnosis of major diseases of field, fruit, vegetable and ornamental crop plants & control.
3. Mushroom cultivation & value addition.

II. Agricultural Engineering
1. Farm machinery and equipments.
2. Setting up and maintenance of irrigation systems and farm ponds.
3. On-farm water management.
4. Watershed management.
5. Poly-house construction and maintenance etc.
6. Post harvest processing & storage techniques.
7. Laser-levelling

I. Agricultural Physics
1. Weather based crop planning, Disaster management.
2. Remote sensing and GIS.
J. Agricultural Economics
1. Socio-economic survey
2. Co-operative and marketing
3. Agricultural Insurance
4. IPR, WTO & its implications

K. Agricultural Extension
1. Organization and functioning of the Directorate of Extension Education.
2. Organization of State Department of Agriculture, Cental & State sponsored schemes.
4. Extension Reforms
5. Organizing extension activities/programmes
6. Different approaches of Extension Education.
7. Agro-ecosystem diagnostic analysis
8. IT based transfer of technologies

L. Agricultural Statistics & computer application: Statistical tools & their application.

9. Distribution of credit hours

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<tr>
<th>Description</th>
<th>Cr. hrs.</th>
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<tbody>
<tr>
<td>1. Socio-economic survey and on-campus training</td>
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<td>2. Village attachment</td>
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<td>3. Industrial attachment</td>
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<td>4. Report writing, Group discussion, Presentation &amp; Viva-voce</td>
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<td><strong>TOTAL</strong></td>
<td><strong>20 Cr. hrs.</strong></td>
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10. Grading

10 point scale

11. Attendance

85% is essential

12. Break up of workload for a semester of 20 weeks

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<tr>
<th>Description</th>
<th>Duration</th>
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<tr>
<td>1. Registration and Orientation</td>
<td>10 days</td>
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<td>2. Training on agro-ecosystem diagnostic analysis, conduct of PRA exercise</td>
<td>20 days</td>
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<td>On-campus training, Visit to local institutions of State/ICAR</td>
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<td>3. Visit and stay at villages around Zonal Research Station /KVK/NGO</td>
<td>60 days</td>
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<td>4. Placement in Agro-industries, processing centres, progressive farmers</td>
<td>30 days</td>
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<td>&amp; other rural enterprises</td>
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<td>5. Preparation of group reports &amp; individual reports</td>
<td>10 days</td>
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6. Group discussion, report presentation & Viva-voce | 10 days
TOTAL | 140 days

13. Guidance to students
For each batch of about 35 students, there will be a designated RAWE teacher from the Department of Agricultural Extension, who will continuously stay together with students during their placements in rural areas to guide, supervise and monitor the work of students on daily basis. The designated Leathers from the courses related to the subject matter areas will visit at least twice a week to guide the students on technological aspects and to solve the problems, which are beyond the competence of students as well as to, evaluate the performance of the students on the concerned subject. They will also stay overnight once in a fortnight to support the students during the extension educational activities conducted during evening hours.

14. Monitoring & Coordination
A teacher from the Department of Agricultural Extension will be designated as the coordinator to facilitate the teachers and students during rural placements. The coordinator in liaison with KVK/ZRS/NGO and other developmental departments will arrange logistics for the teachers from other departments to organize the follow up visits of teachers to villages after the return of the students to ensure continued technical support to farmers, till the end of crop season. The Dean of the college will provide necessary resources-material, finance, manpower, vehicles, etc. and ensure participation of the designated teachers in the RAWE activities. Coordination Committee for RAWE may consist of:

1. Dean of the Faculty - Chairman
2. Head of Extension Education - Coordinator
3. Representative of State Dept. of Agriculture - Member
4. Off-campus representation (1) - Member
5. Student representative (2) - Member

15. Stipend/Grants
----- Rs.3000/- per month + contingency Rs.1000 per student
Grants
----- ICAR share ---- 75%
State share ---- 25%

16. Focus on
1. Interactions with farmers, KVK, ZRS, NGO, State Department & Industries.
2. Knowledge on present status & scope of improvement in rural areas
3. Decision on major interventions to bring about economic security to farmers
4. Innovations
5. New Technologies/ideas
6. Attachment with "Bharat Nirman Volunteers".
7. Study of Biodiversity & Germplasm collection

17. Evaluation pattern

It will be a common evaluation pattern for all the subjects/courses and for all the degree programmes as the type of work/educational activities they carry out during the rural placements or industries/institutions placements will be the same with different subject matter content. The students will be evaluated for each major subject matter area for 100 marks and grading will be done on 10 point scale. The outline of evaluation and distribution of marks will be as follows:

Attendance & diligence: Marks are given for student's presence and attentiveness in classes conducted on the campus and placements in rural areas/institutions (5 marks).

Work diary: Evaluation of work diary indicating brief description of activities carried out by the student every day during the placements (5 marks).

Practical record/Project report: For each subject, the student will maintain a practical record. The record will have detailed description for all the topics specified under each subject: The description will be on statement of tasks carried out, sequential steps/procedure followed in completion of the task, approaches used to accomplish the task, impact of the task on the intended audience, feedback obtained, and lessons learnt. For the courses where placements in other institutions/industries are made, each student will write a project report. The project report will have description on background of the institution, objectives, vision and mission, organizational structure, staff position; major services/goods produced/delivered area of operation/coverage, tasks carried out by the students, output achieved, experience gained and overall impact on the student (20 marks).

Performance during placement: The student's performance during the placements in villages will be assessed by the designated course teacher who frequently visits villages. In case of placements in industries/institutions, the designated person in the host institute/industry will rate the performance of each student and communicate it to the designated course teacher. The course teacher in consultation with the concerned person in the host institute will assign the marks for the performance of students (20 marks).

Group Discussion/Presentation: After completion of student's placements in rural areas and institutions/industries, the teachers in each course will have group discussion session to assess each student’s level of participation and interaction abilities based on experience gained in RAWE. Each student will give a brief presentation on the work that has been carried out, experience gained and points for future consideration (20 marks).
Final Viva-voce Examination: A Viva-voce examination will be conducted for each student on the relevant topics to know the overall impact of RAWE on the student, on the farming community and on the Institutions.

18. **Feed back obtained on the conduct of RAWE (A report)**

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<tr>
<th></th>
<th>From the student</th>
<th>Students are benefited because of exposure to</th>
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<td>(1) Real field situation in the process of planning, production and marketing of produce.</td>
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<td>(2) They are socially attached to the farming community of the locality.</td>
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<td>(3) Identification of local problems and solving the problem at the first instance or to act as vehicle to bring those problems to consulting experts either from stations or headquarters.</td>
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<th></th>
<th>From the farmers</th>
<th>(1) Student are very much friendly and cooperative.</th>
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<td>(2) Problems generally faced by host farmers were solved by the technical support of students.</td>
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<td>(3) Through the students under this programme, contact with the university has been established.</td>
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<th>From the development departments</th>
<th>(1) Problem is effective for creating quality human resources needed for future development of Agriculture in the State.</th>
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<td>(2) Student acts as a linkman between the farmers and departments.</td>
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<td>(3) Plans, programme and schemes of Government meant for the farmers are reinvigorated in the minds of farmers.</td>
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<th>From the host institutions (Placement, institutions/industries)</th>
<th>(1) Linkages established between the farming community and scientists of the host institute.</th>
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<td>(2) The name and recognition of the institute is upgraded.</td>
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<td>(3) Facilitate in transfer of technology through motivation by students.</td>
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<th>From the faculty</th>
<th>(1) Relationship of farmers -scientist accelerated/ geared up through interaction.</th>
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<td>(2) Becomes easier for faculty to teach students on field — related subjects</td>
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<td>(3) Acquiring few researchable issues.</td>
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<td><strong>6. NGOs &amp; others</strong></td>
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<td></td>
<td>(1) Facilitate to take up certain programmes of NGO and others</td>
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<td>(2) Helps in technology refinement through students</td>
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<td>(3) Wide spread publicity and popularization of firm’s products.</td>
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<td><strong>7. Students</strong></td>
<td>(1) Earned comprehensive practical experience in real field situation and thereby build up of confidence.</td>
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<td>(2) Development of social relationship and emotional attachment to the profession.</td>
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<td>(3) Leadership development in planning, programme, field problems.</td>
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<td>(4) Help shouldering the responsibility as extension worker in future.</td>
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<td><strong>8. Farmers</strong></td>
<td>(1) Acquainted with various schemes, plan and programme of govt. and non govt. Agencies.</td>
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<td>(2) Gaining knowledge on use and abuse of fertilizer, chemical and pesticides etc.</td>
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<td>(3) Socio-economic up-gradation through adoption of modern system of cultivation.</td>
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<td>(4) Achieved knowledge on protection of biodiversity through farm planning.</td>
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<td><strong>9. Developmental departments</strong></td>
<td>(1) Bring the farmer closer</td>
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<td></td>
<td>(2) Facilitate to take up the Govt. programme.</td>
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<td>(3) Gathered confirmation of problems generally faced by farmers.</td>
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<td>(4) Becomes feasible for evaluating the extension programme departmentally.</td>
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<td><strong>10. SHGs/local institution</strong></td>
<td>(1) Motivated the youths to take scientific agriculture as profession.</td>
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<td>(2) Helped improvement of community organizing literacy programme, extracurricular activities etc.</td>
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