NARO

DFID
Department for International Development

In-country Training Program for the Stakeholders of the NARO/DFID COARD Project

Summary of a Report of a Workshop on

Procedures, Techniques and Biometrics for on-farm research with crops and animals



October 29th - November 2nd / 2001

Prepared and Implemented by:

IMPACT Associates
DEVELOPMENT CONSULTANTS
43 Lumumba Avenue Kampala. UGANDA.
Tel: 256-41-234686/231583 **Fax**: 256-41- 347054
Email: *info@impactassociates.co.ug*

AGRO-TECH CONSULTANCY LTD
Faculty of Agriculture
Makerere University
P. O. BOX 7062, KAMPALA
UGANDA
TEL: 256-41-533580/620
Email: kyamanywa@starcom.co.ug

Table Of Contents

1.0 : Introduction 1

2.0 : Participants 1

3.0 : Workshop objectives 1

3.1 : Overall objective of the workshop. 1

3.2 : Specific objectives of the workshop. 1

3.3 : Learning objectives of Module I (Review of Research procedures) 2

3.4 : Learning objectives of Module II (Design and conduct of on-farm Research) 2

3.5 : Learning objectives of Module III (Practical Designs for On-farm experiments) 2

3.6 : Learning objectives of Module IV (Data Management and Analysis) 2

3.7 : Learning objective of Module V (Other approaches for Analysis of On-farm Research Data) 3

3.8 : Learning objective of Module VI (Presentation of results) 3

4.0 : Workshop Outputs 3

5.0 : Workshop Challenges/Gaps 3

6.0 : Overall Evaluation of Workshop (Actual comments by participants) ... 4

1.0 : Introduction

This is a summary of a report for the five-day workshop on Procedures, techniques and biometrics for On-farm Research with crops and animals held at Sunset Hotel Jinja on 29th October – 2nd November 2001. The workshop was based on the discovery the abovementioned skills among research scientists was inadequate to support the changing priorities of agricultural (crops and animals) research which compromises the quality of research aimed at increasing food security and alleviating poverty.

The summary outlines the workshop participation, objectives, outputs, challenges and results of its evaluation by the participants.

1.0 : Participants

Fifteen participants attended. They represented several organizations and departments as shown in the table below:

Table 1.0 a : Organisational /departmental representation at the workshop

Organizational/Department	Number of participants
SAARI	7
NAARI	2
CORI	2
FORRI	1
LIRI	1
MAKERERE UNIVERSITY	2
TOTAL	**15**

3.0 : Workshop objectives

- The workshop was organized into six modules. Each module had its learning objectives.

3.1 : Overall objective of the workshop.

- To impart and strengthen knowledge and skills of scientists who are involved and/or will be involved in conducting on-farm research work.

3.2 : Specific objectives of the workshop.

- To introduce or review statistical concepts and principles and highlight their application in agricultural research based on-farm;

- To present major differences between on-station research and on-farm research with crops and animals;
- To provide guidelines for research designs that are relevant for on-farm experimentation and surveys;
- To present an approach to data collection, data organization, data analysis and interpretation that matches research objectives;
- To discuss possible /available statistical tools for research design, data analysis and presentation of results; and
- To exchange participants' experiences with on-farm research.

3.3 : Learning objectives of Module I (Review of Research procedures)

- To remind participants of the research process; and
- To understand and distinguish between the common research methods.

3.4 : Learning objectives of Module II (Design and conduct of on-farm Research)

- To review common survey designs;
- To present guidelines on survey data analysis;
- To incorporate survey results into subsequent research design;
- To highlight the importance of objectives at various stages in the process; and
- To demonstrate effects and implications of varying levels of the farmer's involvement in On-farm trial (OFT) design.

3.5 : Learning objectives of Module III (Practical Designs for On-farm experiments)

- Introduce flexibility in experimental designs that consider the limited farm resources and varying farmers' interests in choice of treatments/technologies.
- Restricted randomization considering the simplicity, practicality and adoption objective of On-farm experiments.

3.6 : Learning objectives of Module IV (Data Management and Analysis)

- Matching analysis with study objectives; and
- Illustrating various approaches to data analysis.

3.7 : Learning objective of Module V (Other approaches for Analysis of On-farm Research Data)

- Present various approaches/methods for handling the common types of data from OFTs.

3.8 : Learning objective of Module VI (Presentation of results)

- Understand the basic principles of presentation of research results.

4.0 : Workshop Outputs

- The main tangible outputs were a workshop report and products of participants' group exercises
- Participants got a hands-on experience with data analysis.
- Participants acquired additional knowledge of statistical software application.
- Participants appreciated the necessity of the farmer's input in the research process.
- Participants appreciated the usefulness to farmers; of the participatory and multi-disciplinary approaches to on-farm research.
- Participants appreciated the importance of farmer motivation for sustainable participation in the research process.

5.0 : Workshop Challenges/Gaps.

The facilitators observed the following:

- Time limitation: There was not enough time for the participants' hands-on-experience with data analysis and for computer statistical software application as well as for the other workshop activities. They estimated that an extra four days was necessary for full realisation of the workshop objectives.
- Lack of budgetary provisions for farmer motivation to participate in the participants' projects yet the workshop realised that the farmers' sustained participation in the projects was crucial for their success.
- Inadequate knowledge of computer software packages: Some participants were less knowledgeable than others, hence slowing down the pace of the workshop.
- Low dinner/out-of-pocket allowance for participants which apparently undermined the participants' morale.

6.0 : Overall Evaluation of Workshop (Actual comments by participants)

Participant	General Assessment
Participant 1	▪ The course workshop was very useful, as it is an important aspect of meaningful OFR. ▪ Time allocated however was short; it should be given a few more days (I or 2 days) for participants to fully grasp the principles and their practicability. ▪ Handouts were adequate and will help as reference for conducting OFR ▪ Where opportunity avails itself, out-pocket should be reviewed.
Participant 2	▪ Generally a very good course ▪ Adequate commitment ▪ Timely (conducted at the time when skills were required) ▪ Good coordination and facilitation ➢ **Short comings:** ▪ Inadequate time (limited for computer hands-on exercises) and in-depth discussion of different topics ▪ Inadequate allowances ➢ **Recommendations** ▪ More time is required for such a technical course — increase time next time ▪ Improve on allowances
Participants 3	▪ This course is very important, and the timing is very appropriate. ▪ The choice of the resource personnel was very good because statistics generally need clarity, patience, friendliness, stability in content, etc. All these qualities were seen in the resource personnel ▪ The time provided for this course was short and could not allow participants to have sufficient hands-on exercise with (moreover) new things they learnt. More time will be needed ➢ The importance of statistics should be reflected in the ***NARODFID CORSU committee.*** This committee is mainly composed of socio-economists so that during evaluation of project proposals, more is attached to socio-economic aspects which is important/okay- but apparently very little on statistics. ▪ Failure to acknowledge the need to increase the out-of-pocket allowance to participants is cheating, abuse of human rights and could be treated as criminal.
Participant 4	▪ Handouts were good and supported the presentation and content of the transparencies. ▪ Time for understanding the different software and hands-on with computers were not enough ▪ There is need to add allowance since we are not students but

Participant	General Assessment
	▪ participants and responsible for our families. ▪ There is need to use Power Point presentation both for participants and the facilitators ➢ **Recommendations** ▪ Most participants lack knowledge on software and therefore more time should be allocated to it. ▪ Statistical analysis should not be confined to on-farm but should also be applied for on-station.
Participant 5	▪ The content of the course was useful. ▪ The participants were eager to learn and share their experiences pertaining to the course ➢ **Shortcomings:** ▪ There was need for training prior to the workshop. This would have helped participants refine their past knowledge based on the designs and applications. ▪ Limited time to practise with the various computer programmes as per designs. ➢ **Accommodations:** ▪ Hotels should ensure that rooms are available for participants (as I hope per booking). The rooms should reflect the value for money. Avoid having many small beds for one person instead of a simple sufficient bed.

Participant	General Assessment
Participant 6	▪ The overall content of course was very good and applicable to the work we are doing and plan to do. However the time allocated for his workshop (5 days) was very short ▪ To achieve all the planned objectives of the workshop, it needed 10 working days ▪ Hands-on computer practice was limited due to the time constraint. ▪ Out-of-pocket was very low and possibly that explains why some participants did not come to attend the course. ▪ There was variation in the Genstat version used by the participants. I suggest that next time, the improved (updated version) of the Genstat should be loaded to all the computers before the work shop starts. ▪ The venue was good, however, the general service declined with time possibly because of being in the same place over and again. There is therefore need to change the venue. ▪ The facilitators were very resourceful and helpful throughout the course ▪ Due to shortage in time there is need for follow up training on OFR.
Participant 7	➢ **Content** ▪ This issue was well addressed throughout the workshop and it was highly relevant to the participants. ➢ **Participation** ▪ The facilitators encouraged each participant to stand on his/her feet and air out his/her views. This did not only build confidence in the participants but it also improved on the communication ➢ **Coordination** ▪ This was an excellent job done by the facilitators and the overall supervisors. ▪ It was well managed ➢ **Accommodation** ▪ Many thanks to the organizers. ➢ **General output** ▪ The workshop addressed may issues which have immediate and practical considerations in the field of Agricultural research. ▪ By the end of the workshop most of the expectations had been achieved, and all the fears had been considered irrelevant.

Participant	General Assessment
	▪ BUT the time allocation for the computer exercises (relevant data entry *and* analysis) was limited. ▪ Otherwise I thank the sponsors, coordinators, facilitators and fellow participants for the hospitality.
Participant 8	▪ **Course** : Course very relevant in addressing a real need to improve competence of researchers in handling on-farm research. ▪ **Content** : Good, covering the key principles often used in OFR ▪ **Presentation** : style was good with enough exercises, participation and interaction with facilitators. ▪ **Time** : more would be needed, devoted to brief review of general on-station principles and then more time to work on computers - data analysis, interpretation etc ▪ Facilitators were knowledgeable in the subject matter and very willing to explain. ▪ Out-of-pocket allowance inadequate

Participant	General Assessment
Participant 9	▪ **Content** : relevant for OFR. Background for on-station concepts may be necessary. ▪ **Presentation** : current methods of presentation be maintained. ▪ **Time** : more time needed for the workshop to internalize the concepts and practical use of software ▪ **Participation** : involvement of participants be maintained.
Participant 10	▪ In general the course is useful to the participants as a way of refreshing concepts already learnt, and for sharing experience. ▪ More time was needed for computer exercises ▪ May be for future course, the would-be participants could be contacted in advance for their views on the contents of the planned course.
Participant 11	▪ The workshop was okay except that tine allocated to it was short. ▪ Facilitators and participants did a good job. ▪ More time needed to be allocated to practicals for data analysis and use of different software. ▪ Think of increasing our allowances. We are adults with a lot of responsibilities. ▪ Thank you very much (NARO/DFID/Facilitators) for building our scientific capacities.
Participant 12	▪ Course content, presentation and participation were generally good ▪ However, due to limited time (only 4 ½ days), hands-on experience in data analysis on the computer was inadequate. ▪ 1 strongly recommend that the workshop should have taken 10 working days instead of only 5, given the importance of conducting client-oriented agricultural research ▪ The environment was generally good, but venue rather far from town (for brief outing in the evenings). Can't the venue be changed to avoid monotony? ▪ Out-of-pocket allowance is low. Will it ever be revised upwards? ▪ "Diplomatic" bags could be availed to participants for carrying reading materials back to their respective stations.
Participants 13	▪ Has been a very useful refresher on topics one knew about and good eye opener on new topics. ▪ Though time was limited, I have something to build on.
Participant 14	▪ Pay attention to comments on fears and expectations. ▪ The workshop has been intensive, however more time was needed to cover aspects considered in detail. ▪ Particular attention should be paid to hands-on data analysis.