

Evaluating the impact of the graduate fellowship programme of the International Livestock Research Institute

A tools and process report

ILRI Impact Assessment Series 8

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Abstract

Post-graduate research projects are an effective method for building new research capacity in sub-Saharan Africa. The International Livestock Research Institute (ILRI) offers a graduate fellowship programme for scientists from developing and developed countries. This is done in partnership with universities in African and Asian countries, Europe, Australia and North America. To date such programmes have not been adequately assessed to find the impact on national research capacity, the graduate fellows and the partner institutions. To assess the value of this training, ILRI conducted an impact study of its graduate fellows in Kenya and Ethiopia between 1978 and 1997. This report presents the tools and methods used in this study. Others may use these freely, but appropriate acknowledgement of the source will be appreciated. Future users may modify these instruments for their own impact studies; and indeed are encouraged to do so. We recognise that many improvements could be made and request feedback from others on how they have accomplished this. This report also presents part of the results to enable those interested in future impact studies in Ethiopia or Kenya to use the data as a benchmark.

Introduction

In recent years the impact of graduate degree training of students from sub-Saharan Africa (SSA) has been debated widely (Pires et al. 1999). These studies have focused mostly on 'rates of return', i.e. the number of students returning to work in Africa after completing their degree courses. While these surveys of overseas study among trained African scientists are useful, there are many other important hypotheses to explore. Little is known, for instance, about either the direct or indirect outcomes of training programmes on long-term capacity building within developing countries.

In late 1998 an impact assessment of graduate training at the International Livestock Research Institute (ILRI) and at the founder institutes, International Livestock Centre for Africa (ILCA) and International Laboratory for Research on Animal Diseases (ILRAD) was undertaken.¹ The impact study covers 60 graduate fellows from Kenya and Ethiopia who undertook the research component of their degrees at ILRI between 1978 and 1997. Graduate fellows (GF) are staff members of national agricultural research systems (NARS) who are students registered for a graduate degree (e.g. MSc, DEA, MPhil or PhD) in their home countries or elsewhere. The GF undertake a major part (sometimes all) of the research component of their degree at ILRI, working in an ILRI research project and supervised by an ILRI staff member. Over 75% of the 307 graduate fellows over the 1978-97 period were from African countries and almost without exception they

1. ILRI was formed in 1994 by combining the resources of the International Laboratory for Research on Animal Diseases (ILRAD) and the International Livestock Centre for Africa (ILCA). ILRI is a member of the Consultative Group on International Agricultural Research (CGIAR), with a mandate for global livestock research.

returned to or entered into the NARS after their degree training. It was to these students that the assessment was addressed.

Demand for graduate training at ILRI remains high as NARS in SSA continue to develop capacity. The desired outcomes of this study were to:

- be able to identify the contribution that ILRI had made to institutional development and building new capacity from NARS institutes
- ascertain the sustainability of that new capacity
- determine whether changes were necessary in the current and future ILRI programmes.

This paper documents the tools, process and collected data of the impact assessment of graduate training at ILRI. It is published with the intention of making these instruments available to other international and national research institutes interested in evaluating their graduate study and capacity building programmes. Analysis and discussion of the results appear in a follow-up paper (Eley et al. in preparation).

Assessing the impact of the degree training: Insights from the literature

Currently the topic of the long-term impact of capacity building programmes is receiving attention in the literature, however, this has not always been the case (Brown et al. 1999). Impact evaluation of training received little support from decision makers and trainees who were not required to report on their long-term human resource development activities. By the mid-1980s this situation had changed a little due to tighter training budgets and emphasis in management studies on learning from past mistakes. However, based on her review of the limited number of evaluation-related articles published in refereed journals, Marsden (1991) still concluded that evaluation of training was given low priority in many educational and training institutions.

The focus of the impact assessment should be on the value of the overall learning experience and its contribution to individual and organisational development (Senge 1995). However, a major difficulty, as Foxon (1989) points out, is that assessments are made by training managers mostly on the basis of evaluating the training activity itself and not the important subsequent outcomes. Consequently less is published about the impact of degree training than the evaluation of the effectiveness of training methods. Foxon (1989) and Marsden (1991) attributed the lack of studies to problems with available quantitative measurement techniques, lack of finances, time and expertise in evaluation by trainers, and the lack of encouragement from donors and managers to do impact studies

Distinguishing between regular evaluation and impact assessment is also necessary. In this regard it is useful to consider the analytical framework offered by one of the best-known evaluators of training and capacity building, Donald Kirkpatrick. In his model (Kirkpatrick 1994), there are four levels of evaluation designated. These levels evaluate results in terms of change in *reaction*, *learning*, *performance* (behaviour) and *impact* (results). Impact assessment is the highest of these four levels and it is characterised by two main factors. Firstly, it considers the cumulative, long-term outcomes of a training programme and implicates both individuals and organisations in its analysis. Secondly, impact assessment is an extraordinary activity in research management, and is best conducted by a team external to the training institution. In other words for any one training programme impact assessment is an infrequent activity and it requires additional resources—both in terms of finance and external input.

Agricultural research organisations are often called upon to evaluate in a systematic and thorough manner the outcomes of their efforts in human resource development (Brush 1993; Hambly et al. 1999). In part, this requirement is the result of donor interest in validating their investments in training, but it is also due to a wider need to identify and strengthen the process of capacity building to make agricultural research more effective. Yet, one problem facing managers of agricultural research training is a lack of proven tools and processes for evaluating capacity building. A further problem is that for those tools that do exist, emphasis has often been placed on the tools themselves, while paying little attention to setting out clear objectives and research questions or hypotheses

for the evaluation. In other words the tools determine rather than provide the service to the outcome.

As Foxon (1989) and Taschereau (1998) noted, the most common evaluation techniques range from simple questionnaires to complex statistical procedures. Review of evaluation methods in education and training programmes identifies three main techniques. Firstly direct interviews that can include interviewing the trainee, trainer or trainee's supervisor. A second method involves the use of questionnaires (without interviews), which generate qualitative or quantitative data or both. The third method involves statistical measures that tend to compare an evaluated group of participants with a control group. Some literature does, however, suggest that a mix of methods is preferable to the selection of one of these methods. It is advised, for instance, to combine interviews with questionnaires, and to collect both qualitative and quantitative data (Brannen 1992; Kirkpatrick 1994).

In the course of this study evaluation reports were made available to us from other international research institutes. Unfortunately, most have not been published and all have had limited dissemination. Consequently tools and process were not widely available. Moreover they have focused primarily on informal analysis of training impact and primarily on short-term training activities (e.g. for International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) the study by Nagur (1993)). An exception was in 1988 when International Center for Agricultural Research in the Dry Areas (ICARDA), followed 231 of their 1205 trainees from the 1984-1987 period and undertook a more methodologically rigorous approach (Kearl 1991). Unfortunately, there were few (if any) graduate students followed up.

Perhaps the most extensive follow up to graduate training has been by International Rice Research Institute (IRRI) (Raab et al. 1998). Three associated questions were asked. What did IRRI's training programme do in terms of a) advancement of rice science, b) dissemination of rice-related knowledge and technology and c) the development of national rice research systems? A questionnaire was developed and sent to all 612 MSc and PhD fellows who were at IRRI from 1962 to 1995. Over 60% (374) responded. Although the methodology was not published, results indicated that questions were asked as to how IRRI contributed to scientific competence in terms of acquiring scientific and technical skills and scientific product (to answer (a) above) and to teaching (question b). Development of NARS (question c) was based on numbers of ex-trainees working in the NARS, with the premise that the higher educational level of trainees over the years, the increase in disciplinary areas worked and ability for local universities to undertake their own course work rather than depend on overseas support, were indicators for development.

This IRRI report stands alone in assessing degree related training and despite interest expressed by all the CGIAR centres to strengthen the evaluation component of training and capacity building activities, achievements in this regard are few. For example, in a recent survey of genetic resources training activities, all 16 centres of the CGIAR indicated that they conduct first-level evaluation of training activities, which immediately follows the training event. However, only four centres reported conducting long-term or impact evaluation of training, namely International Plant Genetic Resources Institute (IPGRI),

International Service for National Agricultural Research (ISNAR), ICARDA and ILRI (ISNAR/SGRP 1999).

As noted above for the most part the few tools and processes needed to undertake impact assessment have not focused on degree training, but rather short course training (Hambly et al. 1999). The first task of ILRI was therefore to set out its evaluation objectives and hypotheses and develop relevant tools and a process for assessing the impact of its graduate degree training programme.

Graduate degree training at ILRI

The goals of graduate degree training at ILRI

The first graduate fellows started at ILRAD in 1978 and in ILCA in 1985. The major goal of those institutes was, and now of ILRI's training programme is, to increase the research capacity within the NARS. In the graduate degree training context, the training of existing or future NARS researchers increases this capacity. The NARS, as defined in this study, include not only government research and extension organisations but also university departments of agriculture, veterinary medicine and science and non-governmental organisations. From 1978 to 1997, ILRI hosted a total of 307 graduate fellows; 233 from 26 African countries and 74 from 15 developed countries.

ILRI has emphasised the importance of graduate study as part of its research programmes for several reasons. Firstly ILRI's mandate is to assist in sustainable development for poverty alleviation through the enhanced productivity of livestock. Such development must involve the NARS where skilled human resources are directly linked to research output and effectiveness in addressing the problems at hand. Graduate training contributes to a sustained human resource capacity increase among NARS. Consequently, although the training benefits the career development of the graduate fellow as an individual, it is an important part of the institutional strengthening. Secondly ILRI benefits from graduate study programmes directly through the contribution of the student's research towards its own research outputs, and subsequently through the creation of partnerships with the ex-trainees and their NARS.

Objectives of the impact assessment of ILRI's graduate fellowship programme

The overall purpose of the review of ILRI's graduate fellowship programme was to assess the impact of the programme over a 20-year period. The contribution that ILRI had made to build new capacity among NARS institutes and the sustainability of that new capacity provided the rationale for the study.

The specific objectives of the impact study were therefore identified as follows:

- to determine the impact of graduate training to capacity building in agricultural research in developing countries

- to provide self-evaluation by the training programme to facilitate improvement in the programme, including monitoring and evaluation
- to systemise feedback on the programme on the programme and,
- to provide information to interested donors and attract further funding.

The study set out six key hypotheses that would respond to the above objectives:

1. ILRI graduate fellows obtain new research knowledge, attitudes and skills during their fellowship programme.
2. ILRI graduate fellows return to their NARS to practise their newly attained abilities.
3. ILRI graduate fellows continue to use and sustain these new research skills.
4. ILRI graduate fellows continue to make useful contributions to their NARS.
5. ILRI graduate fellows contribute to ILRI's own research programme.
6. Universities, NARS and NARS employees perceive ILRI as a high quality location for graduate degree research.

Tools and process of the impact assessment of ILRI's graduate fellowship programme

The immediate problem for implementing the study was that ILRI knew of no tools that would achieve the desired result. Furthermore the evaluation literature suggests that no single methodology exists for assessing the impact of graduate training and capacity building efforts.

ILRI addressed this challenge by designing a process that would allow for maximum data capture, with minimal cost associated with tracking ex-graduate fellows. The tool developed consisted of six separate questionnaires that could be used alone or in combination to address the hypotheses. The respondents of the various questionnaires were a) the recipients of the training, i.e. the graduate students themselves, b) representatives from ILRI and universities who contributed to the training as supervisors and c) potential beneficiaries of the training, i.e. the users or clients of the graduate fellows knowledge and skills. The potential beneficiaries consisted of people who were considered best able to assess performance of the trained personnel.

Steps in the process

1. A team of ILRI training specialists consisting of the Head of Training, the Education Officer and the Head of Training Resources met during several brain-storming sessions and listed the often-asked questions about impact. Between them the three officers had over 50 years of experience in postgraduate training through their employment in 3 NARS and 9 international institutes. Over a number of years these questions had been posed by the specialists themselves and also had come from ILRI's donors, board members, observers and the NARS.
 2. The often-asked questions were grouped and from these groups the six key hypotheses were formulated.
 3. Questions to test each hypothesis were then developed and grouped. For each section indicators were developed to provide a measure of achieving the objectives for that section. Following discussion and iterations within the Training Programme, external input was sought and an independent consultant was recruited. Working with the ILRI team, the consultant transferred the broad questions to a recording form that was used to refine the questions. The questions were formulated to provide multiple choices; very few were open-ended. This was done to facilitate data processing and to avoid ambiguous responses. Finally the questions were divided in several separate questionnaires; each one to be answered by a different person associated with the same graduate fellow training activity (Appendices 1-6).
- Questionnaire 1 for the graduate fellow is divided into sections covering biodata, fellowship, career, publications, ILRI environment, administration of training by

ILRI, conceptualisation and development of research project, thesis development, university environment and NARS environment.

- Questionnaire 2A is intended for university supervisors. It contains questions assessing the contribution of the supervisors in guiding students and their assessment of the environments in ILRI and NARS.
- ILRI supervisors complete Questionnaire 2B. They give information regarding their interaction with the student, their opinion on the student's abilities and assessed the training environment within ILRI.
- Current NARS supervisors complete Questionnaire 3A or 3B depending on whether they were the supervisor at the time of the award of the fellowship. The questionnaires focus on soliciting information on students' skills acquired at ILRI and university environments.
- Team leaders, deans and chairpersons of university departments complete Questionnaire 4. They provide information on career development and insight on training at ILRI versus non-ILRI and African versus outside Africa context.

The following statement prefaced each questionnaire: *The purpose of this Review is to assess the value and impact of the ILRI Graduate Fellow programme as a whole over the past 20 years. It is not a review of any individual graduate student, nor of any supervisor, registering university or NARS institute, and data will remain confidential.*

The questionnaires were pre-tested in Ethiopia with a subsample of graduate fellows and supervisors.

Sample size

To define the size of the sample, the team addressed the question 'How many graduate fellows will be enough to provide meaningful results?' Following guidelines from the literature (Neuman 1997) and the advice of the ILRI biometrician, we realised that for a small population (under 100), a large sampling ratio (about 30%) is needed for high degree of accuracy.

Application of the questionnaires

ILRI maintains a database of all trainees in all categories of technical and scientific training. This amounts to nearly 3500 training activities over the 1977 to 1997 period. All graduate fellows were extracted from this database and from this subset a list of Kenyan and Ethiopian graduate fellows was developed. For each graduate fellow details available included their name, years at ILRI, degree, university of registration, supervisors' names, thesis area and employer.

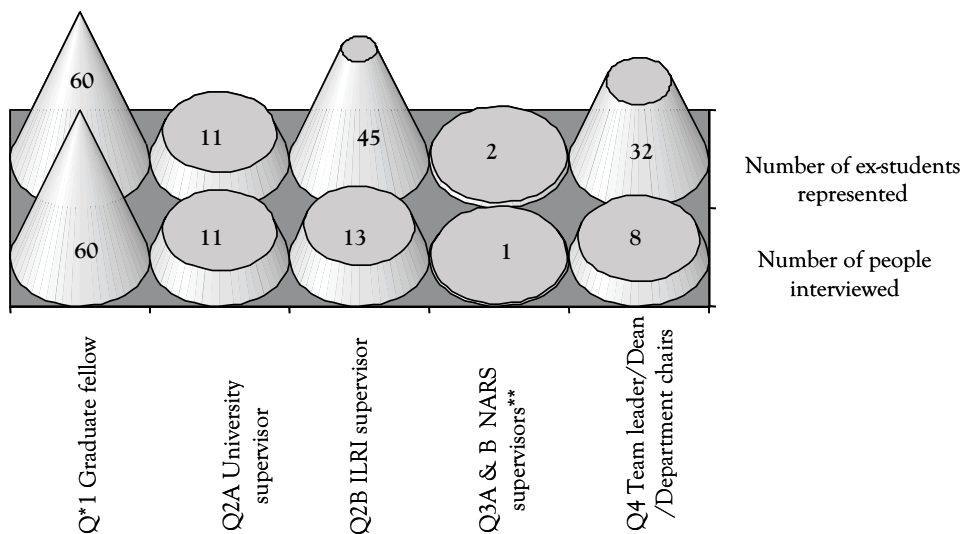
Both Kenya and Ethiopia had just over 60 graduate fellows each and a 50% sample size of 30 graduate fellows from both was selected. No sample stratification was deemed necessary since there was little significant variation within the graduate fellow population in terms of educational background, age and employing institution. The variation that

was found relating to, for example, the choice of registering university was random and considered as having no direct bearing on the outcome of the study.

In both Kenya and Ethiopia external consultants were hired to conduct the interviews. Both consultants were faculty members of university departments, were trained to doctoral level and neither had a vested interest in ILRI. They were each given the list of graduate fellows within their own country and asked to contact 30 at random. The consultants identified the whereabouts of the graduate fellows using the employer's address on the database as the first place for contact.

Almost without exception ILRI graduate fellows are NARS employees before their fellowship and are bonded to return to their employer. Consequently, contact for the majority was not too difficult, although one or two individuals had left employment and others were not available as they were away on study leave. Eventually 30 who were available for interview were reached. Over a one-month period the consultants interviewed in person all subjects.

The first part of the study stressed the graduate fellows themselves, however, where they were available their university, ILRI and NARS supervisors were also interviewed. The numbers of each are given in Figure 1 where, as expected, the number of respondents for each questionnaire reduced quite dramatically from Questionnaires 1 to 4. For example, as many of the registering universities were in Europe and North America, university supervisors were unlikely to be interviewed in person, thereby preventing exact comparisons. Also several ILRI and NARS supervisors were expected to have left and/or



*Q = questionnaire

**NARS supervisors = Q3A for current supervisor who was also the supervisor prior to the fellowship
Q3B is current supervisor who was not the supervisor prior to the fellowship

Figure 1. Number of people interviewed and number of ex-students represented using questionnaires.

had more than one student. Finally as several trainees came from the same institutions, Questionnaires 3 and 4 would have the least number of respondents of all.

Compilation and reporting of results

The raw data were coded, cleaned and entered into computers for subsequent analysis using SPSS (Statistical Package for Social Science) software.

Coding involved assigning numerical values to verbal answers to enable analysis. After all the coding was completed, a codebook was prepared to describe the coding procedures and the location of the data variables.

During data entry care was taken to detect errors and omissions. Data cleaning also involved checking the categories of all variables for impossible codes and entry errors. Analysis of data started with generation of basic frequency and descriptive tables. The frequency distributions and averages of all variables helped identify coding or entry errors and these were corrected. Outliers were checked against the original questionnaires.

A consultant, independent of the ILRI training programme, did all data coding, cleaning and analysis. This consultant was not involved with the data collection and like those who collected the data, had no vested interest in the outcome of the study.

Results were classified by nationality (Kenya and Ethiopia). Further classification by gender or other variables of interest was not attempted because of the small sample size. Even though this publication provides tools and methods on the impact of graduate fellowship, only results from the application of Questionnaire 1 are tabulated in Appendix 7. The aim is to highlight the results and to enable those interested in future impact studies in Ethiopia, Kenya or other African countries to use the data presented in this study as a benchmark. The next section reveals the need for further studies that treat certain issues in more depth, e.g. cumulative effect of training and the challenge to separate the effect of ILRI's training with that obtained elsewhere.

Strengths and weaknesses of the approach

The tools used in this study combined both participant questionnaires and an interview process. This is the preferred methodology for impact assessment. The depth of the questions and the identity of the respondents allowed us to assess many aspects of impact as well as evaluate the training programme itself. While inclusion of the supervisors interviewed in the methodology was not as widely used as desired, recent work in the area of training impact assessment reinforces the need and importance of this feedback (Abernathy 1999).

Our emphasis was ILRI's involvement in impact assessment and Questionnaires 1 and 2b were the principal components of the instruments that were used. Subsequent work will make more use of the other components to make a more thorough assessment.

Using retention of ex-graduate fellows within the NARS as the principal indicator of contribution to capacity building is not ideal. It is not a true indicator of impact although it is an indicator of capacity building or institutional strengthening. However, it must be remembered that although ILRI has control over the capacity building success it has little control over the use of that increased capacity by the NARS. These are dependent upon many external factors.

The difficulty remains, however, as to what constitutes impact and to whom may it be attributed. The study does consider the cumulative effect of training and the challenge is to separate the effect of ILRI's training with that obtained elsewhere. There appear to be no tools available to tease out these factors and attempts to do so will involve substantial trial and error.

Inevitably, the assessment of training impact will have to address the changing context of the national systems and the multiple actors involved in development. Collaboration with other international agricultural research centres (e.g. ISNAR), regional associations and the NARS themselves will be essential.

Principal lessons from the study

Although preliminary in nature the assessment study has provided insight into the programme, namely:

- ILRI provides a high quality environment for graduate students
- the graduate training programme contributes to capacity building in NARS
- an assessment programme is useful to ILRI

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Appendix 1: Questionnaire 1

To be completed by the graduate fellow

Questionnaire 1. To be completed by the graduate fellow

Section A. Biodata

1. Name of graduate fellow
Family name
First name
2. Nationality
3. Gender
 - 1) Male
 - 2) Female
4. Date of birth (dd/mm/yy)
5. Give the details of all degrees (for example, BSc, MSc, DEA etc.) awarded PRIOR to the ILRI fellowship. For each, name the degree and provide the awarding university and dates (start/end).

Name of university	Degree awarded	Date of registration (dd/mm/yy)	Date of graduation (dd/mm/yy)
1.			
2.			
3.			

6. Give the details of any degrees (for example, PhD) awarded SUBSEQUENT to the ILRI fellowship. Name the degree and provide the awarding university and dates (start/end).

Name of university	Degree awarded	Date of registration (dd/mm/yy)	Date of graduation (dd/mm/yy)
1.			
2.			
3.			

Section B. ILRI graduate fellowship

7. Give details of your university registration connected with your ILRI graduate fellowship
Name of registering university
Department
Date of registration (dd/mm/yy)
Date of submission of thesis (dd/mm/yy)
Date of degree award (dd/mm/yy)
Degree awarded: MSc/Mphil/PhD/Other

8. Were you registered at university prior to being awarded an ILRI graduate fellowship?

1) Yes 2) No

If yes, explain who paid your registration fees (for example, home institute or a DAAD or British Council scholarship).

.....
.....

If you registered after coming to ILRI what influenced your choice of university (for example, employment as a faculty member, ILRI made the choice). Please explain.

.....
.....

9. Dates of graduate fellowship (month/year): Start.....

Finish

10. Names of degree supervisors

University supervisor

ILRI supervisor

Other supervisor (specify).....

11. Name your ILRI duty station for your degree research

(Addis Ababa/Debre Zeit/Nairobi/Ibadan/Niamey/other)

.....

12. Thesis title

.....

.....

.....

13. General area of research (e.g. economics, immunology, forages):

.....

.....

14. Name the source of financial support for your personal costs (stipend, insurances),

ILRI or external donor (for example, DAAD, WHO, Rockefeller)

.....

.....

15. How were you recruited into the ILRI graduate fellowship programme?

In response to an advertisement 1) Yes 2) No

Through a collaborative research project between either your institute or university and ILRI? 1) Yes 2) No

(give details)

.....

.....

.....

Other (give details).....
.....
.....
.....

Section C. Career

16. Were you employed prior to the start of your fellowship? 1) Yes 2) No

If yes, for each period of employment please give

Most recent period

Name of employer

City and country.....

Your job title.....

Salary (in US\$) /month

Date of employment (month/year): startend

Prior to the most recent period

Name of employer

City and country.....

Your job title.....

Salary (in US\$) /month

Date of employment (month/year): startend

17. Did you remain in employment during your graduate fellowship?

1) Yes 2) No

18. Were you employed six months after completion of your ILRI Graduate Fellowship?

1) Yes 2) No

If yes

Job Title: 1) Same as before fellowship 2) Senior position 3) Junior position

Employer : 1) Same as before fellowship 2) Different

Was your employer a ministry/research institute/university/other (specify)?

.....

Date of employment (month/year): startend

Was your degree necessary for this position? 1) Yes 2) No

Salary (in US\$) / month

19. Subsequent employment history, for each position provide

First employment

Employer.....

Position.....

Date of employment (month/year): startend

Was your degree necessary for this position? 1) Yes 2) No

Second Employment

Employer.....

Position.....

Date of employment (month/year): startend

Was your degree necessary for this position? 1) Yes

2) No

Section D. Publications

20. Give details of your publications (e.g. journal articles, conference papers/poster, internal reports etc) including the specific citation (please provide full citation details and use a separate page if necessary).

From research work undertaken prior to your ILRI graduate fellowship

Refereed journals

1.
.....
2.
.....

Conference papers/poster

1.
.....
2.
.....

Internal reports

1.
.....
2.
.....

From research work undertaken during your ILRI Graduate Fellowship

Refereed journals

1.
.....
2.
.....

Conference papers/poster

1.
.....
2.
.....

Internal reports

1.
.....

2.
.....

From research undertaken subsequent to your ILRI Graduate Fellowship
Refereed journals

1.
.....
2.
.....

Conference papers/poster

1.
.....
2.
.....

Internal reports

1.
.....
2.
.....

Section F. ILRI environment

21. In general, how often did you talk with your ILRI supervisor about your research?
1) Daily 2) Weekly 3) Monthly 4) Quarterly
22. What influenced the level of interaction?
Your location compared to that of your supervisor 1) Yes 2) No
Your supervisor's travel or work schedule 1) Yes 2) No
Mutual agreement 1) Yes 2) No
Other (give details)
.....
.....
23. In general, how were meetings with your ILRI supervisor arranged?
Had a formal appointment to meet with my supervisor? 1) Yes 2) No
Supervisor insisted on regular meetings? 1) Yes 2) No
24. How do you evaluate your ILRI supervisor's support as for the following (circle one)
(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)
- | | |
|-----------------------|---------------|
| Moral support | 1 / 2 / 3 / 4 |
| Intellectual support | 1 / 2 / 3 / 4 |
| Interest in your work | 1 / 2 / 3 / 4 |
25. Were you integrated into a research team or did you work independently?
1) Team 2) Independent

If independent, why?

Physical location 1) Yes 2) No

Nature of project 1) Yes 2) No

Excluded from team 1) Yes 2) No (please explain)

.....

.....

.....

Other (explain)

.....

.....

.....

26. As a result of your stay with ILRI, how much did you gain in terms of scientific knowledge outside the specific skills required by your research project?

1) None 2) Some 3) Many

If some or many, how was this knowledge acquired?

Participated in team meeting 1) Yes 2) No

Participated in project meetings 1) Yes 2) No

Participated in project development 1) Yes 2) No

Teaching/demonstration 1) Yes 2) No

Working with other graduate fellows/ILRI scientists 1) Yes 2) No

Others (give details)

.....

.....

If none, why not

Location of my project prevented interaction with others 1) Yes 2) No

Too busy with my own project 1) Yes 2) No

No opportunity given by others for interaction 1) Yes 2) No

My supervisor discouraged such interactions 1) Yes 2) No

27. How much time did you spend on your own research project compared to other ILRI research activities? 1) >90% 2) 75-90% 3) 50-75% 4) <50%

Section G. Administration of training by ILRI

28. Did ILRI provide your stipend?

1) Yes 2) No

Accommodation or housing allowance?

1) Yes 2) No

29. Rank the quality of the contribution by ILRI's Training Department to the following (Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)

Travel arrangements to and from ILRI 1 / 2 / 3 / 4

Recruitment into your graduate fellowship 1 / 2 / 3 / 4

Response to and assistance with personal problems 1 / 2 / 3 / 4

Interactions with your registering university 1 / 2 / 3 / 4

30. Have you used the ILRI Training Policies and Procedures Manual?

1) Yes 2) No

If yes, how useful was it for explaining procedures?

(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)

For recruitment 1 / 2 / 3 / 4

For issues concerning proposal development, supervision/
thesis preparation 1 / 2 / 3 / 4

For interacting with your registering university 1 / 2 / 3 / 4

Related to your contract and support package 1 / 2 / 3 / 4

Section H. Conceptualisation and development of your research project

31. Estimate the contribution to the conceptualisation of your research project.

Yourself: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

ILRI supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

University supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

32. Estimate the contribution to the expansion of the concept into a full proposal and work-plan?

Yourself: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

ILRI supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

University supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

33. Estimate the contribution to methods of data collection and analysis of research project.

Yourself: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

ILRI supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

University supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

34. Estimate the contribution to software selection for analysis of your research project.

Yourself: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

ILRI supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

University supervisor: 1) None 2) Less than 25% 3) 25-50% 4) Less than 75%

35. Was your ILRI supervisor open to your suggestions for project proposal development or modifications?

1) Yes 2) No

36. Did you present your research proposal in written form to your

Registering university 1) Yes 2) No

Home NARS institute 1) Yes 2) No

37. Did you present your research proposal as a seminar to

ILRI 1) Yes 2) No

University 1) Yes 2) No

Home NARS institute 1) Yes 2) No

38. Were you required to provide regular quarterly reports to
- | | | |
|-----------------------------------|--------|-------|
| ILRI supervisor | 1) Yes | 2) No |
| ILRI training department | 1) Yes | 2) No |
| University supervisor | 1) Yes | 2) No |
| Employer | 1) Yes | 2) No |
| Was this exercise helpful to you? | 1) Yes | 2) No |

Section I. Thesis development

39. Did you prepare an outline for your thesis? 1) Yes 2) No
 If yes, did you prepare the outline (circle one)
- 1) Alone
 - 2) With your ILRI supervisor
 - 3) With your university supervisor
 - 4) With your ILRI and university supervisor
- If no, was it presented to you by a supervisor? 1) Yes 2) No
40. In your opinion did your supervisors make a significant contribution to the thesis preparation?
- | | | |
|-----------------------|--------|-------|
| ILRI supervisor | 1) Yes | 2) No |
| University supervisor | 1) Yes | 2) No |
- Did your supervisors return drafts of your thesis to you in reasonable time?
- | | | |
|-----------------------|--------|-------|
| ILRI supervisor | 1) Yes | 2) No |
| University supervisor | 1) Yes | 2) No |
41. What was the time from submission of thesis to University to date of examination?
months.
 Comment if necessary
42. How much did the ILRI Training Department contribute to the development of your thesis?
 1) None 2) Little 3) Some 4) Lot
43. How could ILRI's graduate fellowship programme be improved? (Please comment.)

Section J. University environment

44. Where was the location of your registering university relative to your ILRI research location?

- 1) Same town 2) Same country 3) Same continent 4) Different continent

45. How frequently did you meet with your university supervisor?

- 1) Weekly 2) Monthly 3) Annually 4) More than annually 5) Only at thesis submission

46. How would you rank your supervisor's contribution to your graduate study?

(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)

University supervisor 1 / 2 / 3 / 4

ILRI supervisor 1 / 2 / 3 / 4

47. What was the period of residence at your university, in months?

Prior to arrival at ILRI months

After departure from ILRI months

48. Did you receive course work at your university? 1) Yes 2) No

If yes, in general was it

Background material? 1) Yes 2) No

Relevant to your research at ILRI? 1) Yes 2) No

Relevant to your work in your home institution? 1) Yes 2) No

Section K. NARS environment

49. On completion of your degree did you return to the same research programme or university department in your home Institute you were in before you left?

- 1) Yes 2) No

50. Are you still in the same programme?

- 1) Yes 2) No

If no, are you still with the same NARS? 1) Yes 2) No

Have you been transferred to another research programme? 1) Yes 2) No

Have you been transferred out of research? 1) Yes 2) No

Are you still applying the technical skills gained at ILRI

to other research topics? 1) Yes 2) No

51. Are you currently working in the same research area as you did during your graduate programme?

- 1) Yes 2) No

52. How much contact did you have with your employer during the graduate fellowship?

- 1) Weekly 2) Monthly 3) Annually 4) More than annually 5) Not at all

53. Did your employer require you to formally report to them during your graduate fellowship?

- 1) Yes 2) No

If yes, how often?

- 1) Weekly 2) Monthly 3) Annually 4) More than annually 5) Not at all

54. Were your expected responsibilities following your degree studies discussed with you before your departure from ILRI?

- 1) Yes 2) No

55. What proportion of your time was/is spent in station or department management (as distinct from project management)?

Before your ILRI fellowship 1) >90% 2) 75-90% 3) 50-75% 4) <50%

Since your return 1) >90% 2) 75-90% 3) 50-75% 4) <50%

56. Have you attended as a participant any training events since completion of your degree?

1) Yes 2) No

If yes, please give description, location, date and donor for each

.....
.....
.....

57. Have you attended international meetings since completion of your degree?

1) Yes 2) No

If yes, give name, location, date and donor for each meeting

.....
.....
.....

Did you present a paper?

1) Yes 2) No

If yes, please give details.....

.....
.....
.....

Did you present a poster?

1) Yes 2) No

If yes, please give details.....

.....
.....
.....

58. Since leaving ILRI have you undertaken a further degree or postdoctoral training?

1) Yes 2) No

If yes, give details

.....
.....
.....

59. In your current position are resources limiting the use of your skills and knowledge fully?

1) Yes 2) No

If yes, are these limiting resources any of the following?

- Your position description and responsibilities 1) Yes 2) No
- Project funding 1) Yes 2) No
- Non-availability of e-mail 1) Yes 2) No
- Salary 1) Yes 2) No
- Number of support staff 1) Yes 2) No
- Quality of support staff 1) Yes 2) No
- Laboratory/field facilities 1) Yes 2) No
- Transport 1) Yes 2) No

Other (please explain).....

60. During your ILRI graduate fellowship what interaction do you have with ILRI Information Services?

- Did you join ILRI's SDI service? 1) Yes 2) No
- Do you still receive SDI outputs from ILRI? 1) Yes 2) No
- Do you request literature searches from ILRI? 1) Yes 2) No

61. Have you submitted any project proposals to donors since your return?

- 1) Yes 2) No

If yes, to which donor (List all donors)

Donors	Status (1 = Approved, 2 = Rejected, 3 = still under review)
Proposal 1	
1.	
2.	
3.	
4.	
Proposal 2	
1.	
2.	
3.	
4.	
Proposal 3	
1.	
2.	
3.	
4.	

Repeat your answer on a separate page if you have written more than three project proposals

62. Were any of these joint proposals with ILRI scientists?

- 1) Yes 2) No

If yes, give details

.....
.....
63. Were any of these joint proposals with one of the NARS livestock networks associated with ILRI?

1) Yes 2) No

If yes, give details
.....
.....

64. Have you trained people since returning to your position?

1) Yes 2) No

If yes, how many?

	Number
Undergraduate	
Scientists - Msc	
- PhD	
Technicians	
Short courses for scientists	

65. Would this training have been possible without your graduate training?

1) Yes 2) No

66. Have you organised and run training courses?

1) Yes 2) No

Would this training have been possible without your graduate training?

1) Yes 2) No

67. Have you been a trainer for activities outside your institute/department?

1) Yes 2) No

If yes, for whom?
.....
.....

When?
.....
.....

Would this training have been possible without your graduate training?

1) Yes 2) No

68. Does your current position require you to provide scientific leadership? 1) Yes 2) No

If yes,

How many people do you supervise?

What operational budget do you manage?

.....

How much project funding have you brought to your team?

Would you have been able to do this before the ILRI training programme?

1) Yes 2) No

69. Which professional societies do you belong to?

1.
2.
3.
4.
5.
6.
7.
8.

Does your employer pay for the membership? 1) Yes 2) No

70. Do you have access to

Computer?

1) Yes 2) No

If yes, please give details.....

.....
.....
.....

E-mail?

1) Yes 2) No

If yes provide address

.....
.....
.....

Internet? 1) Yes 2) No

Fax? 1) Yes 2) No

Appendix 2: Questionnaire 2A

To be completed by the university supervisor

Questionnaire 2A. To be completed by the university supervisor

According to our records you were the supervisor of the following student:

Name of the student

Thesis title

Year of graduation

Date of attachment to ILRI

1. Estimate your contribution (in %) to the;
Conceptualisation of the student's research project
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Method of data collection/type of experiment
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Method of analysis
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Development of the full research proposal
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Software selection for the analysis
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Development of a thesis outline
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Thesis preparation
1) >90% 2) 75-90% 3) 50-75% 4) <50%
2. How frequently did you meet with the graduate fellow (physical or electronically)?
1) Weekly 2) Monthly 3) Quarterly 4) Annually
3. Did the student provide you with
A completed written research proposal? 1) Yes 2) No
Seminar on the completed proposal? 1) Yes 2) No
Regular progress reports? 1) Yes 2) No
4. What contribution did you make to the selection of the student for an ILRI graduate fellowship?
1) None 2) Interviewed 3) Correspondence with ILRI 4) Correspondence with student 5) Other
5. How do you rate the intellectual and analytical skills of the student?
(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)
At start of graduate programme 1 / 2 / 3 / 4
At completion of graduate programme 1 / 2 / 3 / 4
6. Was the research undertaken by the student at ILRI part of a wider research project within your department
1) Yes 2) No
If yes, how important a contribution did the graduate fellow make to the success of your research project?
1) None 2) Little 3) Moderate 4) Major

7. On completion, and in comparison to other students you have supervised, how do you rank the ability of the graduate fellow as a scientist?

- 1) Top 10%
- 2) Top 25%
- 3) Top 50%
- 4) Lower 50%

8. How effective was ILRI in the graduate education of the student?

(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent, 5 = No information)

- Providing research facilities 1 / 2 / 3 / 4 / 5
- Supervision 1 / 2 / 3 / 4 / 5
- Technical support 1 / 2 / 3 / 4 / 5
- Intellectual support 1 / 2 / 3 / 4 / 5
- Access to information services 1 / 2 / 3 / 4 / 5
- The overall research environment 1 / 2 / 3 / 4 / 5

9. How effective was the university in providing the following components of a graduate education for this student?

(Rank as, 1 = Poor 2 = Adequate 3 = Good 4 = Excellent)

- Appropriate course work 1 / 2 / 3 / 4
- Required technical skills 1 / 2 / 3 / 4
- Supervision 1 / 2 / 3 / 4
- Intellectual support 1 / 2 / 3 / 4
- Access to information services 1 / 2 / 3 / 4
- Administrative support 1 / 2 / 3 / 4

10. How effective was ILRI Training Department in providing support for this fellowship?

(Rank as, 1 = Poor 2 = Adequate 3 = Good 4 = Excellent 5 = No information)

- Advertising the fellowship 1 / 2 / 3 / 4 / 5
- Recruitment to the fellowship 1 / 2 / 3 / 4 / 5
- Entry into ILRI 1 / 2 / 3 / 4 / 5
- Administrative support during graduate fellowship at ILRI 1 / 2 / 3 / 4 / 5
- Linkage to registering university 1 / 2 / 3 / 4 / 5
- Reporting process 1 / 2 / 3 / 4 / 5
- Examination process 1 / 2 / 3 / 4 / 5
- Departure from ILRI 1 / 2 / 3 / 4 / 5
- Dealing with personal problems of the student 1 / 2 / 3 / 4 / 5

11. How do you believe ILRI can improve their graduate programme?

.....

.....

.....

.....

.....

.....

Appendix 3: Questionnaire 2B

To be completed by the ILRI supervisor

Questionnaire 2B. To be completed by the ILRI supervisor

According to our records you were the supervisor of the following student:

Name of the student

Thesis title

.....

.....

.....

Year of graduation

Date of attachment to ILRI

Registering university

1. Estimate your contribution (in %) to the
Conceptualisation of the student's research project
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Development of the full research proposal
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Development of a thesis outline
1) >90% 2) 75-90% 3) 50-75% 4) <50%
Thesis preparation
1) >90% 2) 75-90% 3) 50-75% 4) <50%
2. How frequently did you meet with the graduate fellow (physical or electronically)?
1) Daily 2) Weekly 3) Monthly 4) Quarterly
3. What influenced the level of interaction?
Your location compared to that of the student 1) Yes 2) No
Your student's travel or work schedule 1) Yes 2) No
Mutual agreement 1) Yes 2) No
Other (give details)
4. In general, how were meetings with your student arranged?
Did you make a formal arrangement to meet with the student?
1) Yes 2) No
Did you insist on regular meetings?
1) Yes 2) No
5. Did the student provide you with:
A completed written research proposal? 1) Yes 2) No
Seminar on the completed proposal? 1) Yes 2) No
Regular progress reports? 1) Yes 2) No

6. What contribution did you make to the selection of the student?
None / interviewed / correspondence with the student/correspondence with university/other
7. How do you rate the intellectual and analytical skills of the student?
(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)
- | | |
|-------------------------------------|---------------|
| At start of graduate programme | 1 / 2 / 3 / 4 |
| At completion of graduate programme | 1 / 2 / 3 / 4 |
8. On completion, and in comparison to other students you have supervised, how do you rank the ability of the graduate fellow as a scientist?
- | | |
|----------|-----|
| 1) Top | 10% |
| 2) Top | 25% |
| 3) Top | 50% |
| 4) Lower | 50% |
9. Was the research undertaken by the student at ILRI part of a collaborative research programme with your department?
1) Yes 2) No
- If yes, how important a contribution did the graduate fellow make to the success of your research project?
1) None 2) Little 3) Moderate 4) Major
10. In hindsight, would you have taken this student on a graduate fellow?
1) Yes 2) No
11. How effective was ILRI in providing a graduate education for the student?
(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)
- | | |
|----------------------------------|---------------|
| In providing research facilities | 1 / 2 / 3 / 4 |
| Supervision | 1 / 2 / 3 / 4 |
| Technical support | 1 / 2 / 3 / 4 |
| Intellectual support | 1 / 2 / 3 / 4 |
| Access to information services | 1 / 2 / 3 / 4 |
| The overall research environment | 1 / 2 / 3 / 4 |
12. How effective was the university in providing a graduate education for this student?
(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent)
- | | |
|--------------------------------|---------------|
| Appropriate course work | 1 / 2 / 3 / 4 |
| Required technical skills | 1 / 2 / 3 / 4 |
| Supervision | 1 / 2 / 3 / 4 |
| Intellectual support | 1 / 2 / 3 / 4 |
| Access to information services | 1 / 2 / 3 / 4 |
| Administrative support | 1 / 2 / 3 / 4 |
13. How effective was ILRI Training Department in providing support for this fellowship?
(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent, 5 = No information)
- | | |
|----------------------------|-------------------|
| Advertising the fellowship | 1 / 2 / 3 / 4 / 5 |
| Recruitment | 1 / 2 / 3 / 4 / 5 |
| Entry into ILRI | 1 / 2 / 3 / 4 / 5 |

Appendix 4: Questionnaire 3A

To be completed by the current NARS supervisor

5. How effective was ILRI in providing the following components of a graduate education for the student?

(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent, 5 = No information)

In providing research facilities	1 / 2 / 3 / 4 / 5
Supervision	1 / 2 / 3 / 4 / 5
Technical support	1 / 2 / 3 / 4 / 5
Intellectual support	1 / 2 / 3 / 4 / 5
Access to information services	1 / 2 / 3 / 4 / 5
The overall research environment	1 / 2 / 3 / 4 / 5

6. How effective was the university in providing a graduate education for this student?

(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent, 5 = No information)

Appropriate course work	1 / 2 / 3 / 4 / 5
Required technical skills	1 / 2 / 3 / 4 / 5
Supervision	1 / 2 / 3 / 4 / 5
Intellectual support	1 / 2 / 3 / 4 / 5
Access to information services	1 / 2 / 3 / 4 / 5
Administrative support	1 / 2 / 3 / 4 / 5

7. How effective was ILRI Training Department in providing support for this fellowship?

(Rank as: 1 = Poor, 2 = Adequate, 3 = Good, 4 = Excellent, 5 = No information)

Advertising position	1 / 2 / 3 / 4 / 5
Recruitment	1 / 2 / 3 / 4 / 5
Entry into ILRI	1 / 2 / 3 / 4 / 5
Administrative support during graduate fellowship	1 / 2 / 3 / 4 / 5
Linkage to registering university	1 / 2 / 3 / 4 / 5
Reporting process	1 / 2 / 3 / 4 / 5
Examination process	1 / 2 / 3 / 4 / 5
Departure from ILRI	1 / 2 / 3 / 4 / 5
Personal problems	1 / 2 / 3 / 4 / 5

Appendix 5: Questionnaire 3B

To be completed by the current NARS supervisor

Questionnaire 3B. To be completed by the current NARS supervisor

This questionnaire is for current supervisors who were NOT the supervisor PRIOR to the ILRI graduate fellowship.

Name of the student

Thesis title

.....

.....

Year of graduation

Date of attachment to ILRI

1. ILRI provides research training within Africa. Compared to graduate fellows who did their research exclusively outside Africa? How do you rate the ILRI graduate fellow's abilities to:

Formulate relevant research 1) Better 2) Same 3) Worse

Implement research 1) Better 2) Same 3) Worse

Write proposals 1) Better 2) Same 3) Worse

Use communication skills 1) Better 2) Same 3) Worse

2. As a result of the graduate fellowships, has your staff member shown improved:

Technical skills? 1) Yes 2) No

Scientific knowledge? 1) Yes 2) No

Conceptual skills? 1) Yes 2) No

Project management? 1) Yes 2) No

Supervising skills? 1) Yes 2) No

Communication skills? 1) Yes 2) No

Appendix 6: Questionnaire 4

To be completed by Team Leader/Dean/
Department Chairperson

Questionnaire 4: To be completed by Team Leader/Dean/Department Chairman

ILRI has contributed to training several graduates within your national system as part of its institutional development programme. We want to assess the value of this contribution by the following questionnaire.

Our records show the following graduate fellows as members of your team/faculty/department. The details of their names, degrees, dates, registering university and ILRI supervisor are given below:

Name of graduate fellow	Degree awarded	Start/end dates of degree programme	Registering university	ILRI supervisor
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

1. How many of the above are still within your station/team/department/programme/faculty?

2. For those who are not now within your station, what are reasons for their departure?
 1) Promotion 2) Transfer 3) Resignation 4) Death 5) Other (please state reason)

3. For those who are still with your team:
 Do the ILRI trained graduates function as productive members of your team compared to those trained elsewhere?
 1) Yes 2) No
 Do they collectively bring skills and knowledge not available from other team members?
 1) Yes 2) No

4. ILRI provides research training within Africa. Compared to graduate fellows who did their research exclusively outside Africa, how do you collectively rate the ILRI graduate fellow's abilities to:

Formulate relevant research? 1) Better 2) Same 3) Worse

Implement research? 1) Better 2) Same 3) Worse

Write proposals? 1) Better 2) Same 3) Worse

Use communication skills? 1) Better 2) Same 3) Worse

5. As a result of the graduate fellowships, has there been an improvement in your institution in:

Technical skills? 1) Yes 2) No

Scientific knowledge? 1) Yes 2) No

Conceptual skills? 1) Yes 2) No

Project management? 1) Yes 2) No

Supervising skills? 1) Yes 2) No

Communication skills? 1) Yes 2) No

Appendix 7

Results from application of Questionnaire 1

Appendix 7

Results from application of Questionnaire 1

Table A1. Graduate fellows by sex and nationality.

Sex	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Male	25	83.3	30	100	55	91.7
Female	5	16.7	0		5	8.3
Total	30		30		60	

Table A2. University attended for first degree before ILRI fellowship.

	No.	%
Kenyan		
University of Nairobi	21	70.0
Kenyatta University	3	10.0
Egerton University	1	3.3
University outside Kenya	5	16.7
Total	30	100
Ethiopian		
Alemaya University of Agriculture	19	63.3
Addis Ababa University	10	33.3
University outside Ethiopia	1	3.3
Total	30	100

Table A3. University attended in connection with ILRI fellowship.

	No.	%
Kenyan		
University of Nairobi	14	48.3
Kenyatta University	2	6.9
Egerton University	1	3.4
University outside Kenya	12	41.4
Total	29	100
Ethiopian		
Alemaya University of Agriculture	20	66.7
Addis Ababa University	-	-
University outside Ethiopia	10	33.3
Total	30	100

Table A4. Graduate fellows registered at university before award of the fellowship.

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Yes	21	70	27	93.1	48	81.4
No	9	30	2	6.9	11	18.6
Total	30		29		59	

Table A5. *Source of funds for prior registration.*

Source of funds	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Home institution	6	33.3	17	68.0	23	53.5
DAAD	6	33.3	4	16.0	10	23.3
Other donors	5	27.8	2	8.0	7	16.3
Own private fund	1	5.6	2	8.0	3	7.0
Total	18		25		43	

Table A6. *Degree awarded/to be awarded post ILRI fellowship.*

	Kenyan		Ethiopians		Total	
	No.	%	No.	%	No.	%
MSc/MPhil	10	33.3	18	60.0	28	46.7
PhD	15	50.0	7	23.3	22	36.7
Incomplete	1	3.3			1	1.7
Yet to be awarded (MSc)	3	10.0	4	13.3	7	11.7
Yet to be awarded (PhD)	1	3.3	1	3.3	2	3.3
Total	30		30		60	

Table A7. *Means of recruitment of graduate fellows.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Advertisement	5	16.7	11	40.7	16	28.1
Collaborative projects	18	60.0	14	51.9	32	56.1
Other means (mainly applications)	7	23.3	2	7.4	9	21.1
Total	30		27		57	

Table A8. *Duration of the graduate fellowship (months).*

Average duration of fellowship	Kenyan			Ethiopian			Total		
	Mean	Range	No.	Mean	Range	No.	Mean	Range	No.
MSc	13.00	9–17	6	16.43	3–26	14	15.40	3–26	20
MPhil				26.00	-	1	26.00	-	1
PhD	38.6	14–60	10	29.17	15–51	6	35.06	14–60	16

Table A9. *Financial source for personal costs during the fellowship.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
ILRI	11	39.3	13	43.3	24	41.4
DAAD and ILRI	3	10.7	1	3.3	4	6.9
ILRI and home institution/university	5	17.9	1	3.3	6	10.3
SAREC and ILRI			1	3.3	1	1.7
UNDP and ILRI			1	3.3	1	1.7
DAAD	2	7.1	4	13.3	6	10.3
Home institution/university	5	17.9	5	16.7	10	17.2
Other donors	2	7.1	4	13.3	6	10.3
Total	28		30		58	

Table A10. *General areas of research.*

Research area	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Economics/Agricultural Economics	4	13.3	4	13.3	8	13.3
Immunology	8	26.7			8	13.3
Forages	2	6.7	5	16.7	7	11.7
Animal Science (production/breeding/ nutrition)	3	10	12	40	15	25
Biochemistry	5	16.7	1	3.3	6	10
Demography	1	3.3			1	1.7
Animal Traction			1	3.3	1	1.7
Genetics	2	6.7	3	10	5	8.3
Parasitology	2	6.7	1	3.3	3	5
Soil Science			2	6.7	2	3.3
Dairy Science			1	3.3	1	1.7
Molecular Biology	2	6.7			2	3.3
Epidemiology	1	3.3			1	1.7
Total	30		30		60	

Table A11. *ILRI station for undertaking research.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Addis Ababa (Ethiopia)	2	6.7	13	43.3	15	25.0
Debre Zeit (Ethiopia)	1	3.3	6	20.0	7	11.7
Nairobi (Kenya)	22	73.3	2	6.7	24	40.0
Mombasa (Kenya)	2	6.7			2	3.3
Holetta (Ethiopia)			2	6.7	2	3.3
Abernessa ranch (Ethiopia)			1	3.3	1	1.7
Selale (Ethiopia)			1	3.3	1	1.7
Welaita Sodo (Ethiopia)			1	3.3	1	1.7
Debre Birhan (Ethiopia)	1	3.3	2	6.7	3	5.0
KARI Muguga (Kenya)	1	3.3			1	1.7
Khuaga (Kenya)	1	3.3			1	1.7
Awassa (Ethiopia)			1	3.3	1	1.7
Other			1	3.3	1	1.7
Total	30		30		60	

Career

Table A12. *Graduate fellows employed before fellowship, remained employed during fellowship and employed six months after completion.*

	Kenyan (%)	Ethiopian (%)	Total (%)
Employment condition			
Employed before fellowship	71.4	100	86.0
Remain employed during fellowship	68.2	89.7	80.4
Employed after six months of completion	88.9	83.3	86.3

Table A13. *Employers of graduate fellows (most recent period) before fellowship.*

Employers	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Ministry/government bureaus	1	5.0	10	33.3	11	22.0
Research institute	8	40.0	4	13.3	12	24.0
University/college	10	50.0	16	53.3	26	52.0
Companies/organisations	1	5.0			1	2.0
Total	20		30		50	

Table A14. *Salary per month (US\$).*

Salary	Kenyan		Ethiopian		Total	
	Mean	No.	Mean	No.	Mean	No.
Before	645.45	11	218.44	29	335.87	40
After completion	676.92	22	262.53	24	461.05	46

Salary/month (US\$) of the graduate fellow by degree after completion						
MSc	506.25	10	247.53	17		
PhD	950.00	12	375.00	6		
Total	676.92	22	262.53	23		

Table A15. *Job title of graduate fellow six months after completion.*

Job title	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Same as before fellowship	3	21.4	7	38.9	10	31.3
Senior position	10	71.4	11	61.1	21	65.6
Junior position	1	7.1			1	3.1
Total	14		18		32	
Importance of the degree						
Important	18	94.7	15	78.9	33	86.8
Not important	1	5.3	4	21.1	5	13.2
Total	19		19		38	

Table A16. *Employers of graduate fellows six months after completion.*

Employers of graduate fellow	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Same as before fellowship	8	66.7	12	75.0	20	71.4
Different	4	33.3	4	25	8	28.6
Total	12		16		28	
Sector						
Ministry	2	9.1	8	42.1	10	24.4
Research institute	12	54.5	3	15.8	15	36.6
University/college	8	36.4	8	42.1	16	39.0
Total	22		19		41	

Publications

Table A17. Mean number of publications* produced by graduate fellows.

		Kenyan	Ethiopian	Total
Before	Journal	3.18 (11)	1.75 (4)	2.80 (15)
	Conference paper	3.4 (10)	2.71 (7)	3.12 (17)
	Internal report	1.0 (2)	1.77 (13)	1.67 (15)
During	Journal	2.46 (13)	1.82 (11)	2.17 (24)
	Conference paper	2.75(16)	1.83 (12)	2.36 (28)
	Internal report	2.25 (4)	2.0 (3)	2.14 (7)
Subsequent	Journal	8.92 (13)	4.13 (8)	7.10 (21)
	Conference paper	4.77 (13)	1.80 (10)	3.48 (23)
	Internal report	2.67 (3)	2.00 (8)	2.18 (11)

* Numbers in brackets indicate number of articles written.

ILRI environment

Table A18. Frequency of discussion with ILRI supervisor.

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Daily	18	60.0	7	25.0	25	43.1
Weekly	8	26.7	11	39.3	19	32.8
Monthly	3	10.0	4	14.3	7	12.1
Quarterly	1	3.3	2	7.1	3	5.2
As needed			4	14.3	4	6.9
Total	30		28		58	

Table 19. Factors influencing interaction between the graduate fellow and supervisor.

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Location of supervisor	19	82.6	14	56.0	33	68.8
Supervisor's work schedule	6	33.3	9	40.9	15	37.5
Mutual agreement	23	95.8	18	75.0	41	85.4

Table A20. Procedures for meeting with supervisor.

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Formal appointment	5	21.7	13	50.0	18	36.7
Regular meetings	22	78.6	6	28.6	28	57.1
Open to your suggestions	29	96	25	92.6	54	96.4

Table A21. *Evaluation of ILRI supervisor.*

	Moral support			Intellectual support			Interest in your work		
	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total
Poor	2 6.7%	2 7.1%	4 6.9%		2 7.1%	2 3.5%	1 3.4%	2 7.1%	3 5.3%
Adequate	1 3.3%	4 14.3%	5 8.6%	3 10.3%	2 7.1%	5 8.8%	1 3.4%	2 7.1%	3 5.3%
Good	8 26.7%	6 21.4%	14 24.1%	5 17.2%	8 28.6%	13 22.8%	6 20.7%	2 7.1%	8 14.0%
Excellent	19 63.3%	16 57.1%	35 60.3%	21 72.4%	16 57.1%	37 64.9%	21 72.4%	22 78.6%	43 75.4%
Total	30 100%	28 100%	58 100%	29 100%	28 100%	57 100%	29 100%	28 100%	57 100%

Table A22. *Arrangements for undertaking the research.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Integrated (team)	16	53.3	10	34.5	26	44.1
Independent	14	46.7	19	65.5	33	55.9
Total	30		29		59	
Factors for working independently						
Physical location	3	21.4	5	26.3	8	24.2
Nature of project	14	100	17	89.5	31	93.9

Table A23. *Scientific knowledge gained outside the project area.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Some	15	50.0	11	39.3	26	44.8
Much	15	50.0	17	60.7	32	55.2
Total	30		28		58	

Table A24. *Sources of scientific knowledge*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Team meeting	20	80.8	10	38.5	30	58.8
Project meeting	20	83.3	11	44.0	31	63.3
Project development	12	54.5	9	39.1	21	46.7
Teaching/demonstration	13	61.9	7	30.4	20	45.5
Working with others	26	92.9	26	96.3	52	94.5

Table A25. *Time spent on the project compared to other ILRI activities.*

Time (%)	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
>90	22	73.3	24	82.8	46	78.0
75-90	7	23.3	3	10.3	10	16.9
50-75	1	3.3	2	6.9	3	5.1
Total	30		29		59	

Administration and training

Table A26. *Provision of stipend and housing allowance by ILRI.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Stipend	22	75.9	19	63.3	41	69.5
Accommodation/housing allowance	7	28.0	8	30.8	15	29.4

Table A27. *Evaluation of ILRI's Training Department by graduate fellows.*

	Quality of travel arrangement from/ to ILRI			Quality of recruitment to fellowship			Quality of response to personal problems			Quality of interactions with the university		
	Kenya	Ethiopia	Total	Kenya	Ethiopia	Total	Kenya	Ethiopia	Total	Kenya	Ethiopia	Total
Poor	4 16.7%	4 16.7%	8 16.7%	2 7.4%	5 20.8%	7 13.7%	5 20.0%	2 7.4%	7 13.5%	4 14.8%	8 29.6%	12 22.2%
Adequate	5 20.8%	2 8.3%	7 14.6%	2 7.4%	3 12.5%	5 9.8%	4 16.0%	5 18.5%	9 17.3%	6 22.2%	4 14.8%	10 18.5%
Good	8 33.3%	19 41.7%	27 37.5%	13 48.1%	6 25.0%	19 37.3%	6 24.0%	9 33.3%	15 28.8%	10 37.0%	9 33.3%	19 35.2%
Excellent	7 29.2%	8 33.3%	15 31.3%	10 37.0%	10 41.7%	20 39.2%	10 40.0%	11 40.7%	21 40.4%	7 25.9%	6 22.2%	13 24.1%
Total	24	24	48	27	24	51	25	27	52	27	27	54

Table A28. *Graduate fellows who used ILRI Training Policy and Procedures Manual.*

	Kenyan		Ethiopians		Total	
	No.	%	No.	%	No.	%
Yes	9	30.0	10	34.5	19	32.2
No	21	70.0	19	65.5	40	67.8
Total	30		29		59	

Table A29. *Usefulness of the training manual.*

	Recruitment			Preparation of proposal and thesis			Interaction with university			Contract and support package		
	Kenya	Ethiopia	Total	Kenya	Ethiopia	Total	Kenya	Ethiopia	Total	Kenya	Ethiopia	Total
Poor	1 16.7%		1 9.1%		2 28.6%	2 13.3%						
Adequate		1 20.0%	1 9.1%	4 50.0%	1 14.3%	5 33.3%	1 14.3%	2 33.3%	3 23.1%	1 14.3%	1 11.1%	2 12.5%
Good	2 33.3%	2 40.0%	4 36.4%	2 25.0%	3 42.9%	5 33.3%	4 57.1%	3 50.0%	7 53.8%	2 28.6%	5 55.6%	7 43.8%
Excellent	3 50.0%	2 40.0%	5 45.5%	2 25.0%	1 14.3%	3 20.0%	2 28.6%	1 16.7%	3 23.1%	4 57.1%	3 33.3%	7 43.8%
Total	6	5	11	8	7	15	7	6	13	7	9	16

Conceptualisation and development of the research project

Table A30. *Contribution to conceptualisation.*

Contribution (%)	Yourself			ILRI supervisor			University supervisor		
	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total
None	1 3.3%	3 10.3%	4 6.8%		3 10.7%	3 5.3%	9 31.0%	5 17.9%	14 24.6%
<25	4 13.3%	3 10.3%	7 11.9%	4 13.8%	8 28.6%	12 21.1%	7 24.1%	8 28.6%	15 26.3%
25-50	11 36.7%	7 24.1%	18 30.5%	9 31.0%	9 32.1%	18 31.6%	8 27.6%	12 42.9%	20 35.1%
>75	14 46.7%	16 55.2%	30 50.8	16 55.2%	8 28.6%	24 42.1%	5 17.2%	3 10.7%	8 14.0%
Total	30	29	59	29	28	57	29	28	57

Table A31. *Contribution to full proposal and work plan.*

Contribution (%)	Yourself			ILRI supervisor			University supervisor		
	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total
None		2 6.9%	2 3.5%				8 33.3%	4 13.8%	12 22.6%
<25	1 3.6%	2 6.9%	3 5.3%	3 13.0%	9 34.6%	12 24.5%	7 29.2%	11 37.9%	18 34.0%
25-50	8 28.6%	8 27.6%	16 28.1%	9 39.1%	12 46.2%	21 42.9%	6 25.0%	11 37.9%	17 32.1%
>75	19 67.9%	17 58.6%	36 63.2%	11 47.8%	5 19.2%	16 32.7%	3 12.5%	3 10.3%	6 11.3%
Total	28	29	57	23	26	49	24	29	53

Table A32. Contribution to data collection and analysis.

Contribution (%)	Yourself			ILRI supervisor			University supervisor		
	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total
None				3		3	9	5	14
				11.5%		5.5%	34.6%	17.2%	25.5%
<25		2	2	4	7	11	9	14	23
		6.7%	3.6%	15.4%	24.1%	20.0%	34.6%	48.3%	41.8%
25-50	7	9	16	13	15	28	6	8	14
	26.9%	30.0%	28.6%	50.0%	51.7%	50.9%	23.1%	27.6%	25.5%
>75	19	19	38	6	7	13	2	2	4
	73.1%	63.3%	67.9%	23.1%	24.1%	26.6%	7.7%	6.9%	7.3%
Total	26	30	56	26	29	55	26	29	55

Table A33. Contribution to software selection.

Contribution (%)	Yourself			ILRI supervisor			University supervisor		
	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total
None	2	2	4	1	5	6	12	15	27
	8.3%	6.9%	7.5%	4.0%	17.9%	11.3%	54.5%	51.7%	52.9%
<25	5	2	7	5	4	9	5	10	15
	20.8%	6.9%	13.2%	20.0%	14.3%	17.0%	22.7%	34.5%	29.4%
25-50	6	9	15	9	9	18	3	2	5
	25.0%	31.0%	28.3%	36.0%	32.1%	34.0%	13.6%	6.9%	9.8%
>75	11	16	27	10	10	20	2	2	4
	45.8%	55.2%	50.9%	40.0%	35.7%	37.7%	9.1%	6.9%	7.8%
Total	24	29	53	25	28	53	22	29	51

Table A34. Graduate fellows who submitted proposals in written form and presented the proposal as a seminar.

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Presented in written form						
To university	26	89.7	24	82.8	50	86.2
To NARS institute	10	62.5	10	41.7	20	50.0
Presented as a seminar						
To ILRI	10	34.5	9	33.3	19	33.9
To university	19	65.5	20	69.0	39	67.2
To NARS institute	6	37.5	5	20.8	11	27.5

Table A35. Were the quarterly reports helpful?

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Yes	23	85.2	22	81.5	45	83.3
No	4	14.8	5	18.5	9	16.7
Total	27		27		54	

Table A36. *Submission of quarterly reports.*

	To ILRI supervisor		To ILRI training department		To university supervisor		To employer	
	No.	%	No.	%	No.	%	No.	%
Kenyan	19	63.3	15	51.7	23	76.7	6	50.0
Ethiopian	18	69.2	15	60.0	15	55.6	5	21.7
Total	37	66.1	30	55.6	38	66.7	11	31.4

Thesis development

Table A37. *Preparation of the outline of the thesis.*

	Kenyans		Ethiopians		Total	
	No.	%	No.	%	No.	%
Alone	6	21.4	5	18.5	11	20.0
With ILRI supervisor	8	28.6	7	25.9	15	27.3
With university supervisor	3	10.7	5	18.5	8	14.5
With university and ILRI supervisor	11	39.3	10	37.0	21	38.2
Total	28		27		55	

Table A38. *Percentage supervisors who returned thesis within reasonable time.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
ILRI supervisor	26	89.7	14	66.7	40	80.0
University supervisor	18	64.3	22	88.0	40	75.5

Table A39. *Suggestions for improving the graduate fellowship programme.*

	Nationality					
	Kenya		Ethiopia		Total	
	No.	%	No.	%	No.	%
1. Academic						
1.1 Give seminars, workshops, training on computer use, proposal writing and presentation	5	15.2	-		5	8.1
1.2 Assign more than one supervisor—the experienced ones as principal	2	6.1			2	3.2
1.3 Better academic support, smooth & formal interaction between students, supervisors and training department	8	24.4	7	24.1	15	24.2
1.4 Graduate fellow should focus on technical and scientific works (not on data entry)			1	3.4	1	1.6
2. Administrative						
2.1 Improve the process and procedures of recruitment—more transparent criteria of admission	6	18.2	4	13.8	10	16.1
2.2 Provide and standardise stipend that would cover until final submission of thesis	1	3.0	2	6.9	3	4.8
2.3 Equal treatment of local graduate fellows and expatriates on provision of housing, stipend and support from assistants	3	9.1	8	27.6	11	17.7
2.4 Replace highly paid foreign staff with local ones			1	3.4	1	1.6
2.5 Invite national university supervisors			2	6.9	2	3.2
2.6 The programmes should be more open to NARS	1	3.0	2	6.9	3	4.8
2.7 Keep linkage after completion	1	3.0			1	1.6
3. General						
3.1 More focussed goal oriented programmes	1	3.0	1	3.4	2	3.2
3.2 Broaden mandate of the fellowship programme	1	3.0	-		1	1.6
4. Satisfied						
4.1 Satisfied with the current programme	4	12.1	1	3.4	5	8.1
Total	33		29		62	

University environment

Table A40. *Location of university in relation to ILRI.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Same town	12	41.4	1	3.4	13	22.4
Same country	4	13.8	18	62.1	22	37.9
Same continent	1	3.4			1	1.7
Different continent	12	41.4	10	34.5	22	37.9
Total	29		29		58	

Table A41. *Frequency of meeting with university supervisor.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Weekly	3	11.5	3	10.7	6	11.1
Monthly	12	46.2	6	21.4	18	33.3
Annually	6	23.1	7	25.0	13	24.1
>Annually	2	7.7	2	7.1	4	7.4
Only at thesis submission	1	3.8	3	10.7	4	7.4
Biannually			3	10.7	3	5.6
As needed	1	3.8	4	14.3	5	9.3
Never	1	3.8			1	1.9
Total	26		28		54	

Table A42. *Graduate fellows who received course work at university and type of course received.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Have you taken courses?						
Yes	19	65.5	21	72.4	40	69.0
No	10	34.5	8	7.6	18	31.0
Total	29	100	20	100	58	100
Type of course received						
Background material	14	87.5	21	100	35	94.6
Relevant to ILRI research	13	76.5	17	85.0	30	81.1
Relevant to home institution	7	77.8	19	95.0	26	89.7

NARS environment

Table A43. *Frequency of contact with employer during the fellowship programme.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Daily			1	3.8	1	2.4
Weekly	5	31.3	1	3.8	6	14.3
Monthly	2	12.5	11	42.3	13	31.0
Annually	6	37.5	4	15.4	10	23.8
>Annually	1	6.3	3	11.5	4	9.5
Not at all	2	12.5	6	23.1	8	19.0
Total	16	100	26	100	42	100

Table A44. *Graduate fellows formally reporting and discussing responsibilities.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Required to formally report to employer	8	47.1	9	33.3	17	38.6
Discuss your expected responsibilities	4	20.0	8	32.0	12	26.7

Table A45. *Career after completion of the fellowship programme.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Same programme after completion	15	62.5	19	76.0	34	69.4
Still in the same programme	8	33.3	13	52.0	21	42.9
Transferred to another research programme	5	55.6	7	53.8	12	54.5
Transferred out of research	1	9.1	2	16.7	3	13.0
Still applying skills gained at ILRI	13	100	10	76.9	23	88.5

Table A46. *Time spent in station or department management.*

	Before fellowship			After fellowship		
	Kenyan	Ethiopian	Total	Kenyan	Ethiopian	Total
>90.0%	3 (23.1%)	1 (4.0%)	4 (10.5%)	5 (35.7%)	1 (4.5%)	6 (16.7%)
75-90.0%	2 (15.4%)	1 (4.0%)	3 (7.9%)	3 (21.4%)	6 (27.3%)	9 (25.0%)
50-75.0%	3 (23.1%)	5 (20.0%)	8 (21.1%)	1 (7.1%)	6 (27.3%)	7 (19.4%)
<50.0%	5 (38.5%)	17 (68.0%)	22 (57.9%)	5 (35.7%)	8 (36.4%)	13 (36.1%)
Not at all		1 (4.0%)	1 (2.6%)		1 (4.5%)	1 (2.8%)
Total	13 (100%)	25 (100%)	38 (100%)	14 (100%)	22 (100%)	36 (100%)

Table A47. *Training and international meeting after completion.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Attended training after completion	11	50.0	15	60.0	26	55.3
Attended international meeting after completion	15	62.5	13	56.5	28	59.6
Presented a paper	11	61.1	10	50.0	21	55.3
Presented a poster	5	31.3	3	18.8	8	20.0

Table A48. *Graduate fellows who undertook degree training during 1978-97.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Yes	13	52.0	4	16.0	17	34.0
No	12	48.0	21	84.0	33	66.0
Total	25	100	25	100	50	100

Table A49. *Access to information and technology.*

Interaction with ILRI information services	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Joined ILRI's SDI service	11	42.3	13	68.4	24	53.3
Still receive ILRI's SDI outputs	7	29.2	9	42.9	16	35.6
Requested literature searches from ILRI	23	85.2	23	88.5	46	86.8
Number of professional societies to which graduate fellow belongs						
0	8	27.6	5	16.7	13	22.0
1	13	44.8	20	66.7	33	55.9
2	4	13.8	4	13.3	8	13.6
3	4	13.8	1	3.3	5	8.5
Total	29	100	30	100	59	100
Does employer pay membership fee?						
Yes	2	10.5			2	4.8
No	17	89.5	23	100	40	95.2
Total	19	100	23	100	42	100
Access to modern facilities						
Access to computer	25	96.2	22	88.0	47	92.2
Access to E-mail	21	80.8	13	52.0	34	66.7
Access to Internet	15	57.7	4	17.4	19	38.8
Access to fax	18	78.3	17	73.9	35	76.1

Table A50. *Limitation of resources in the current position.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Yes	15	62.5	21	84.0	36	73.5
No	9	37.5	4	16.0	13	26.5
Total	24	100	25	100	49	100

Table A51. *Areas in which resources are limiting factors.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Position description and responsibilities	4	30.8	4	28.6	8	29.6
Project funding	11	84.6	17	89.5	28	87.5
Unavailability of e-mail	6	46.2	10	58.8	16	53.3
Salary	12	80.0	8	53.3	20	66.7
Number of supporting staff	3	25.0	9	50.0	12	40.0
Quality of support staff	7	50.0	11	68.8	18	60.0
Laboratory/field facilities	11	84.6	18	94.7	29	90.6
Transport	9	69.2	15	88.2	24	80.0

Table A52. *Proposals submitted to donors after completion.*

Did you submit proposals	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Yes	12	50.0	14	56.0	26	53.1
No	12	50.0	11	44.0	23	46.9
Total	24	100	25	100	49	100
Share of joint effort out of the total submissions						
Joint proposals with ILRI scientists	5	41.7	2	14.3	7	26.9
Joint proposals associated with ILRI	2	16.7	5	35.7	7	26.9

Table A53. *Training and scientific leadership offered by graduate fellows after completion.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
On training						
Trained people after return	17	73.9	15	60.0	32	66.7
Organized and run training courses	9	39.1	5	20.8	14	29.8
Trainer outside the institute/department	11	45.8	6	26.1	17	36.2
On scientific leadership						
Provide scientific leadership at current position	16	69.6	16	72.7	32	71.1
Were able to be scientific leaders before the programme	2	20.0	3	33.3	5	26.3

Table A54. *First and second degrees awarded before ILRI fellowship.*

	First degree								Second degree					
	BSc/BA/BE		DVM		BVM/BVSc		Total		Msc/MVM		No 2nd degree		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Kenya	22	71	1	3.2	8	25.8	31	100	17	56.7	13	43.3	30	100
Ethiopia	27	90	3	10			30	100	8	26.7	22	73.3	30	100
Total	49	80.3	4	6.6	8	13.1	61	100	25	41.7	35	58.3	60	100

Table A55. *Job title of graduate fellow before fellowship (most recent period).*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
Civil servant			2	6.7	2	4.1
Researcher/co-ordinator	8	42.1	4	13.3	12	24.5
Lecturer	10	52.6	16	53.3	26	53.1
Company/organisation employee	1	5.3			1	2.0
Expert			5	16.7	5	10.2
Economist			3	10.0	3	6.1
Total	19	100	30	100	49	100

Table A56. *Contribution of ILRI training department to thesis development.*

	Kenyan		Ethiopian		Total	
	No.	%	No.	%	No.	%
None	10	35.7	6	25.0	16	30.8
Little	4	14.3	6	25.0	10	19.2
Some	11	39.3	9	37.5	20	38.5
Lot	3	10.7	3	12.5	6	11.5
Total	28	(100%)	24	(100%)	52	(100%)