RURAL AGRICULTURAL WORK EXPERIENCE (RAWE) AND AGRO-INDUSTRIAL ATTACHMENT (AIA)

MANUAL

(कृषि विज्ञान केन्द्र, कोट) प्रयार शिका किरेशनय कृष्ट्रि, विश्वविद्यालय, कोटा **R.(...)** कार्यक्रम, 2023

कृषि विज्ञान केन्द्र, कोट

Department of Agricultural Extension and Communication College of Agriculture, Ummedganj-Kota Agriculture University, Kota (Raj.)-324001

Student READY Programme RURAL AGRICULTURAL WORK EXPERIENCE (RAWE) AND AGRO-INDUSTRIAL ATTACHMENT (AIA) MANUAL



Patron

: Dr. Abhay Kumar Vyas Vice Chancellor Agriculture University, Kota

Faculty Chairman : Dr. Virendra Singh Dean College of Agriculture, Kota

Compiled & Edited by:

K. C. Meena

B. L. Nagar

L. K. Meena

R. K. Meena

Published by: Department of Agricultural Extension and Communication College of Agriculture, Ummedganj, Kota Agriculture University, Kota

September, 2024

डॉ. अभय कुमार व्यास कुलपति Dr. Abhay Kumar Vyas Vice-Chancellor



कृषि विश्वविद्यालय, कोटा बोरखेडा, बांरा रोड, कोटा-324001 (राज.) AGRICULTURE UNIVERSITY, KOTA

Borkheda, Baran Road, Kota-324001 (Raj.) Tel : 0744-2321204, E-mail : vcaukota@gmail.com



FOREWORD

The Student READY (Rural Entrepreneurship Awareness Development Yojana) programme was recommended by the ICAR fifth Deans' committee as an integral part of the degree programme for undergraduate education in the disciplines of Agriculture and allied sciences. The programme has been designed to provide rural entrepreneurship awareness and practical experience in real-life rural agricultural scenario among the UG students. Through the programme, the students will gain skills, confidence and Indigenous Technical Knowledge (ITK) and preparing them for self-employment. Experiential Learning (EL) helps the student to develop competence, capability, capacity building to start their own enterprise and turn "Job creators instead of Job Seekers. The programme has been implemented in Agriculture University, Kota as per the guidelines suggested by the ICAR.

Rural Agricultural Work Experience (RAWE) programme provides opportunities to the students to learn about the rural agricultural environment and related activities, the status of agricultural technologies adopted by farmers, socio-economic circumstances and problems faced by farmers and gain experience in real-field situations.

Agro-industrial attachment (AIA) is beneficial for students as it helps to develop their careers in agro-based sectors by exposing them to the workplace culture and gaining knowledge and experience in that field.

I hope this Manual on RAWE & AIA will provide guidelines for the students as well as teachers for effective implementation of the programmes as per the syllabus of the 5th Deans' Committee of ICAR. I appreciate the efforts made by Dr. K.C. Meena, Head, Department of Agricultural Extension and Communication, Dr. B.L. Nagar, Dr. R K. Meena and Dr. L.K. Meena for compiling such a comprehensive manual. I also congratulate Dr. Virendra Singh, Dean, College of Agriculture, Kota for his timely endeavors to bring out this publication.

Date : 9th September, 2024 **Place** : Kota

(Abhay Kumar Vyas)

डॉ. विरेन्द्र सिंह अधिष्ठाता एवं संकाय अध्यक्ष Dr. Virendra Singh Dean & Faculty Chairman



कृषि महाविद्यालय, उम्मेदगज-कोटा (कृषि विश्वविद्यालय, कोटा) उम्मेदगज फार्म, कैथून रोड, कोटा-324001 (राज.) College of Agriculture, Ummedganj, Kota (Agriculture University, Kota) Ummedganj Farm, Kaithoon Road, Kota-324 001 (Raj.)



PREFACE

The Student Rural Entrepreneurship Awareness Development Yojana, also known as the Student READY Programme, attempts to provide students with real-world experience in addition to exposure to rural areas. The curriculum will aid in the students' confidence-building, communication skill development and acquisition of Indigenous Technical Knowledge (ITK) specific to the area, so equipping the graduating students for their future. In addition, it seeks to familiarize participants with ongoing programmes in developmental departments and offer possibilities for gaining job experience and diagnostic skills. Additionally, this programme gives students a chance to learn about rural communities, farmers' socio-economic situations, local issues, practical training in crop production, facilitation of agricultural technology understanding and implementation, identification of adoption gaps and preparation of alternative plans tailored to local conditions.

Under Student READY, the Agriculture University, Kota is implementing the innovative Rural Agricultural Work Experience Programme. Undergraduate students learn by applying the ideas of "Seeing is Believing" and "Learning by Doing" in this learner-centered method. Based on the course curriculum, I am sure that this RAWE & AIA manual would be act as a roadmap and help students to meet the goals established by the Student READY programme. In addition to wishing the students well in finishing this practical exercise in a way that is appropriate, I also hope that they will represent Agriculture University, Kota with distinction in their future undertakings.

Date : 10th September, 2024 **Place :** Kota

(Virendra Singh)

डॉ. कमल चन्द मीना विभागाध्यक्ष Dr. Kamal Chand Meena Head



कृषि प्रसार एवं संचार विभाग

कृषि महाविद्यालय, उम्मेदगंज, कोटा उम्मेदगंज फार्म, कैथून रोड, कोटा-324001 (राज.) Department of Agricultural Extension & Communication College of Agriculture, Ummedganj-Kota Ummedganj Farm, Kaithoon Road, Kota-324 001 (Raj.)



ACKNOWLEDGEMENT

It is thought necessary to provide a fresh push in guiding agricultural graduates toward selfreliance given the altered agricultural landscape globally. The College of Agriculture, Kota has been working hard since its founding to raise academic standards and instill a sense of independence in order to support the rural population and increase opportunities for gainful employment. Students that participate in the Rural Agricultural Work Experience (RAWE) programme gain an understanding of rural environments, the state of agricultural technology adoption, how to prioritize issues facing farmers, and how to collaborate with farm families to promote overall development in rural area. This manual is clearly going to be very helpful in putting the RAWE and AIA Programme into action.

I feel pleasure to offer gratitude to Dr. Virendra Singh, Dean, College of Agriculture, Kota, Dr. I. B. Maurya, Director of Education, Dr. Pratap Singh, Director Extension Education, Dr. S. K. Jain, Director Research and Dr. Mukesh Chand Goyal, Director, PM&E for their keen interest, invaluable guidance and vital suggestions during the preparation of this manual. I am extremely thankful to all Heads of the Departments and Faculty members for their technical contribution. I appreciate the determined efforts made by Dr. B. L. Nagar, Associate Professor (Horticulture), Dr. L. K. Meena, Assistant Professor (Agricultural Economics) and Dr. R. K. Meena, Assistant Professor (Agronomy) for compilation and editing the manual.

Date : 10th September, 2024 **Place :** Kota

(Kamal Chand Meena)



Student READY Programme RURAL AGRICULTURAL WORK EXPERIENCE (RAWE) AND AGRO-INDUSTRIAL ATTACHMENT (AIA) MANUAL

Compiled & Edited by:

- K. C. Meena
- B. L. Nagar
- L. K. Meena
- R. K. Meena

| Name of the Student | : |
|--------------------------------|---|
| Academic Year | : |
| Class & Semester | : |
| Roll No | : |
| Enrolment Number | : |
| KVK/ Research Station Allotted | : |



Published by Department of Agricultural Extension and Communication College of Agriculture, Ummedganj-Kota Agriculture University, Kota (Raj.)-324001

September, 2024



INDEX

| S.No. | Particulars | Page Nos. |
|-------|---|-----------|
| 1. | Introduction | 1 |
| 2. | Component-I Rural Agriculture Work Experience (RAWE) | 2 |
| 3. | Component -II Agro-Industrial Attachment (AIA) | 2 |
| | Duration-wise activities performed during RAWE & AIA Programme | 3 |
| | Registration | 3 |
| | Eligibility for Registration | 3-4 |
| | Monitoring | 4 |
| | Evaluation | 4-5 |
| | Implementation of the Programme | 5 |
| | Rules of allotment of villages | 5 |
| | Orientation Programmes | 6-7 |
| 4. | Proforma for daily diary of students & WeatherRecord | 8-9 |
| 5. | Courses | |
| | Survey of Village | 10-22 |
| | Agronomical Interventions | 23-28 |
| | Plant Protection Interventions | 29-32 |
| | Soil Improvement Interventions | 33-36 |
| | Fruit and Vegetable production interventions | 37-44 |
| | Food Processing and Storage interventions | 45-47 |
| | Animal Production Interventions | 48-51 |
| | Extension and Transfer of Technologyactivities | 52-59 |
| | Agro-Industrial Attachment | 60-62 |



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

Student READY Programme

Rural Agricultural Work Experience (RAWE) & Agro-Industrial Attachment (AIA)

Credits: 20 (0+20)

Introduction

The Hon'ble Prime Minister of India launched the 'Student READY' programme on 25th July 2015. The term 'READY' refers to the "Rural Entrepreneurship Awareness Development Yojana".

To reorient graduates of agriculture and allied subjects for ensuring and assuring employability and developing entrepreneurs for emerging knowledge-intensive agriculture, the component envisages the introduction of the programme as an essential prerequisite for the award of a degree to ensure hands-on experience and practical training.

This programme includes Rural Agricultural Work Experience, In-Plant Training/Industrial attachment, Experiential Learning, Hands-on training (HOT)/Skill development training and Students Projects. All these are interactive and are 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.

Components:

- Rural Agricultural Work Experience (RAWE)
- In-Plant Training/Agro-Industrial Attachment (AIA)

The Rural Agricultural Work Experience (RAWE) helps the students primarily to understand the rural situations and status of Agricultural technologies adopted by farmers, prioritize the farmer's problems and develop skills & attitudes of working with farm families for overall development in rural areas.

The students will undertake this programme during the seventh semester for a total duration of 20 weeks with a weightage of 0+20 credit hours in two parts namely RAWE and AIA. It will consist of general orientation and on-campus training by different faculties followed by village attachment/unit attachment in University/ College/ KVK or a research station. The students would be attached to the agro-industries to get an experience of the industrial environment and working. Due weightage in terms of credit hours will be given depending upon the duration of stay of students in villages/agro-industries. At the end of RAWE & AIA, the students will be given one week for project report preparation, presentation and evaluation. The students would be required to record their observations in field and agro-industries daily and will prepare their project report based on these observations.

1



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

Component-I

Rural Agricultural Work Experience (RAWE)

Credits: 16 (0+16)

Credits: 4 (0+4)

Objectives:

- 1. To provide an opportunity for the students to understand the rural setting concerning agriculture and allied activities.
- 2. To make the students familiar with the socio-economic conditions of the farmers and their problems.
- 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 the transfer of technology.
- 5. To develop confidence and competence to solve agricultural problems.
- 6. To acquaint students with on-going extension and rural development programmes.

Component-II

Agro-Industrial Attachment (AIA)

Technology and globalization are ushering in 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 shall be mandatory in the last semester for a period of up to 3 weeks. In this training, students will have to study a problem from an industrial perspective and submit the reports to the college. Such in-plant training will provide industrial exposure to the students as well as develop their careers in the high-tech industrial requirements. In-Plant training is meant to correlate theory and actual practices in the industries. It is expected that the sense of running an industry may be articulated in the right way through this type of industrial attachment mode.

Objectives:

- 1. To expose the students to an Industrial environment, this cannot be simulated in the university.
- **2**. To familiarize the students with various Materials, Machines, Processes, Products and their applications along with relevant aspects of shop management.
- **3**. To make the students understand the psychology of the workers and their approach to problems along with the practices followed at the factory
- 4. To understand the scope, functions and job responsibilities in various departments of an organization.
- 5. To expose various aspects of entrepreneurship during the programme period.

Placement

- Students shall be placed in Agro-and Cottage Industries and Commodities Boards for three weeks.
- Industries include Seed/Sapling production, Pesticides-insecticides, Post harvest-processing-value addition, Agri-finance institutions, etc.



Duration- wise activities performed during RAWE (For One Semester)

| S.No. | Activity | Duration |
|-------|---|----------|
| 1 | Orientation & Placement | 2 weeks |
| 2 | Survey of Village | |
| 3 | Agronomical Interventions | |
| 4 | Plant Protection Interventions | |
| 5 | Soil Improvement Interventions (Soil sampling and testing) 18 | |
| 6 | Fruit and Vegetable Production Interventions | |
| 7 | Food Processing and Storage Interventions | |
| 8 | Animal Production Interventions | |
| 9 | Extension and Transfer of Technology Activities | |
| 10 | Agro-Industrial Attachment 3 wee | |
| 11 | Project Report Preparation, Presentation & Evaluation | 2 weeks |

Registration

• The students shall register for the RAWE programme during the VII semester in B.Sc. Hons. (Agri.) degree programme.

Eligibility for registration and other requirements

- Students undergoing studies leading to the award of B.Sc. and its equivalent a degree in Agricultural Sciences at Agricultural University shall be eligible for a period of one semester.
- The stipend will be admissible to persons of Indian Nationality as defined in the Constitution of India or persons domiciled in India; irrespective of sex, race or religion.
- A student will be under the administrative control of the Head of the Institution as he joins. The Head of the Institution will ensure that all the rules and regulations of ICAR are strictly adhered to.
- A student will devote his whole time to the approved training and will not be allowed to accept or hold another appointment paid or otherwise.
- If a student shows unsatisfactory progress during the course of his training or gives up the chosen course of studies before its completion without any prior approval of the Head of Institution, or is irregular in attendance, the Head of Institute itself will cancel the stipend. The stipend once cancelled will not be restored, no matter whatever the reasons adduced.
- 85 per cent attendance is compulsory for students registered for the RAWE programme, failing which they will have to repeat the programme at their owncost.

3



- The students registered for RAWE are not allowed to leave the venue of their placement without written permission of the Coordinator RAWE / Dean, College of Agriculture. Permission will be granted only in emergencies.
- Good conduct and regularity in attendance are also implied conditions for the continuance of the stipend.
- The Head of the Institution is expected to bring to the notice of the Council any adverse report that may have been necessitated due to habitual/ irregularity, misbehaviour, participation in strikes etc. suggesting suspension/ cancellation of stipend. The student will not be paid their stipend during the period of the strike or the period the trainee remains on conduct probation.
- A student undergoing RAWE will not be allowed to avail of any other fellowship/ scholarship during the tenure of stipend of the Council. In case a candidate is already receiving any other fellowship/ Scholarship it will be surrendered by him before accepting stipend of the Council. Merit cum means scholarship, Freeship is, however, not covered under the above conditions.

Monitoring

- 1. The advisory committee for monitoring of RAWE programme will comprise of the following members:
 - a. Zonal Director Research/Senior Scientist and Head (KVK) of concerned station (Chairman).
 - b. Dean's nominee (Dean will be the overall in-charge of the programme).
 - c. Head/representative of the departments involved in the RAWE programme.
- 2. Students will be required to submit a final comprehensive report on or before the date specified in the academic calendar.
- **3**. The students will be required to maintain a daily diary as per the prescribed proforma. They shall produce their diary to the visiting teacher for inspection and for recording their observation & suggestions. The visiting teachers shall verify the work and sign the diary.
- 4. The Chairman of the committee shall monitor the daily activities of individual students.

Evaluation

- 1. Students shall be evaluated component-wise under village attachment/ agro- industrial attachment.
- 2. Each College of the University will designate a Student READY Programme Coordinator and component-wise evaluation committees. These committees will evolve a method of evaluation depending upon the component undertaken giving due weightage to the observations made by the Scientists/Agro-industrial Officer and the Senior Scientist and Head (KVK) with whom they are attached.
- **3**. Since the Credit Hours allotted to the Student READY programme are gradual, the minimum condition of attendance and grading system will apply to the programme as will apply to other courses.



- 4. It is expected that at the end of the Student READY programme, the students should gain competency for entrepreneurship, which should be innovative and creative. The evaluation committee must ensure a percentage increase in this competency at the end & successful organization of all Student READY programmes.
- 5. The marks allotted to each activity will be awarded by considering the performance of the student viz. work done in the respective subject with the host farmer, observation of the teacher recorded during the visits, punctuality, enthusiasm, rapport with the host farmer and any other significant achievements of the student. All the course teachers will evaluate the comprehensive report, submitted by the student and conduct a viva-voce examination as per their course.

| S.No. | Activity | Credit(s) | |
|-----------------------------------|---|-----------|--|
| Compor | Component – I Rural Agricultural Work Experience (RAWE) | | |
| 1 | Survey of Village | 0+1 | |
| 2 | Agronomical Interventions | 0+3 | |
| 3 | Plant Protection Interventions | 0+2 | |
| 4 | Soil Improvement Interventions | 0+2 | |
| 5 | Fruit and Vegetable production interventions | 0+3 | |
| 6 | Food Processing and Storage interventions | 0+1 | |
| 7 Animal Production Interventions | | 0+1 | |
| 8 | Extension and Transfer of Technology activities | 0+3 | |
| Compor | nent - IIAgro-Industrial Attachment (AIA) | | |
| 9 | Agro-Industrial Attachment | 0+4 | |
| | Total | 0+20 | |

Thus, a student registered for RAWE will have to obtain minimum pass marks as decided by the University and OGPA will be worked as University prescribed procedures. In case, a student fails to secure the required marks will have to repeat the programme at their own cost, in the next year as and when RAWE will be offered.

Implementation of the Programme

The students will be placed in Krishi Vigyan Kendra/ Agriculture Research Station under the jurisdiction of Agriculture University, Kota and a small group of students will work in the selected villages.

Rules for Allotment of Villages

- 1. The students will be placed in KVK or Research Station and they will be equally distributed in different villages depending on the availability of enterprising and innovative host-farmers. The ZDR (ARS) / Senior Scientist and Head (KVK) must satisfy themselves with regard to the suitability of selected farmers/villages for fulfilling the overall objectives of the RAWE programme.
- 2. Among the students placed in a village, one student nominated by the Station In- charge will function as a student group leader and coordinate the activities in the assigned village.

5



Orientation Programme

As per the assigned work schedule for orientation, students must report as soon as they register to the In-charge RAWE programme in their respective colleges. Prior to training on agronomical interventions, plant protection interventions, soil improvement interventions, fruit and vegetable production interventions, animal production interventions and extension and transfer of technology activities, the Heads of the relevant Departments will make sure that the students are thoroughly exposed to the most recent practices and technologies available in their respective fields.

Programme of Work

The Rural Agricultural Work Experience (RAWE) programme comprises of 9 components as under:

- 1) Survey of Village
- 2) Agronomical Interventions
- 3) Plant Protections
- 4) Soil Improvement Interventions
- 5) Fruit and Vegetable production interventions
- 6) Food Processing and Storage interventions
- 7) Animal Production Interventions
- 8) Extension and Transfer of Technology activities
- 9) Agro-Industrial Attachment
- **1. Survey of Village:** The students shall take-up a survey of the village as per the prescribed scheduled. The students shall be required to collect data on the overall condition of the village, resource endowment and its utilization, problems of labour and employment and other important economic aspects detailed in the schedule. The student shall also conduct a PRA of the village.
- **2. Agronomical Interventions:** In agronomical interventions, the students will be exposed to various crops and different agronomical practices in the farmer's field. He /She will also be involved in production technology and management of various crops. The student shall maintain a record of work done in the prescribed proforma.
- **3.** Plant Protection Interventions: Under this, the students will be exposed to various plant diseases, insect-pests, and physiological disorders prevailing in the area and prescribe remedial measures.
- **4. Soil Improvement Interventions:** Students will engage in tasks such as soil testing and utilizing a GPS to collect soil sample under this component. Utilizing soil health cards to create fertilizer schedules, the role and significance of micronutrients in crop productivity, the reclamation of contaminated soil, and Integrated Nutritional Management (INM) will all be covered for students. Natural Resource Management (NRM), vermi-compost, green manures, biofertilizer and its role in enhancing soil health and soil properties, quality control in fertilizer, soil degradation, crops rotation and managing water and improvement of soil health for sustainable agriculture.



- **5.** Fruit and Vegetable production interventions : In fruits and vegetable crops, the students shall involve themselves in field operations viz., seedbed preparation, nursery management, propagation etc. along with their host farmers. The student shall maintain a record of work done and will submit it at the end of the semester.
- **6.** Food Processing and Storage interventions : Students will participate in the research and gathering of knowledge on topics such as food processing and preservation techniques, the significance of processing fruits, vegetables, spices, sauces, and flowers, Horticultural product packaging, standard storage techniques, post-harvest handling, and equipment for flowers and spices, Control of quality in the fruit and vegetable processing sector; grain storage techniques and storage structures; traditional and contemporary storage structures; indigenous technological knowledge applied to food preservation.
- **7. Animal Production Interventions:** Under this, the students shall collect information on livestock in various aspects i.e. daily maintenance and feed expenses, milk production, milk disposal, dairy products, eggs and birds, pigs etc.
- 8. Extension and Transfer of Technology activities: The students shall involve themselves in the activities i.e. Participatory Rural Appraisal, Identification of agricultural problems of the village and training needs of the farmers, Conducting method demonstrations of improved practices, Organization of short duration farmers training camp, field visits and agricultural exhibitions, Study of the on-going rural and agriculture development programme in the villages, Arrange farmers meeting to discuss agricultural aspects, Visit to various village institutions and study their role in development programmes and other extension activities, Motivate farmers through different extension teaching methods, Documentation of success stories. The students shall be given an opportunity to acquaint themselves with on-going programme and activities of research, development, marketing, extension agencies and organizations in the village. The students will submit reports on the institutions he/she has visited.
- **9. Agro-Industrial Attachment :** The students shall involve themselves in the activities and tasks during Agro- Industrial attachment for 3 Weeks duration viz. acquaintance with industry and staff, study of structure, functioning, objectives and mandates of the industry, study of various processing units and hands-on training under the supervision of industry staff, ethics of the industry, employment generated by the industry, the contribution of the industry promoting environment, learning business network including outlets of the industry, skill development in all crucial tasks of the industry, documentation of the activities and task performed by the students.



Component – I: Rural Agricultural Work Experience (RAWE)

PROFORMA FOR DAILY DIARY OF STUDENT (To be maintained by the student in a ruled notebook)

- 1. Student's Name:2. Enrolment No.:3. College:4. Farmer Name & Village:5. KVK/ Research Station:
- 6. Summary of work

| Day | Date | Summary of work done | Sign of Contact Farmer | Sign & designationof Visitors |
|-----------|------|-------------------------|---------------------------|----------------------------------|
| Monday | | | | |
| Tuesday | | | | |
| Wednesday | | | | |
| Thursday | | | | |
| Friday | | | | |
| Saturday | | | | |
| Sunday | | | | |

:

* Daily diary will be maintained in a separate ruled book Register showing work report on daily basis for each month of stay in the village.

Fortnightly Progress Report

| Number of Fortnight | Date | Remarks about the performance | Signature of officer In charge |
|------------------------|------|-------------------------------|-----------------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Note: Daily diaries will provide the basis for verification on a fortnightly or monthly basis.



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

WEATHER RECORD

 Village:
 Block:

 (if the data at the place is not available, the data of the Research Station/KVK can be given)

 Month
 Met. Week
 Temperature Max °C
 Humidity % Morning
 Rainfal (mm)
 No. of rainy days

 Image: Constraint of the second of the second

REVENUE RECORD OF THE VILLAGE (To be acquainted with)

- 1. Khasara
- 2. Apna Khata
- 3. Zamabandi
- 4. Village Map



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

| I. | Survey of Village Cre | |
|-------|--|--|
| VS-I: | General Information | |
| 1. | Name of village: | |
| 2. | Tehsil: | |
| 3. | District | |
| 4. | Distance in Kilometers from the nearest: | |
| | a) Primary/Middle School: | |
| | b) High School/ Higher Secondary/College: | |
| | c) Post Office: | |
| | d) Railway Station: | |
| | e) Bus Stand: | |
| | f) Tehsil Place: | |
| | g) Krishi Upaj Mandi: | |
| 5. | Transport facilities available in the village: | |
| 6. | Nearest village (weekly) market: | |
| | a) Place : | |
| | b) Distance: | |

VS-II: Population of Village

| S.No. | Item | Population as per Census |
|-------|--|--------------------------|
| 1. | Total Population | |
| 2. | Total Male | |
| | Literate Illiterate | |
| 3. | Total Female 1. Literate 2. Illiterate | |
| 4. | Number of Cultivators | |
| 5. | Number of Agricultural Labourers 1. Male 2. Female | |
| 6. | Other Nos. of Scheduled Castes Nos. of Scheduled Tribes Nos. of Scheduled Backwards | |

Note: Information on of village population is to be obtained from the Gram Panchayat Officer /Patwari



VS-III: Land use pattern of village

| S.No. | Particulars | Area (ha.) | Geographical area (%) |
|-------|--|------------|-----------------------|
| 1. | Total Geographical area of Village | | |
| 2. | Area under forest | | |
| 3. | Barren and uncultivable land | | |
| 4. | Land put to non-agricultural use | | |
| 5. | Cultivable waste land | | |
| 6. | Total fallow land | | |
| 7. | Net area sown | | |
| 8. | Net irrigated area | | |
| 9. | Area sown more than once | | |
| 10. | Gross cropped area (S.No. 7+9) | | |
| 11. | Area under | | |
| | 1. Light soil (Depth up to one foot) | | |
| | 2. Medium soil (Depth 1 to 2 ft) | | |
| | 3. Heavy soil (Depth of more than 2ft) | | |

Note: Information on the land use pattern of the village is to be obtained from the Patwari.

VS-IV: Irrigation facilities available in the village:

| S.No. | Source of Irrigation | Number | Area irrigated in Hectare | | |
|-------|--|--------|---------------------------|-----------|--|
| | | | Seasonal | Perennial | |
| 1. | Total Wells | | | | |
| | a) Well in useb) Not in use | | | | |
| 2. | Canal | | | | |
| 3. | Tube wells | | | | |
| 4. | Tank | | | | |
| 5. | Other Sources (specify) | | | | |

VS-V: Implements and machinery available in the village:

| S.No. | Particulars | Number |
|-------|--------------------------|--------|
| 1. | Bullock drawn implements | |
| 2. | Hand drawn implements | |
| 3. | Tractors | |
| 4. | Power thresher/Combine | |
| 5. | Electric pump/oil engine | |
| 6. | Sprayers | |
| 7. | Dusters | |

Note: Information on irrigation facilities implements and machinery can be obtained from the Patwari and Village Development Officer (V.D.O) working in Gram Panchayat.



| S.No. | Сгор | Varieties | Area (ha) | Gross cropped area (ha) |
|-------|-----------------------|-----------|-----------|-------------------------|
| 1. | Soybean | | | |
| | a) HYV | | | |
| | b) Local | | | |
| 2. | Jowar | | | |
| | a) HYV | | | |
| | b) Local | | | |
| 3. | Maize | | | |
| | a) HYV | | | |
| | b) Local | | | |
| 4. | Paddy | | | |
| | a) HYV | | | |
| | b) Improve | | | |
| 5. | Blackgram | | | |
| | a) HYV | | | |
| | b) Local | | | |
| 6. | Green Gram | | | |
| | a) HYV | | | |
| | b) Local | | | |
| 7. | Wheat | | | |
| | a) HYV | | | |
| - | b) Improve | | | |
| 8. | Gram | | | |
| | a) HYV | | | |
| 0 | b) Local | | | |
| 9. | Mustard | | | |
| | a) HYV b) Local | | | |
| 10. | Garlic | | | |
| 10. | a) HYV | | | |
| | b)Local | | | |
| 11. | Coriander | | | |
| 11. | a) HYV | | | |
| | b) Local | | | |
| 12. | , | | | |
| 12. | Other oilseed/ pulses | | | |
| | 2 | | | |
| 13. | Vegetable crops | | | |
| 14. | Orchards | | | |
| 15 | Any other crops | | | |
| 16 | Gross cropped area | | | |
| | | | | |

VS-VI: Cropping pattern of the village (use data for current/latest year):

Note: Data on the Cropping Pattern of the village is to be obtained from the village Patwari.

12



VS-VII: Wages rates prevalent in the village:

| S.No. | Period | Wages Rate (Rs.) per day | | | | | | | |
|-------|---|--------------------------|-------|--------------|-------------|--|--|--|--|
| | | Man | Women | Bullock pair | Tractor/hr. | | | | |
| 1. | Khairf Season a) Sowing time b) Interculture c) Harvesting d) Threshing | | | | | | | | |
| 2. | Rabi Season a) Sowing time b) Interculture c) Harvesting d) Threshing | | | | | | | | |
| 3. | Summer Season | | | | | | | | |

Household Schedule

Information of Selected farmer

:

- a) Farmer Name :
- b) Caste :
- c) Village
- d) Block & District :

HS-I: Family Members

| S. | Name of family | Age | | Ε | ducat | tion | | Relation | Oc | cupation |
|-----|----------------|-------|----|---|-------|------|---|-----------|------|------------|
| No. | member | (Yrs) | IL | Р | Μ | S | G | with Head | Main | Subsidiary |
| 1. | | | | | | | | | | |
| 2. | | | | | | | | | | |
| 3. | | | | | | | | | | |
| 4. | | | | | | | | | | |
| 5. | | | | | | | | | | |
| 6. | | | | | | | | | | |

IL - Illiterate, P - Primary Level, M - Middle Standard, S - Secondary Level, G- Graduate & above.



HS-II: Land possessed by the farmer

| S.No. | Particulars | Area (ha.) |
|-------|--|------------|
| 1. | Total land area | |
| 2. | Permanent fallow | |
| 3. | Current fallow | |
| 4. | Net sown area | |
| 5. | Area under irrigation | |
| 6. | Area sown more than once | |
| 7. | Gross cropped area (4+6) | |
| 8. | Approximate value of land (Rs./ha) | |
| 9. | Total land revenue paid (Rs.) per year | |
| 10. | Other taxes | |

HS-III: Livestock

| S. | Particulars | Type of Animal | | | | | |
|-----|---|----------------|--------------|------|--|--|--|
| No. | | Bullock | Milch Animal | | | | |
| | | Pairs | Buffaloes | Cows | | | |
| 1. | No. of animals | | | | | | |
| 2. | Age of animals | | | | | | |
| 3. | If purchased Year of purchase Price (Rs.) | | | | | | |
| 4. | If home bred Present Value (Rs.) | | | | | | |

HS-IV: Farm Machineries

| S.No. | Name of Machine | Machine's make | Year of Purchase | Present value (Rs.) |
|-------|-----------------|-------------------|------------------|------------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |



HS-V: Inventory of Residential and Farm Building

| S.No. | Type of building | Year of constriction | Type of construction | Present value (Rs.) |
|-------|------------------------------------|----------------------|----------------------|------------------------|
| 1. | Type of building | | | |
| 2. | Residential | | | |
| 3. | Cattle Shed | | | |
| 4. | Other Shed Storage | | | |
| 5. | Irrigation Structures (Pump house) | | | |
| 6. | Tractor shed | | | |
| 7. | Others | | | |

HS-VI: Financial Status of Farmer

(I) Liabilities (Dues payable)

| S.No. | Particulars | | Loan No. | | | | |
|-------|---|---|----------|-----|----|--|--|
| | | Ι | Π | III | IV | | |
| 1. | Amount of loan | | | | | | |
| 2. | Date of borrowing | | | | | | |
| 3. | Source of loan | | | | | | |
| 4. | Purpose of loan | | | | | | |
| 5. | Amount of loan outstanding at the end of the year | | | | | | |

(II) Dues Receivable

| S.No. | Dues receivable from | Amount (Rs.) |
|-------|----------------------|--------------|
| 1. | Cultivator/Relatives | |
| 2. | Traders | |
| 3. | Aarhata | |
| 4. | Other | |

(III) Net Worth = Total Assets - Total Liabilities

Assets – HS- III, + HS -IV, HS-V Liabilities- HS-VII+II



HS-VII: Labour used for one important crop grown by the selected farmer:

I) Name of Crop..... II) Area (ha).....

| S.No. | Name of Operation | Frequency of use | Hu | man | Labou | ır | B | ulloc | k La | bour | Ma | chine | e Labo | our |
|-------|--|---------------------|------|------|-------|------|------|-------|------|-------|------|-------|--------|------|
| | Operation | of use | | mily | | red | | vned | | lired | | ned | | ired |
| | | | Hrs. | Val. | Hrs. | Val. | Hrs. | Val. | Hrs. | Val. | Hrs. | Val. | Hrs. | Val. |
| 1. | Ploughing | | | | | | | | | | | | | |
| 2. | Harrowing | | | | | | | | | | | | | |
| 3. | Levelling | | | | | | | | | | | | | |
| 4. | Manuring | | | | | | | | | | | | | |
| 5. | Seed raising | | | | | | | | | | | | | |
| 6. | Sowing/ Transplanting | | | | | | | | | | | | | |
| 7. | Fertilizer application | | | | | | | | | | | | | |
| 8. | Weeding | | | | | | | | | | | | | |
| 9. | Hoeing | | | | | | | | | | | | | |
| 10. | Fertilizer application (Second dose) | | | | | | | | | | | | | |
| 11. | Plant protection | | | | | | | | | | | | | |
| 12. | Irrigation | | | | | | | | | | | | | |
| 13. | Harvesting | | | | | | | | | | | | | |
| 14. | Threshing and winnowing | | | | | | | | | | | | | |
| 15. | Transportation of produce to home | | | | | | | | | | | | | |
| 16. | Other operation | | | | | | | | | | | | | |



HS-VIII: Material used and Estimation of the cost of cultivation of one important crop grown by the selected farmer:

I) Name of the Crop..... II) Area (ha).....

| S.No | Particulars | Quantity Used | Price per unit | Total cost | Per cent to total cost |
|------|---|------------------|-------------------|---------------|---------------------------|
| 1. | Family labour | | | | |
| | a) Man (day) | | | | |
| | b) Woman (day) | | | | |
| 2. | Hired Human labour owned/Hire | | | | |
| | a) Male (day)b) Woman (day) | | | | |
| 3. | Bullock labour Pair (day) | | | | |
| 5. | a) Owned | | | | |
| | b) Hired | | | | |
| 4. | Machine Labour | | | | |
| | a) Owned (Hrs.) | | | | |
| | b) Hired (Hrs.) | | | | |
| 5. | Seed (Kg) | | | | |
| 6. | Manures (Q.) | | | | |
| 7. | Fertilizer | | | | |
| | a) N | | | | |
| | b) P | | | | |
| | c) K | | | | |
| 8. | Insecticides | | | | |
| 9. | Irrigation charges (Rs.) | | | | |
| 10. | Land Revenue | | | | |
| 11. | Other taxes | | | | |
| | Total S.No. 2 to 11 | | | | |
| 12. | Interest on working capital on S.No.12 @10% | | | | |
| 13. | Rent paid for leased in land | | | | |
| 14. | Rental value of owned land prevailing rate in the | | | | |
| | village or | | | | |
| | 1/6th of the gross value of produce | | | | |
| 15. | Interest on fixed capital @ of 10% per | | | | |
| | annum (Excluding land) | | | | |
| | Total Cost (S.No. 12 to 16) | | | | |
| | PRODUCTION | | | | |
| | a) Main produce (Q.) | | | | |
| | b) By produce (Q.) Gross Income = (Value of M.P.+B.P.) | | | | |
| | Net Income over | | | | |
| | | | | | |
| | Net income over | | | | |
| | a) $Cost A2 = GI-Cost A2$ | | | | |
| | b) $Cost B2 = GI-Cost B2$ | | | | |
| | c) $Cost C2 = GI-Cost C2$ | | | | 1 |
| | d) $Cost C3 = GI-Cost C3$ | | | | |

Cost Concept:

Cost A1 = S.No. 2 to 13 (Except S. No. 12)

Cost A2 - Cost A1 + Rent paid for leased in land if any Cost B1= Cost

A1+ Interest on fixed capital (Excluding land value)

Cost B2 = Cost B1 + Rental value of owned land + rent paid for leased in landCost C1 =

17

Cost B1 = Imputed value of family labour i.e. S. No. 1

Cost C2 = Cost B2 + Imputed value of family labour (i.e. S. No. 1) Cost C3

= Cost C2 + 10% of Cost C2 (Treated as managerial cost) Cost of Production

Rs./q = (Total Cost - Value By Product) / (Yield/ha)



HS-IX: Record of Crop Production

| S.No. | Crop and | Area | Quantity p | | Productivity / hectare |
|-------|----------|------|---------------------|-------------------|-------------------------------|
| | variety | (ha) | Main product (Q) | By product (Q) | Main product (Q) |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |

HS-X: Disposal of Farm Produce

| S.No. | Name of the | Quantity | Quantity | | Quantity sold | |
|-------|-------------|----------|----------|---|---------------|-------|
| | crop | Produced | Consumed | Q | Price/Q | Total |
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |
| 6. | | | | | | |
| 7. | | | | | | |
| 8. | | | | | | |
| 9. | | | | | | |
| 10. | | | | | | |
| 11. | | | | | | |
| 12. | | | | | | |



HS-XI: Family Budget

| S.No. | Item | Consumed durin | g the year | Total Value | % of total | |
|-------|--|------------------|------------|-------------|------------|--|
| | | Home Produced | Purchase | | | |
| I. | Cereals | | | | | |
| | Jowar | | | | | |
| | Wheat | | | | | |
| | Rice Other | | | | | |
| II. | Pulses | | | | | |
| | Tur | | | | | |
| | Gram | | | | | |
| | Mung | | | | | |
| | Urid | | | | | |
| ш | Other Pulses Edible Oil | | | | | |
| III. | Groundnut/Linseed/Til | | | | | |
| | /Safflower/Soybean/ | | | | | |
| | Mustard/ Vegetable oil | | | | | |
| IV. | Non- Vegetarian | | | | | |
| | Mutton/Chicken | | | | | |
| | Eggs | | | | | |
| | Other | | | | | |
| V. | Milk and Milk | | | | | |
| | Products Milk | | | | | |
| N/I | Ghee/Butter | | | | | |
| VI. | Condiments and Spices 1. Condiments | | | | | |
| | 2. Chillies | | | | | |
| | 3. Turmeric | | | | | |
| | 4. Other | | | | | |
| VII. | Beverages | | | | | |
| | 1. Tea | | | | | |
| | 2. Coffee | | | | | |
| | 3. Other | | | | | |
| IX. | Fuel and Light | | | | | |
| Χ. | Clothing and Footwear | | | | | |
| XI. | Education | | | | | |
| XII. | Medicine and Medical | | | | | |
| | Services | | | | | |
| XIII. | Other | | | | | |
| | TOTAL | | | | | |



Other Information Related to Village

1. Industry- wise progress in production and employment (Year......)

| S.No. | Village industry | Production (Rs.) | Employment (days) |
|-------|----------------------------------|---------------------|----------------------|
| 1. | Processing of cereals and pulses | | |
| 2. | Ghani Oil | | |
| 3. | Village leather | | |
| 4. | Cottage Match | | |
| 5. | Sugar Cane and Khandsari | | |
| 6. | Bee Keeping | | |
| 7. | Village pottery | | |
| 8. | Carpentry and block smithy | | |
| 9. | Lime manufacturing | | |
| 10. | Others | | |

2. Employment potential in forestry (Year.....)

| S.No. | Head of Development | Employment (Man hours) |
|-------|------------------------|------------------------|
| 1. | Production forestry | |
| 2. | Regeneration operation | |
| 3. | Road construction | |
| 4. | Social Forestry | |
| 5. | Minor Forest Product | |

3. Institutional Finance for Agricultural Development (Year....)

| S.No. | Particular | Amount (Rs.) |
|-------|--------------------------------------|--------------|
| 1. | Primary agril. credit societies | |
| 2. | Govt. loans | |
| 3. | Commercial bank loans | |
| 4. | RRB loans | |
| | (Total Short Term Credit) | |
| 5. | Primary land Development bank | |
| 6. | Commercial bank loans | |
| | Total Medium term & Long term credit | |
| | Total Direct Credit | |



4. Prevailing Marketing Channel for cereals/pulses/oil seed/fruit and vegetable/forests products

| S. No. | Cereals | Pulses | Oil Seeds | Fruits | Vegetables | Forest Product |
|--------|---------|--------|-----------|--------|------------|-----------------------|
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |
| 5. | | | | | | |
| 6. | | | | | | |
| 7. | | | | | | |
| 8. | | | | | | |

5. Number of cold storage prevailing in the village

| S.No. | Establishment Year | Commodity Store | Capacity (In tones) | Charges/per months |
|-------|--------------------|--------------------|------------------------|-----------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

6. Rural employment generation schemes and other schemes in operation

| S.No. | Name of Scheme | Beneficiaries (Nos.) |
|-------|----------------|----------------------|
| | | |
| | | |
| | | |
| | | |
| | | |

7. Minor irrigation projects

| S.No. | Name | Numbers | Area covered (ha) |
|-------|------|---------|-------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



8. Self Help Groups in the village

| S.No. | Name of SHG | Group of Person | Activity | Employment |
|-------|-------------|--------------------|----------|------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Final Report on Socio-economic Study of Village/Farmer: (This is to be based on the data collected by the student for the village and selected farmer. He should write at least one para on the location, institutional facilities, population composition and cropping pattern of the village. A similar report for the selected farmer should also be prepared.)

Observations on Contact Farmers: Students will record their observations on the following aspects:- (Quantity, Nature, Use Pattern)

- Resource base of the farmer
- Technological Status of the farmer
- Family budget and investment pattern of farmer
- Marketing problems of the farmer
- Constraints in the adoption of technology

Signature of Student

Signature of Officer In-charge



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

II: Agronomical Interventions

Credits: 3 (0+3)

Format - I Agricultural Operation Performed by the Host Farmers (Some good photographs of important features can be attached)

| Name of the host farmers | |
|--------------------------|--------------------|
| Village | Block |
| | Cropping Season(s) |
| Year | |

| Field No. | Field area (ha) | Crop(s) Variety(s) grown | Agronomic operation done by the farmer during cropproduction | | | | |
|--------------|-----------------------|--------------------------------|--|---|--|---|-------------------------------|
| | | | Tillage | Seed rate, Sowing date seedtreatment, sowingmethod etc. | Manuring and Fertilizer application | Weed control and inter- culture operations | Irrigation and drainage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Agronomi | c operations w | vere done during ci | Actual | Yield per ha | |
|-------------------------------------|----------------|---|-------------------------------|---|--|
| After care / plant protection | Harvesting | Transportation to the threshing floor | Threshing and winnowing | Main production (Grain/Tubers/ Green vegetable) | By-product (Straw/Stover/ Haulm) |
| 9 | 10 | 11 | 12 | 13 | 14 |
| | | | | | |

Estimated value of the produce (Rs./ha)

| Main produce | Main produce | Main produce | Estimated expenditure (Rs./ha) | Profit or loss (Rs./ha) |
|-----------------|-----------------|-----------------|-----------------------------------|----------------------------|
| 15 | 16 | 17 | 18 | 19 |
| | | | | |
| | | | | |
| | | | | |

Signature the Teacher

Signature of Student

Signature of Farmer



Format - II

Cropping programme proposed by the student to the Host Farmer (To be filled by the students as suggestions to the farmers)

| Field No. | Field area (ha) | Crop(s) Variety(s) grown | Agronomical operations are done by the farmer duringcrop production | | | | |
|--------------|-----------------------|--------------------------------|--|--|--|--|-------------------------------|
| | | | Tillage | Seed rate, Date of Sowing, Seed treatment, Depth of sowing etc. | Manuring and Fertilizer application | Weed control and inter- culture operations | Irrigation and drainage |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | |

| Agronomic operations done during crop production | | | | Actual Yield per ha | | |
|---|-----------------|---|-------------------------------|---|--|--|
| After care / plant protection | Harves- ting | Transportation to the threshing floor | Threshing and winnowing | Main production (Grain/Tubers/ Green vegetable) | By-product (Straw/Stover/ Haulm) | |
| 9 | 10 | 11 | 12 | 13 | 14 | |

Estimated value of the produce (Rs./ha)

| Main Produce | Main Produce | Main Produce | Estimated expenditure (Rs./ha) | Profit or loss (Rs./ha.) |
|-----------------|-----------------|-----------------|-----------------------------------|-----------------------------|
| 15 | 16 | 17 | 18 | 19 |
| | | | | |
| | | | | |
| | | | | |

Signature the Teacher

Signature of Student

Signature of Farmer


: :

:

Background Information of the Host Farmer

| 1. Name of the farmer | : |
|---|-----------|
| (a) Total land owned by the farmer (ha) | : |
| (b) Land suitable for cultivation (ha) | : |
| (c) Land not suitable for cultivation | : |
| (i) Farm Stead (ha) | : |
| (ii) Waste land (ha) | : |
| 2. Soil Conditions | : |
| (i) Topography | : |
| (ii) Colour | : |
| (iii) Texture | : |
| (iv) Depth | : |
| (v) Fertility Status | : |
| 4. Rainfall of the district : | |
| 5. Irrigation facilities available on the field | |
| (i) Irrigation source | |
| (ii) Water availability period | : |
| (iii) Approximate irrigated area (ha) | : |
| 6. Drainage requirement | : |
| 7. Crop(s) / Variety (s) i.e. grown by the farm | ners |
| (i) During Kharif | : |
| (ii) During Rabi | : |
| (iii) During Summer | : |
| 8. Existing cropping systems practised by th | e farmer |
| (i) Cropped area during kharif | : |
| (ii) Cropped area during rabi | : |
| (iii) Cropped area during summer | • |
| 9. Use of seeds | |
| (i) Own seeds | : |
| (ii) Seeds if purchased / Procured (Source/ | Agency) : |
| (iii) Category of seed used, if purchased | ÷ |



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

| 10. | Use | of | agro-inputs |
|-----|------|----|-------------|
| 100 | 0.50 | • | "BIO mputo |

(Fertilizers/Manures/Herbicides/Insecticides/Fungicides/Others) etc. (quantity)

:

::

: : :

: : : :

:

11. Adoption of cultivation practice by the farmer with reasoning

| | (i) | Traditional practice | : |
|-----|-------|----------------------------|---|
| | (ii) | Recommended practice | : |
| 12. | Liv | estock/position in numbers | : |
| | (i) | Bullock | : |
| | (ii) | Cows | : |
| | (iii) | He buffaloes | : |
| | (iv) | She buffaloes | : |
| | (v) | Goats | : |

(iv) Others

13. Farm machinery and power

| (i) | Availability of electricity |
|--------|-----------------------------|
| (ii) | Tractor |
| (iii) | Trolley/bullock cart |
| (iv) | Plough |
| (v) | Harrow |
| (vi) | Leveller |
| (vii) | Seed drill |
| (viii) | Weeders |
| (ix) | Threshers / Winnowers |
| (x) | Chaff cutters |

14. Market facilities (Regulated/unregulated): (Mandi, Cold storage if any)

15. Transport facilities (Road, Railways):

16. Loan facilities

(Cooperative or commercial or private : Banks, Government Agencies, Other sources)

17. Technological facilities

| 8 |
|-----------------------------------|
| Training Centres / Charcha Mandal |
| Television / Radio |
| Public Library |
| Krishi Vigyan Kendra |
| Research Centre |
| NGO's |
| |



18. Calendar of the farm operation during the crop season/year. Calendar of agricultural operations done by the farmer*

| S.No. | Day and Date | Name of the operation performed by the (Attach a separate sheet, if necessary) | | |
|-------------------|--|--|--|--|
| 1. | 2 | 3 | | |
| 2. | | | | |
| 3. | | | | |
| * Calendar sl | hould be maintained for the follow | ving : | | |
| (a) Land p | preparation | : | | |
| (i) | Number of ploughing / harrowing | ng : | | |
| (ii) | Levelling | : | | |
| (iii) | Soil and water conservation pra- | ctices : | | |
| <i>//</i> 、 | Practices/ soil amendments | | | |
| (IV) | Any practice to facilitate (irrigation/drainage) | : | | |
| (b) Sood a | | | | |
| (b) Seed a (i) | Seed treatment/seed inoculation | | | |
| (i) (ii) | Raising of nursery, if needed | | | |
| (ii) (iii) | | · | | |
| (iii) (iv) | | | | |
| (1•) | (Sowing, Fertilizer Application | | | |
| | Irrigation, after care), if needed | · | | |
| (v) | - | | | |
| · · · | Method of sowing of Transplant | ting | | |
| (*) | (if applicable) | ing . | | |
| (vii) | Date of sowing/transplanting | | | |
| (vii) | Plant population etc. | · | | |
| (viii |) Thinning / gap filling | | | |
| • | Bird watching / aftercare after s | Pading | | |
| (17) | Bild watching / altercare alter s | | | |
| (c) Fertiliz | er application | · | | |
| (i) | Application of organic manures | : | | |
| (ii) | Application of fertilizers | : | | |
| (iii) | Method and time of manure and | fertilizer application : | | |
| (iv) | Any other information on nutrie | | | |
| (d) After c | - | : | | |
| (i) | Weed control | : | | |
| (ii) | Intercultural | | | |

:



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

- (iii) Manual / cultural
- (iv) Mechanical / Chemical weed control measures, if any:
- (v) Special cultural operations, if any:
- (vi) Any other information like earthening : stacking, wrapping, nipping etc.

(e) Irrigation

- (i) Time of irrigation (s)
- (ii) Drainage, if done

(f) Plant protection

- (i) Time and stage of the occurrence:of the pests/diseases
- (ii) Severity of the pest/diseases :
- (iii) Extent of damage caused

(g) Control measures adopted for the control of insects pest/diseases

- (i) Type of sprayer / no... used by farmers:
- (ii) Insecticides pesticides used, dose and frequency of application

:

:

:

:

:

(iii) Any other information like bird watching etc. :

(h) Harvesting, threshing and processing

- (i) Date of harvesting and duration
- (ii) Transportation to the threshing floor
- (iii) Threshing (manual/animal / machinery):
- (iv) Winnowing (method, time)
- (v) Storage, processing, marketing facilities:
- (vi) Any other work

Summary of the work by the student done on the farmer's field :

Suggestions to farmers for future work

Signature of Student

Signature of Officer In-charge



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

III. Plant Protection Interventions

Credits: 2 (0+2)

(A). Entomology

Identification of Important Insect pests of at least two major crops cultivated in the village.

1. Name of Crop

2. Name of insects identified in the field

| S.No. | Common Name | Local Name | Scientific Name | Systematic position |
|-------|----------------|------------|--------------------|---------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |

3. Main symptoms of pest damage

| S.No. | Early growth stage | Vegetative stage | Flowering /podding / earhead | Grain etc. |
|-------|-----------------------|---------------------|------------------------------------|------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |

4. Intensity of pest attack

| Nil | |
|----------|--|
| Low | |
| Medium | |
| High | |
| Epidemic | |

5. Collection of major insect-pests and predatory insects in the field

| S.No. | Name of | Stages | | | | | |
|-------|---------|--------|--------|------|-------|-------|--|
| | Insects | Egg | Larval | Pupa | Nymph | Adult | |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |



6. Methods of Control adopted: (2 major crops) (Crop wise at different times)

| S.No. | Name of Insects | Non-chemical methods | Cultural methods | Mechanical/ physical methods |
|-------|--------------------|-------------------------|---------------------|---------------------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |

7. Chemical Control:

| Pest | Farmers Practices | | | | Recommended practices | | | 5 |
|--------|-------------------|-------|----------------------|---------|-----------------------|-------|---------------------|---------|
| attack | | Doses | Type of | 0 | Name of | Doses | Type of | 0 |
| | Insecticides | | sprayers / Duster | of crop | Insecticides | | sprayer / Duster | of crop |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

8. Rodent management in the field as well as in House / Storage (As per recommendation)

| | Farmers Practices | | | | | Recomm | ended P | ractices | |
|---------|-------------------|---------------|------|---------|---------|-------------------|---------------|----------|---------|
| Stra | tegies | Fi | eld | Storage | Stra | tegies | Fi | eld | Storage |
| Tapping | Poison Baiting | Crop stage | Dose | Dose | Tapping | Poison Baiting | Crop stage | Dose | Dose |
| | | | | | | | | | |

9. Suggestion for proper storage of food grains.

| S.No. | Name of Food Grain | Moisture content | Fungicide / Fumigant Treatment | Dose |
|-------|---------------------|---------------------|--------------------------------------|------|
| 1. | For Human | | | |
| 2. | For storage purpose | | | |

10. Documentation of indigenous technology knowledge (ITK) of pest management practices in the village along with photographs.

Signature of Student

Signature of Officer In-charge



(B). Plant Pathology

Identification of Important disease of at least two major crops cultivated in the village.

- 1. Name of Crop
- 2. Name of disease identified

| S.No. | Common Name | Local Name | Scientific Name | Systematic position |
|-------|----------------|------------|--------------------|---------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |

3. Symptoms of disease

| S.No. | Early growth stage | Vegetative stage | Flowering /podding / earhead | Grain etc. |
|-------|-----------------------|---------------------|------------------------------------|------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |

4. Intensity of disease

| Nil | |
|----------|--|
| Low | |
| Medium | |
| High | |
| Epidemic | |

5. Methods of Control adopted: (2 major crops) (Crop wise at different times)

| S. No. | Name of disease | Non-chemical methods | Cultural methods | Mechanical/ physical methods |
|--------|--------------------|-------------------------|---------------------|---------------------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |



6. Chemical Control:

| Disease | Farmers Practices | | | Recommended practices | | | 5 | |
|---------|---------------------|-------|---------------------------------|------------------------------|---------------------|-------|--------------------------------|---------|
| | Name of Chemical | Doses | Type of sprayers / Duster | - | Name of Chemical | Doses | Type of sprayer / Duster | of crop |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

7. Herbarium Collection

Each student has to submit at least 2 plant disease species specimens properly pressed/dried and labelled in file cover by giving the following information.

- 1. Name of crop/variety
- 2. Name of Disease
- 3. Name of the casual organism
- 4. Locality/place / Name
- 5. Date of collection
- 6. Collected by

Signature of Student

Signature of Officer In-charge

Credits: 2 (0+2)



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

IV. Soil Improvement Interventions

Students have to test soil samples in respective Krishi Vigyan Kendra, for which the information should be collected according to the given format:

Information Sheet for Soil Testing

| 1. | Full address of Farmer | : |
|-----|---|-----------------------|
| 2. | Sample number | : |
| 3. | Number of soil samples | : |
| 4. | Date of soil sampling | : |
| 5. | Field name (Khasara number etc.) | : |
| 6. | Whether the field is irrigated or not | : |
| 7. | Source of irrigation | : |
| 8. | Nature of field i.e. sloppy, depression, st | tony etc.: |
| 9. | Crop rotation | : |
| 10. | Name of crops to be sown | : |
| 11. | Amount and nature of fertilizer applied | to the previous crop: |
| 12. | Visual nutrient deficiency, if any | : |
| 13. | Water infiltration rate | : |
| 14. | Water logging problem, if any | : |
| 15. | Any other | : |

Signature

Preparation of Soil Health Card

Detail Information of Farmer

| • Name | : |
|---|---|
| • Address | : |
| • Village | : |
| • Tehsil | : |
| • District | : |
| • Aadhar Number | : |
| Mobile Number | : |
| Details of Soil Sample | |
| • Soil Sample Number | : |
| • Date of Soil Collection | : |
| • Khasra Number | : |
| • GPS: | |
| • Longitude | : |
| • Latitude | : |
| Irrigated Soil/Rainfed Soil | : |



Result of Soil Testing

| S.No. | Parameter | Value | Analysis | Remarks |
|-------|----------------------|-------|----------|---------|
| 1. | pН | | | |
| 2. | EC | | | |
| 3. | Organic Carbon | | | |
| 4. | Available Nitrogen | | | |
| 5. | Available Phosphorus | | | |
| 6. | Available Potassium | | | |
| 7. | Available Sulphur | | | |
| 8. | Available Zinc | | | |
| 9. | Available Boron | | | |
| 10. | Available Iron | | | |
| 11. | Available Manganese | | | |
| 12. | Available Copper | | | |

| Recomme | Recommendations for application of Micro nutrients | | | | |
|-----------|--|---|--|--|--|
| S.No. | Parameter | Recommendations for soil application | | | |
| 1. | Sulphur (S) | | | | |
| 2. | Zinc (Zn) | | | | |
| 3. | Boron (B) | | | | |
| 4. | Iron (Fe) | | | | |
| 5. | Manganese (Mn) | | | | |
| 6. | Copper (Cu) | | | | |
| General R | ecommendations | | | | |
| 1. | Organic Manure | | | | |
| 2. | Bio-fertilizer | | | | |
| 3. | Gypsum | | | | |



Objective and advantage of soil testing:

Objectives: 1. 2. 3. 4. 5. **Advantages:**

- 1.
 - 2. 3.
 - 4.
 - 5.

Importance of Micronutrients in Crop Production

| S.No. | Name of micro nutrient | Importance |
|-------|------------------------|------------|
| 1. | Zinc | |
| 2. | Copper | |
| 3. | Iron | |
| 4. | Manganese | |
| 5. | Boron | |
| 6. | Chlorine | |
| 7. | Molybdenum | |

Reclamation of soil salinity, alkalinity and acidity

- 1. Soil salinity :
- 2. Soil alkalinity:
- 3. Soil acidity :



Natural Resource Management

(a) Role of Bio fertilizer in improving soil health

- 1. 2. 3.
- 4.

(b) Role of Vermi compost in improving soil health

- 1. 2. 3. 4.
- 4

(c) Role of Green manure in improving soil health

- 1. 2. 3.
- 4.

(d) Soil degradation, improvement of soil health for sustainable agriculture

Reasons:

- 1.
- 2.
- 3. 4.

ч.

Improvement:

- 1.
- 2.
- 3.
- 4.

(e) Role of Quality control in fertilizer

- 1.
- 2.
- 3. 4.

(f) Water management for soil improvement

- 1. 2.
- *2*. 3.
- 4.

(g) Role of Crop rotation in soil improvement

- 1.
- 2.
- 3.
- 4.

Signature of Student

Signature of Farmer

Signature of Officer In-charge

36



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

| V. | Fruit and Vegetable Production | 1 Interventions | | Credits: 3 (0+3) |
|----------|--|-----------------|-------------|---------------------------------|
| Α. | FRUIT PRODUCTION | | | |
| 1. 2. | Name of Village/Block/Dist Name of the Farmer | | | |
| 3. | Plot No. Crop & Cro ii. iii. iv. v. | p Variety | Area (ha)/I | No. of treesi. |
| 4. | Manures/Fertilizers applied | | Time | Quantity |
| - | Fruit crops/intercrop | , | C | Area |
| 5. | Inter-crop taken (name of th | e crop season) | Crop | Plant population m ² |
| 6. | Yield obtained | | | |
| | i) Fruit Crop ii) Inter Crop | Area | Quality | Amount (Rate/kg) |
| 7. | Yield per ha/per tree | | | |
| 8. | Cultivation Problems | | | |
| 9. | Income in Rs. Fruit | | | |
| | CropsInter | | | |
| | Crops | | | |
| 10. | Net Expenditure Rs. | per ha | per t | ree |
| 11. | Mode of transport and sale of | of the produce | | |
| 12. | Status of production technol | ogy | | |
| 13. | Suggestions if any | | | |
| 14. | Total area cultivated | | | |
| 15. | Irrigated area | | | |
| 16. | Area in fallow | | | |
| 17. | Area under fruit/horticultura | ll crop | | |
| 18. | Net profit | per ha | per t | ree |

Signature of Farmer

Signature of Student



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

PLOT HISTORY (Two important Fruit Crops)

- 1. Name of Student:
- 2. Name of Research Station/KVK to which attached:
- 3. Name of farmer:
- 4. Topography:
- 5. Soil type & drainage:
- 6. Irrigation source and irrigated area:

Well/Canal/River/Nala/Rainfed potential available

(Hours per day & area covered)

- 7. Trees planted with area and number:
- 8. Quality of planting material and method of planting:
- 9. Present survival of trees with age & condition of plants:
- 10. Remarks (Inter crops grown in the plot in the past):
- 11. Per cent of the total area under horticultural corps:

| Area | Crop | Variety | Number of trees |
|------|------|---------|-----------------|
| PI | | | |
| PII | | | |

Problems faced and techniques adopted to overcome.

Signature of Officer In-charge

Signature of Student



Operational cost

Labour Cost (Rs).....(only two plots)

| S.No. | Particulars | Owned@ | Hired @ | Bullock | Tractor |
|-------|-----------------------------|--------|---------|---------|-----------|
| | | | | Pair @ | machinery |
| 1. | Ploughing / harrowing | | | | |
| 2. | Digging, filling & planting | | | | |
| 3. | Manuring /Fertilizers | | | | |
| 4. | Weeding | | | | |
| 5. | Irrigation | | | | |
| 6. | Trining & Pruning | | | | |
| 7. | Spraying/Dusting | | | | |
| 8. | Harvesting/grading/ packing | | | | |
| 9. | Watching | | | | |
| 10. | Transport to market | | | | |

Total Cost on Labour (Rs.)

Material Cost

| S.No. | Particulars | Number | | Value (Rs.) | | Remarks |
|-------|----------------------------|--------|--------|-------------|--------|---------|
| | | Plot-1 | Plot-2 | Plot-1 | Plot-2 | |
| 1. | Plant Material | | | | | |
| | a) Seedling | | | | | |
| | b) Layers / Grafts | | | | | |
| 2. | Manures/Fertilizers | | | | | |
| 3. | Irrigation | | | | | |
| 4. | Hormone & Plant protection | | | | | |
| | Chemicals | | | | | |
| 5. | Staking cost | | | | | |
| 6. | Packaging Material | | | | | |
| 7. | Cultivation problems/ | | | | | |
| | otherproblems identified | | | | | |

Total cost of material (Rs.):



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

COST OF FARM PRODUCE

- 1. Name of Crop, Number & Age of Trees
- 2. Crop Variety
- 3. Date of flowering & harvest
- 4. Production (kg) and income Per tree Rs. Per ha

Rs.

- 5. Price of Produce Rs. Demonstration by the student on:
 - (a) Propagational studies
 - (b) Special Horticultural Practices
 - (c) Special problem & demonstration of solution (Training, Prunning, Bahar treatment, Manuring etc.)

Plantation of fruit trees-Demonstration & Plantation of at least 5 fruit treesGrading and

Packing

Storage – Zero Energy Chamber

Note: Detailed note on above shall be written.

Signature of Student



B. VEGETABLE PRODUCTION

1. Cropping Scheme for Vegetables (period of reports)

| S.No. | Сгор | Variety | Area (ha) |
|-------|------------------------------|---------|-----------|
| | | | |
| i. | Brinjal | | |
| i. | Potato / Tomato | | |
| iii. | Onion/Garlic | | |
| iv. | Cabbage /Cauliflower | | |
| v. | Chillies/Coriander/Fenugreek | | |
| vi. | Other | | |

2. Nutrient Application:

| | Time | Quality | Rate | Value |
|--------------------|------|---------|------|-------|
| Manure applied | | | | |
| Fertilizer applied | | | | |
| Green manure used | | | | |

| 3. | Intercrop taken: Kharif Rabi Summer | Crop - - - | Area |
|----|--|---------------------|--------------------|
| 4. | Actual yield obtained: Main vegetable Inter crops | Quantity (No./Q) | Rate Rs. Value Rs. |
| 5. | Yield per ha (Quintal /No.) Main crops Inter crops | | |
| 6. | Estimated cost: | Main crop: | |
| 7. | Gross Income in Rs. (value) | Inter crop: | |
| 8. | Net Income Rs. (value) | per plot | per ha |
| 9. | Cost/ Benefit ratio | per plot | per ha |

Field –II



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

PLOT HISTORY (two important vegetable crops)

| | | | Field—I |
|----|--|---|---------|
| 1. | Name of Student | : | |
| 2. | Name of institute to which attached : | | |
| 3. | Name of farmer | : | |
| 4. | Topography | : | |
| 5. | Soil type with drainage | : | |
| 6. | Well/Canal/River/Water: irrigation : with potential available (hours/day & area covered) | | |
| 7. | Crops grown in last year | : | |
| | Plot No., Survey No. and area in ha: | | |
| 8. | Crops now grown with Plot No. Survey No. and area (ha) planted or proposed | : | |
| 9. | Remarks | : | |

Signature of Officer In-charge

Signature of Student



Farm production cost (year) (at least one crop)

Name of Crops

Variety

Date of Flowering

Date of Harvest

Operational cost (Labour wages) one crop only

| S.No | Particular | Owned M/F | Hired M/F | Hired RateM/F | Machinery Hrs | Tractor Rate |
|------|--|--------------|--------------|------------------|------------------|-----------------|
| 1. | Ploughing | | | | | |
| 2. | Harrowing | | | | | |
| 3. | Bed Preparation | | | | | |
| 4. | Manuring | | | | | |
| 5. | Sowing/Planning | | | | | |
| 6. | Fertilizers | | | | | |
| 7. | Irrigation | | | | | |
| 8. | Weeding Earthing Training Staking | | | | | |
| 9. | Spraying Dusting | | | | | |
| 10. | Harvesting Grading Packing | | | | | |
| 11. | Watching | | | | | |
| 12. | Transport to market | | | | | |
| | Total Cost Labour (Rs) | | | | | |

M - Male, F - Female



Material Cost (Area)

| S.No. | Particulars | Qu | antity | V | alue | Remarks |
|-------|-------------------------------|--------|---------|--------|---------|---------|
| | | Crop-I | Crop II | Crop-I | Crop II | |
| 1. | Seed/Seedling Plant | | | | | |
| 2. | F.Y.M./ Oil cake / | | | | | |
| | Fertilizer | | | | | |
| | a) | | | | | |
| | b) | | | | | |
| 3. | c) Total No. Irrigation | | | | | |
| 5. | SeasonIrrigation Charges | | | | | |
| | | | | | | |
| 4. | Hormonal spray and plant | | | | | |
| | protection charges | | | | | |
| | Cost of chemical | | | | | |
| 5. | Stake cost | | | | | |
| 6. | Packaging/Charge (Boxes or | | | | | |
| | tokni) for hybrid tomato only | | | | | |
| | Total cost of material | | | | | |
| | Total Material Cost (Rs) | | | | | |
| | Total Cost (Labour+Material) | | | | | |
| 7 | Production (Quintal) | | | | | |
| 8 | Price of Produces (Rs) | | | | | |
| 9 | Gross return (Rs) | | | | | |
| 10 | Net Rerurn (Rs) | | | | | |
| 11 | B: C ratio | | | | | |

Signature of Student

Signature of Officer In-charge



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

VI. Food Processing and Storage Interventions

Credit: 1 (0+1)

Students will participate in the research and gathering of knowledge on topics such as food processing and preservation techniques, the significance of processing fruits, vegetables, spices, sauces, and flowers, Horticultural product packaging, standard storage techniques, post-harvest handling, and equipment for flowers and spices, Control of quality in the fruit and vegetable processing sector; grain storage techniques and storage structures; traditional and contemporary store structures; indigenous technological knowledge applied to food preservation.

Food processing methods:

| S.No. | Method | Material used (Cereals/Pulses/Vegetable/Fruits) |
|-------|----------------------------|--|
| 1. | Refrigeration and freezing | |
| 2. | Canning | |
| 3. | Irradiation | |
| 4. | Dehydration | |
| 5. | Freeze-drying | |
| 6. | Pickling | |
| 7. | Pasteurizing | |
| 8. | Fermentation | |

Procedures for fruit and vegetable preservation

| Procedures | Practical applications (Fruits/Vegetables etc.) |
|-------------------------|--|
| Fresh storage | |
| Cold storage | |
| Freezing | |
| Drying/dehydration | |
| Concentration | |
| Chemical preservation | |
| Preservation with sugar | |
| Pasteurization | |
| Sterilization | |

Packaging material used for horticultural crops: at the village level, students are required to gather information about the materials used for packing fruits, vegetables, and other items.

Natural material i.e. wood, bamboo, straw and synthetic bags, sacks, cardboard, plastic containers, crates, etc.

| S.No. | Name of article | Packaging material used |
|-------|-----------------|-------------------------|
| 1. | | |
| 2. | | |



Storage Interventions

- 1. Grain contamination is influenced by
 - Type of storage structure.....
 - Temperature.....
 - pH.....
 - Moisture.....

2. Storage losses in grains (%)

- Type of structure used.....
- Length and purpose of storage.....
- Grain treatment.....
- Pre- storage practices.....

3. What are the insects that are seen during storage

| S.No. | Name of Crop | Insect pests observed during storage |
|-------|--------------|--------------------------------------|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |



4. Name of the structure used for grain storage :

Outdoor structures

| (1) | Name |
|-----|---|
| | Quantity stored |
| | Materials used for construction of the storage structure |
| (4) | Any innovative practice that the farmer has evolved/ demesnes |
| (5) | Problem observed by farm in storage shape of the structure |
| (6) | Traditional or modern method |
| (7) | Fumigation practices |
| (8) | Time schedule |
| (9) | Inter opening |

5. Control Measures adopted by Farmers for Storage pest & Rodent

| S.No. | Name of Insect | Control Measures |
|-------|----------------|------------------|
| 1. | Beetles | |
| 2. | Weevils | |
| 3. | Moth | |
| 4. | Other | |

6. Type of control measure used for Rodents by farmers

(Kindly tick the method used by the farmers of the locality)

- Fumigant aluminium phosphide
- Rodent rat cases
- Poison baits
- Rat borrow fumigation

7. Storage Structure used by the farmers of the locality

- Kothi/Banda
- PAU Bin (capacity 1-5 to 15 quintal)
- Pusa Bin (made from mud and bricks polythene)
- Cylindrical rubberized cloth structure
- CAP storage (cover and plinth)
- Silo
- Large-scale storage
- Other (Specify)
- 8. Students have to write at least two indigenous practices used for safe grainstorage adopted at the village.
 - i)
 - ii)

Signature of Student

Signature of Officer In-charge



12. Animal Production Interventions

Credit: 1 (0+1)

Information of Livestock

| Particulars | Strength of livestock | Name of the Breed |
|---|--------------------------|-------------------|
| Cow class | | |
| 1. Adult cows | | |
| a) Milking | | |
| b) Dry | | |
| 2. Heifers | | |
| 3. Breeding bulls | | |
| 4. Bullocks | | |
| Buffalo class | | |
| 1. Adult Buffaloes | | |
| a) Milking | | |
| b) Dry | | |
| 3. Heifers | | |
| 4. Bulls | | |
| Sheep | | |
| 1. Young stock | | |
| 2. Adult stock | | |
| 3. Adult rams | | |
| 4. Adult ewe | | |
| Goat | | |
| 1. Young stock | | |
| 2. Adult stock | | |
| 3. Adult bucks | | |
| 4. Adult doe | | |
| Poultry/ Pig/ Fish | | |
| 1. No. of chicks/piglets/fingerlings | | |
| 2. No. of layers/broilers/boar/sow | | |
| Cost Structure | Amount (Rs.) | Remarks |
| 1. Cost of animals (if purchased) | | |
| 2. Cost of dairy structure and paddocks | | |
| 3. Total cost of dairy structures | | |



Daily maintenance and feeding expenses

| Particulars | C | Cow | | Buffaloes | | Sheep/Goats | | Poultry | |
|---------------------------------------|------|--------------|------|--------------|------|--------------|------|--------------|--|
| | Qty. | Amt (Rs.) | Qty. | Amt (Rs.) | Qty. | Amt (Rs.) | Qty. | Amt (Rs.) | |
| 1. Labour male/female requirement | | | | | | | | | |
| 2. Concentrates (kg) | | | | | | | | | |
| 3. Green roughages (kg) | | | | | | | | | |
| 4. Dry roughages (kg) | | | | | | | | | |
| 5. Mineral mixtures (kg) | | | | | | | | | |
| 6. Veterinary aids including breeding | | | | | | | | | |
| 7. Total expenses per day | | | | | | | | | |

Daily Milk Production and Disposal Record

(A) Milk Production

| Date | No. of animals in milk | | | | Milk Pro | Total Milk | | | | |
|------|------------------------|---------|-------|------|----------|------------|-------|------|-----------------|--|
| | Cow | Buffalo | Sheep | Goat | Cow | Buffalo | Sheep | Goat | Produced (L) | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

(B) Milk Disposal (L)

| Date | Home consumption (Cow/Buffalo/ Sheep/Goat) Whole milk /Milk Products | Utilized for making Products (Cow/Buffalo/ Sheep/Goat) Ghee/ butter/Khoa/ Curd/Others | Sale (raw milk) (Cow/Buffal o/ Sheep/Goat) | Name of agency to which sold | Income (Rs.) Rate of Dairy Milk/Unions/ Milk Vendors |
|------|---|---|--|---------------------------------------|--|
| | | | | | |
| | | | | | |
| | | | | | |



Daily Production and Disposal Record

(A) Dairy Products

| Date | Name of the dairy products | Quantity of dairy products (Kg) | Quantity sold (Kg) | Name of agency to which sold | Income (Rs.) Rate/kg. |
|------|----------------------------------|--|--------------------------|------------------------------------|-----------------------------|
| | | | | | |
| | | | | | |
| | | | | | |

(B) Eggs and Birds

| Date | Breed/strains of Birds and system of | Production of | | Home consumptio n | | Disposal of | | Name of agency | Incom e (Rs.) |
|------|--|---------------|------------------|-------------------------|----------------|-------------|-------|----------------------|---------------------|
| | keeping /rearing | Eggs | Birds/ Chicks | Eggs | Birds /Meat | Eggs | Birds | to which sold | () |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

(C) Pig

| Date | Breed & system of keeping/rearing | Production of Animals/Piglets | Disposal of Animals | Name of agency to which sold | Income (Rs.) |
|------|---|----------------------------------|---------------------------|------------------------------------|-----------------|
| | | | | | |
| | | | | | |

(D) Any Other Animals / Birds

| Date | Species/Bree | | | Ho | ome | | | Name | Income |
|------|--------------|---------------|--------|-------------------|-------|-------------|-------|--------|--------|
| | d& system of | Production of | | ion of consumptio | | Disposal of | | of | (Rs.) |
| | keeping | | | n | | | | agency | |
| | /rearing | Eggs | Birds/ | Eggs | Birds | Eggs | Birds | to | |
| | | | Chicks | | /Meat | | | which | |
| | | | | | | | | sold | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

50



| Pa | rticulars | Amount (Rs.) |
|------------|--------------------------------|--------------|
| A) | Total production of – | |
| | 1. Animals | |
| | 2. Milk and milk product | |
| | 3. Dung/F.Y.M. | |
| | 4. Eggs | |
| | 5. Poultry Birds/Chicks | |
| | 6. Wool | |
| | 7. Meat | |
| B) | Disposal of – | |
| | 1. Animals | |
| | 2. Milk and milk product | |
| | 3. Dung/F.Y.M. | |
| | 4. Eggs | |
| | 5. Poultry Birds | |
| | 6. Wool | |
| C) | Yearly income from the sale of | |
| | 1. Animals | |
| | 2. Milk and milk product | |
| | 3. Cowdung / F.Y.M. | |
| | 4. Eggs | |
| | 5. Poultry Birds | |
| | 6. Wool | |
| To | tal income (Rs.) | |

Yearly Production and Disposal Record

Yearly Receipt and Expenditure Statement

| Particulars | Amount (Rs.) |
|--|--------------|
| A) Receipt/ revenues- * | |
| Total income obtained from the sale of all | |
| items | |
| B) Expenditure- | |
| 1. Cost of feeds and fodders | |
| 2. Labour costs | |
| 3. Land revenue etc | |
| 4. Medicines & Vaccines (Veterinary | |
| Aids) | |
| Total expenditure | |
| | |
| C) Net profit (Receipt-Expenditure) | |

Signature of Student

Signature of Officer In-charge



13. Extension and Transfer of Technology Activities Credits: 3 (0+3)

Examination of various agricultural and rural development programs, extension services, and organizations' development initiatives and activities

Project –1: Identifying problems of farmers:

It is suggested that information be gathered from individual farmers in order to identify the challenges facing farmers. In order to identify both specific and general agriculture concerns, the students will get in touch with the farmers and gather the data listed in the timetable.

- Name of the farmer:
- Village:
- Education
- Age:
- Total members in family:

| Men | Women | Children |
|-----|-------|----------|
| | | |

Total area of land owned (in ha)

Dry Irrigated Fallow

Sources of information used by farmers:

 1.

 2.

 3.

 4.

 5.

 6.

 7.

 8.



Adoption of farm technology:

Gathering data regarding the use of suggested agricultural technology in relation to important crops is expected of the student.

| S.No. | Crops/ varieties | Technology Adopted |
|-------|------------------|--------------------|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |

Identifying specific gaps in adoption:

This form concerning a significant grain, cash, and oil seed/pulse crop that the farmer grows should be completed by the student. The Department of Agriculture's or Agriculture University's research recommendations may have provided the information used to compile the recommended practices. The data gathered by the student in Agronomy and Agriculture Economics may be utilized in relation to the information regarding the farming activities.

| S.No. | Recommended practices | Practices followed by farmers | Extent of gap in adoption of recommended technology | Constraints in adopting recommended practices | Action- oriented suggestions |
|-------|--------------------------|--|--|--|------------------------------------|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |

After collecting the information in the schedule, the student should record his observations in the following proforma.

| S.No. | Action- oriented suggestions for solving theproblems |
|-------|---|
| 1. | |
| 2. | |
| 3. | |



Project - 2: Studying Ongoing Extension Programme in Village

Multiple agencies in the village are running different extension programs. Field trips, talks, family planning initiatives, training camps, and other events could be included in these programmes. The pupil shall choose an extension program and examine it from the following angles:

- 1. Name of ongoing extension programme you have studied.
- 2. What were the objectives of the programme?
 - (i)
 - (ii)
 - (iii)
- 3. What activities were undertaken to attain these objectives; state objectives?
 - (i)
 - (ii)
 - (iii)
 - (iv)
- 4. How far the targets were achieved? State objective wise.
 - (i)
 - (ii)
 - (iii)
 - (iv)
- 5. What difficulties were faced by the executors of programme ?
 - (i)
 - (ii)
 - (iii)

6. What efforts were made by them to overcome these difficulties?

- (i)
- (ii)
- (iii)
- 7. Your own remarks on achievements of the extension programme.



Project 3: Survey on Utilization of Internet and Mobile Applications by the Farmers for Agriculture Purposes

With the advent of Internet and especially various applications for android mobiles and availability of android phones along with affordable data plans for ordinary person, the usage of internet as well as different social media and various agriculture related applications is increasing day by day by the farmers for obtaining required information such as production technologies, weather and climate, plant protection, post harvest management, marketing of agro produce etc.

The various apps are developed by government and other organizations such as Kisansuvidha, PusaKrishi, Soil health card, Crop insurance, Agri. market (Ministry of Agriculture, GOI), Krishi video advice (MANAGE, Hyderabad), IFFCO Kisan Agriculture (IFFCO), etc. the farmers are, now a days, using such apps for obtaining information and utilizing it at their level for satisfying needs.

Taking into account these facts, it is expected from the students of final year B.Sc. Hons. (Agri.) undergoing RAWE program to study the internet utilization behaviour of farmers and how it is influencing farm management practices of them. Each student shall contact at least 20 farmers from allotted village and obtain information on following points.

- 1. Name of the Farmer :
- 2. Address:
- 3. What's App No.:
- 4. E mail id.:
- 5. Educational qualification:
- 6. Land holding (ha.):
- 7. Crops grown:
- 8. Crop wise Experience in Farming (years)



| S. No. | Particular | Daily | Weekly | Fortnightly | Monthly |
|-----------|---|-------|--------|-------------|---------|
| 1 | E-mail | | | | |
| 2 | Social medial like FB/WA | | | | |
| 3 | You tube videos | | | | |
| 4 | Write name of the mobile apps related to agriculture | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | Other online sources | | | | |

9. Frequency of using Internet/ Mobile apps (Tick mark in relevant column)

- 10. Are you member of What's app group related to agriculture? Yes/ No (If yes, give details)
- 11. Date & year of What's app group created:

| Sr. No. | Name of What'sapp group | Name of Admin | No. of participants | Nature/ Purpose of information received |
|------------|----------------------------|------------------|------------------------|--|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |



12. Are you member of face book group related to agriculture? Yes/ No (If yes, give details)

Date & year of Face book group created:

| S. No. | Name of FB group | Name of Admin | No. of participants | Nature/ Purpose of information received |
|--------|------------------|---------------|---------------------|---|
| 1 | | | | |
| 2 | | | | |

13. Give details about use of agriculture related apps used by you.

| S. No. | Name of App | Name of Organization | Purpose of App | Nature/ Purpose of information received |
|--------|-------------|----------------------|----------------|--|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

14. Do you visit websites of different agricultural institutes? Yes/ No

(If yes, give details)

| S. No. | Web address | Name of Organization | Purpose of visiting website | Nature/ Purpose of information received |
|--------|----------------|-------------------------|--------------------------------|---|
| 1 | www.aukota.org | AU, Kota | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |



15. Do you watch different videos (Agricultural related) on you tube channel? Yes/ No (If yes, give details)Date of upload of videos :

| S. No. | Name of you tube channel subscribed | Name of host/ owner | Numberof subscribers | Nature/ Purpose of information received |
|-----------|--|------------------------|-------------------------|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

 Do you read e Papers / e Magazines / eBooks/Internet blogs? Yes/ No (If yes, give details)

Name of e Papers /e Magazines/ eBooks/ Internet blogs

17. Have you participated in online training/ webinar organized by SAUs/ KVKs or any other agriculture related organizations?

| S. No. | Name of organization | Topic of the programme | Name of expert/s involved | Nature/ Purpose of Information received | Duration of Programme |
|-----------|-------------------------|---------------------------|---------------------------------|---|--------------------------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

- 18. Do you face any problem during use of Internet or Apps?
- 19. Is there any suggestion for overcoming problems or improvement in information provided?

Signature of Farmer



Proforma for Case Study of Rural Development / Agricultural DevelopmentProgrammes

- 1. Name of Programme:

- 3. Who informed about the programme?
- 4. Date of participation in the programme:
- 5. Support of the Programme:

Cash

- a) b) c) Kind a) b) c) 6. Subsidies Availed: 7. A chieven entry of di
- 7. Achievements of the Programme :a)
 - b)
 - c)
- 8. Problems faced:
 - a)
 - b)
 - c)
 - U,
- 9. Suggestions for Improvement :a)
 - b)
 - c)
- 10. An overview of the Programme
 - a)
 - b)
 - c)

(Benefits, opinion of the beneficiaries and your comments on organization and implementation)

:

Signature of Officer In-Charge

Signature of Student



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

| Compone | nt – II | | Credit | s: 4 (0+4) |
|-----------|--|------------------|-----------------|------------|
| IX. Agric | ultural Industrial Attachment (AIA) / I | n-Plant training | | |
| Name of | Industry | | | |
| Location | n Rural Urban | | | |
| Mailing | Address | | | |
| Does the | e industry operate in an industrial estate | Y | res 🗌 No | , |
| Form of | Ownership | | | |
| ٠ | Public | • Cooper | ative | |
| • | Private | • Mixed | | |
| Туре о | f Organization | | | |
| | 1. Individual Proprietorship | 4 Sharel | holding Company | Other |
| | 2. Partnership | 5. | iorang company | |
| | 3. Limited Company | 5. | | |
| | 5. Elinited Company | | | |
| Objectiv | res of the industry : | | | |
| Mandate | es of the industry : | | | |
| Employ | nent : | | | |
| Numbo | r of workers engaged | | | |
| S.No. | Category | Male | Female | Total |
| 1. | Working Proprietor and Partner | | | |
| 2. | Unpaid Workers | | | |
| 3. | Employees | | | |
| | a) Manager & Professional staff | | | |
| | b) Skilled staff | | | |
| | c) Unskilled Staff | | | |
| | d) Others | | | |
| Number | r of Shifts per day | | | |

Number of hours worked per week for all shifts_____

Working Capital (Rs.)_____

Source of Finance

a) Personal and relatives

- b) Loans from banks and bank credit institutions
- c) Other (Specify)



Tenure of building occupied for industry

- a) Wholly owned
- b) Wholly rented
- c) Partly rented

Total area occupied for business m²

Contribution of the industry-promoting environment

Labour Costs

| S.No. | Particular | Amount Paid (Rs.) |
|-------|---|-------------------|
| 1. | Gross Wages & Salaries (including bonus & gratuity) | |
| 2. | Overtime payment | |
| 3. | Payment in kind, i.e. food, drinks, fuel, etc. | |
| 4. | Employer's contribution to social security schemes | |
| 5. | Training expenses | |
| 6. | Other labour costs (Please specify) | |

Purchases

Goods Purchased (Value in Rs.)

- a) Purchase of goods to be sold in the same condition.....
- b) Raw material & supplies purchased for transformation.....

Current Technology Status

| Type of Machines | Percentage | Average Age | Expected average life span of equipment |
|---------------------|------------|----------------|--|
| Manual | | | |
| Automatic | | | |
| Computerized | | | |

Does the industry have any investment plan

Yes/No

If yes, please indicate whether for

- a) Replacement of old equipment
- b) Increasing production capacity
- c) Upgrading technology

Value of Stocks (At the time of in-plant training)

| Description | Value (Rs.) | |
|---|-------------|--|
| Material supplies and raw materials etc | | |
| Semi finished products | | |
| Finished product | | |
| Goods purchased for resale | | |



Value of fixed assets

| S.No. | Particulars | Value (Rs.) |
|-------|------------------------------------|-------------|
| 1. | Land | |
| 2. | Building & Other construction work | |
| 3. | Transport & Other Equipment | |
| 4. | Others | |

Output

| S.No. | Description of main product | Unit | Exported | | Locally sold | |
|-------|--------------------------------|------|----------|-------|--------------|-------|
| 1. | | | Quantity | Value | Quantity | Value |
| 2. | | | | | | |
| 3. | | | | | | |

Main destinations of Exports

| 1. | | |
|---|-----|----|
| 2. | | |
| 3. | | |
| 4. | | |
| Marketing of Final products: | | |
| Direct selling% | | |
| Intermediaries% | | |
| Exports% | | |
| Is the industry a member of any association | Yes | No |
| If yes, indicate the type | | |
| Quality management | | |
| Are the products of the industry certified? | Yes | No |
| If yes, indicate the type of certification | | |
| Is the quality of raw materials purchased also controlled | Yes | No |
| Does the industry have a laboratory? | Yes | No |
| Total number of Quality control staff | | |
| Are there any environmental regulations? | Yes | No |
| Does the industry have treatment facilities for waste? | | |
| Yes No No need | | |

Signature of Student

Signature of Officer In-Charge



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

Photographs



Rural Agricultural Work Experience (RAWE) and Agro-Industrial Attachment (AIA) Manual

Notes





















Department of Agricultural Extension and Communication College of Agriculture, Ummedganj-Kota Agriculture University, Kota (Raj.)-324001