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Field Level Diagnosis and Advisory Services Under RAWE Program: A Case Study of Farmer Arjun Ram

*Sapna
B.Sc. (Hons.) Agriculture, College of Agriculture, Baytu, Barmer, Agriculture University, Jodhpur, Rajasthan, India
*Corresponding Author's email: sapnapoonia747@gmail.com

The Rural Awareness Work Experience (RAWE) programme plays a vital role in enhancing practical knowledge and extension skills among undergraduate agriculture students. The present article documents a field-level case study conducted under the RAWE programme with farmer Arjun Ram of Baytu village, Barmer district. The study emphasizes crop disease diagnosis, weed management practices, advisory services provided and their impact on farm productivity and student learning [1].

Introduction

Agriculture in arid regions like Barmer district faces multiple challenges, including crop diseases, heavy weed infestation and limited access to timely technical guidance. The RAWE programme is a core component of the B.Sc. (Hons.) Agriculture curriculum, bridges the gap between classroom learning and real field situations by enabling students to work directly with farmers and address practical problems [1].

Materials and Methods

Under the RAWE programme, farmer Arjun Ram of Baytu village was allotted for detailed study. Regular field visits, interaction with the farmer and field observations were conducted to assess crop health, weed flora and management practices. Diagnosis was based on visual symptoms and standard agronomic and plant protection principles. The farmer Arjun Ram practices mixed farming with crop production and livestock rearing as major components. The livestock unit consists of two cows and three goats, providing milk, manure and supplementary income. Major crops grown include bajra, sesame and citrus during this study period.

Field-Level Diagnosis of Crop Diseases and Weed Flora and Weed Management Issues:

The following major diseases were identified during field visits:

- Green ear disease of bajra/pearl millet (*Sclerospora graminicola*): Leafy transformation of ear heads and poor grain formation.
- Phyllody disease of sesame (Phytoplasma): Floral parts converted into green leafy structures, bushy growth, and failure of capsule formation.
- Citrus canker disease (*Xanthomonas citri*): Raised brown lesions on leaves and fruits with yellow halos. These diseases resulted in yield losses and reduced quality of produce.

Weed Flora and Weed Management Issues:

Heavy weed infestation was observed in bajra and sesame fields, particularly during the early crop growth stages. The major weed species observed in the farmers'field were grassy weeds like *Cynodon dactylon*, *Brachiaria eruciformis*; broad-leaf weeds like *Parthenium hysterophorus*, *Commelina benghalensis*, *Celosia argentea*, *Panicumi sachmi*, *Amaranthus*

viridis, *Euphorbia microphylla*, *Phyllanthus niruri*, *Alteranthera triandra* and sedges like *Cyperus rotundus etc*., which competed with crops for nutrients, moisture, and sunlight, leading to reduced crop vigour and yield.

Advisory Services on Crop Protection and Weed Management:

Based on disease diagnosis, the farmer was advised to:

- Use disease-free planting material and recommended varieties
- Remove and destroy infected plants
- Adopt suitable plant protection measures as per the package of practices.
- Maintain field sanitation and balanced nutrient management as per recommendation of PoP.

The farmer was advised to adopt an integrated weed management approach including:

- Timely manual weeding and intercultural operation during the critical crop-weed competition period
- Use of recommended pre- and post-emergence herbicides as per crop requirement
- Maintenance of optimum plant population and row spacing as per PoP.
- Clean cultivation and use of weed-free seed material

These practices were explained in simple language to ensure easy adoption at the farm level.

Results and Discussion

The advisory interventions helped the farmer gain better understanding of crop diseases and weed management practices [2]. Adoption of integrated weed management reduced weed pressure and improved crop growth [3]. The RAWE programme significantly enhanced the student's diagnostic skills, communication ability, and confidence in addressing real field problems.

Conclusion

The case study of Arjun Ram under the RAWE programme demonstrates the effectiveness of field-level diagnosis and advisory services in improving crop health and farm management. Inclusion of weed management along with disease control proved beneficial in enhancing overall crop productivity. The RAWE programme serves as a valuable platform for experiential learning and technology transfer between agricultural institutions and farming communities.

References

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