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منظمة الأغذية  
والزراعة  
للأمم المتحدة

联合国  
粮食及  
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Food  
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Agriculture  
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Organisation  
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pour  
l'alimentation  
et  
l'agriculture

Organización  
de las  
Naciones  
Unidas  
para la  
Agricultura  
y la  
Alimentación

## DESERT LOCUST CONTROL COMMITTEE

### Thirty-eighth Session

Rome, 11-15 September 2006

### DESERT LOCUST TRAINING PROGRAMME (Agenda Item 6c)

#### 1. INTRODUCTION

The locust emergency that erupted in late 2003 in the Western Region of the Desert Locust distribution area and the ensuing large-scale mobilization of additional staff highlighted the insufficient number of trained personnel in the region and the inadequacies of Desert Locust knowledge and management. As a result and as part of the planning of locust control activities for 2005, a vast and ambitious training-of-trainers (ToT) programme was drawn up in November and December 2004 for the benefit of the ten countries of the Western Region, namely the four frontline Sahel countries (Chad, Mali, Mauritania, Niger) and Senegal and the five countries generally referred to as the Southern Circuit countries (Burkina Faso, Cape Verde, Gambia, Guinea, Guinea Bissau). The outline of a training strategy was also presented and agreed upon during the Extraordinary Session of the DLCC held in Rome from 29 November to 2 December 2004. This programme, which became operational before the beginning of the 2005 summer campaign, was designed to unfold in three successive stages: a regional master-trainer training session, national training sessions and national workshops to evaluate acquired know-how. It led to the qualification of 20 experts and technicians as master trainers and the basic or refresher training of some 600 technical staff of the agricultural services of the ten countries concerned.

#### 2. PREPARATORY PHASE OF THE PROGRAMME

##### 2.1. Context and preparation of the Programme

One of the major weaknesses to come to light during the locust control campaign of 2004 was the capacity of certain countries to manage a Desert Locust emergency. The number of experts and technicians with proper training in the various domains of acridology was in fact extremely limited in the Western Region and more particularly in the Sahel countries. The Desert Locust control units barely had the staff to deal with recession situations and had to call upon field staff from the plant protection and agriculture services. While some of the staff had already dealt with locust upsurge situations, the last Desert Locust upsurge had occurred in the late 1980s, since when their knowledge had remained largely unchanged.

The quality of a country's response to a locust emergency depends largely on its technical competence in the fields of locust surveys and information, locust control and campaign management, provided supplies and equipment are available and field staff have been trained in their use.

On the basis of these observations and the experience and results gained in the Central Region of the Desert Locust distribution area, an international consultant acridologist was recruited at FAO Headquarters for six weeks, in November 2004, and tasked with designing a detailed trainer-training programme with a heavy emphasis on practical exercises; with defining the topics that needed to be taught and transferred; and with compiling an inventory of training materials and facilitator profiles. Using the FAO Desert Locust Guidelines and the Master Trainer Manual prepared for the Central Region, the identified topics were placed into five modules:

- Bio-ecology and dynamics of Desert Locust populations (3 days),
- Surveys and information processing (5 days),
- Locust control: spray products and equipment (5 days),
- Eco-toxicity and human and environmental safety (5 days),
- Management of a control campaign (3 days),

subdivided into sub-modules (see Annex I) and to be delivered in 3 weeks.

The programme was to take the form of step-down training in three stages:

- 1) the training of 20 master trainers at a regional session lasting three and a half weeks;
- 2) the training, specialization or refresher training of some 600 field staff of the Desert Locust control units and the plant protection and agriculture services at five-day national sessions given by each master trainer to some 30 field staff before the summer control campaign; and
- 3) the validation of knowledge and the evaluation of training outputs at three-day national workshops, held after the 2005 campaign,

taking existing constraints into account, such as the already heavy training calendar, the need to tailor certain topics to country situations and the limited time before the theoretical start of the 2005 summer campaign.

Selection of the participants, the future master trainers, was done with the help of the FAO Representations in the ten countries concerned. The FAO Representations in the five Sahel countries (Chad, Mali, Mauritania, Niger and Senegal) were asked to identify, in close collaboration with the relevant national authorities (national Desert Locust control units and national plant protection services), six potential candidates from whom three would be selected per country on the basis of the following criteria:

- practical knowledge of certain aspects of Desert Locust control such as survey operations and methods of spraying,
- proficiency in French,
- pedagogical skills and experience in extension work,
- expressed desire to become a master trainer and corresponding availability (each trainer was expected to organize at least three national training sessions before the 2005 locust control summer campaign).

Similarly, a candidate from each of the five bordering or neighbouring countries (Burkina Faso, Cape Verde, Guinea, Guinea-Bissau and Gambia) was selected from the three potential candidates provided.

An international consultant was recruited for six months, based at Headquarters but with field missions, to help develop and implement delivery and the pedagogical monitoring of the ToT approach for the candidates, the facilitators and the regional session participants who would become master trainers at the national sessions and the field staff benefiting from the master trainers' acquired skills. There was consultation with all potential candidates from the very outset by means of a questionnaire on the objectives, content and methods of the regional session. The answers were rapidly processed to determine the needs and expectations of all the participants. This participatory approach was repeated during the regional and national sessions, with the body of compiled data analysed by a consultant at Headquarters.

## **2.2. Preparation of the training documents**

The inventory of training materials indicated that these existed in English for two of the five modules (survey and information, and control). They had already been prepared for the Central Region in the form of a highly detailed Master Trainer Manual that accompanied the different levels of training and had been translated into French by the FAO Locust Group. Training aids for the other three modules in the form of CD-ROMs (available upon request) were commissioned from a university with recognized experience in pedagogy and entomology, and more specifically acridology.

## **2.3. Equipment for the regional and national sessions**

The equipment needed for the training sessions was classified into three categories: essential equipment (video projector, printer, micro-computer...), complete kits for each module for the master trainers and basic kits for participants at the national sessions. The equipment for the practical exercises was also identified; for the regional session, a spray plane was even hired for the calibration of pesticide sprayers and the collection of droplets on oil sensitive paper. The necessary equipment was mainly procured through FAO Headquarters and was delivered to the FAO Representations in time for the training sessions.

# **3. CONDUCT OF THE SESSIONS**

## **3.1. The regional sessions**

The regional master-trainer training session of three and a half weeks was held at the ICRISAT Centre in Niamey, Niger, from 14 March to 6 April 2005. As in the case of the national training and evaluation sessions, it was co-financed by the Spanish project "Strengthening National Desert Locust Control Capacities in Affected Countries" involving ten countries: Burkina Faso, Cape Verde, Chad, Gambia, Guinea, Guinea-Bissau, Mali, Mauritania, Niger and Senegal; and the European Commission project "Emergency Assistance to a Desert Locust Control Programme" involving five countries: Chad, Mali, Mauritania, Niger and Senegal.

In order to distinguish this ToT regional session from academic ones and emphasize its pedagogical component, the session was entitled "What you need to know and what needs to be transferred about the Desert Locust". The aim was: 1) to raise the knowledge of all participants to the same level; 2) to teach them how to transfer that knowledge; 3) to enable them to design their own national training programmes; and 4) to help them plan the organization of those national programmes.

The session was supervised by an international consultant pedagogical expert, charged with monitoring the "knowledge transfer" aspect, and a facilitator/technical officer, acridologist and national official of the EMPRES Programme in Mauritania, also responsible for delivering module 2 "Survey and information processing". These were assisted by a national consultant for the organizational and logistical aspects. Four consultants were also recruited to deliver training modules 1, 3, 4 and 5: an acridologist, an environmental expert and two specialists in logistics, also familiar with land and aerial control and the organization of survey and control campaigns.

The opening of the session underlined the manifest interest of the government of the host country and the donors, represented respectively by the Minister of Agricultural Development, the Minister of Livestock Resources, the Ambassador of Spain (stationed in Abidjan), and a representative of the European Union.

Session activities included assessing the knowledge of participants before and after each module, providing theoretical and practical training based on pre-prepared training materials distributed to each participant and further elaborated by each facilitator, with an emphasis on practical field work, the active involvement of participants, activity round-ups and group work. A particular feature of the session was the immediate implication of the trainers in the technical and pedagogical process, through open discussion of individual experiences and a synopsis of aspects identified for transfer during the subsequent national training sessions. The participants were the key drivers of the training, through their expressed aspirations before the training and their national training projects presented at the end of the session. All participants and facilitators agreed that the session took place in good conditions thanks to its faultless logistical and technical organization and to its excellent preparation in Rome and *in situ*, for the final details, even though some of the participants might have been a little baffled by the highly participatory approach and the ongoing pedagogical monitoring, which were new to most of them.

The aim of the session was achieved: at its completion each master trainer (or group of master trainers) was able to use his updated and shared knowledge to present a national session plan (schedule, training location(s), detailed programme with a focus on aspects to be developed in the national context, modalities to identify field staff for basic or refresher training). Each participant received a stamped certificate with the logos of the two donors (Spain and the European Commission) and of FAO, in addition to a complete kit containing all essential implements needed for survey and control operations, together with a CD-ROM of all the documents distributed during the session.

### **3.2. The national training sessions**

To the extent that work schedules permitted, a consultant or Headquarters expert attended at least one of the national training sessions in order to support the master trainers in their task of transmitting, in five days, the scientific and technical knowledge and pedagogical guidelines that they had received over a period of three weeks. The initial intention was for each master trainer to give a training session for 30 field staff. In practice, in the frontline countries and in Senegal, the three master trainers jointly gave three training sessions organized in such a way as to draw upon their complementarities and balance out their relative thematic strengths and weaknesses, for the benefit of each participant and the master trainers themselves.

Most of the national training sessions took place in May 2005 (the third and last session in Chad was held in early June) and were decentralized (except in Senegal where the most appropriate and accessible training centre was at the Directorate of Plant Protection in Dakar). A total of 29 sessions were organized in the ten countries concerned, with the training or refresher training of 547 field staff. Each agent received a basic technical kit comprising a GPS and vernier caliper; in addition, the Desert Locust control unit or plant protection service was provided with the video projector needed for the training. As required, the master trainers were recruited as national consultants to draft reports which were received within an average of one month after the sessions and which followed a standard format provided by the pedagogical supervisor.

### **3.3. The national evaluations**

The third stage of the programme was the evaluation of training through a questionnaire on the content of the national sessions. This was issued a few months after the sessions and after the Desert Locust campaign so that at least some of the field staff could compare what they had been taught with reality on the ground. These evaluation sessions, which lasted from one to five days, were held between November 2005 and March 2006 in the different countries and involved all or some of the staff that had been trained in May 2005. They were supervised by all the master

trainers who were again recruited as national consultants (see summary table). In two countries, Niger and Mali, one of the sessions was followed by officers from the central office; in Niger, the questionnaire prepared by the master trainers comprised some 40 questions on the main aspects of control (identification of the Desert Locust, data to be collected during surveys and instruments needed for the collection and transmittal of data, spraying parameters, reduction of risk to human and environmental health...) to which correct and relevant answers were given. A number of issues were then openly discussed at a round table for trainees, trainers and other participants to exchange additional information and explanations.

The reports from the countries where this third stage took place show the same outputs, in varying degrees of detail: theoretical and practical training that had been taken on board, significant improvement in knowledge, and greater confidence in dealing with situations in the field.

### **3.4. Visibility**

The media (press, radio, television) were contacted for the different stages of the training programme: invitation to the inauguration of the regional training session at the ICRISAT Centre in Niamey, with a programme summary; information through ECLLO bulletins from FAO Headquarters; invitations to attend the start of national training and evaluation sessions; and a video produced by FAO's Information Division and distributed to the master trainers, the FAO Representations in the countries concerned and the donors. This video is available in English, Spanish and French upon request.

## **4. CONCLUSION**

The preparation and delivery of this master-trainers training programme and the organization of the regional and national sessions required significant human, material and financial investment that would not have been possible without the international contributions that were generated by the Desert Locust emergency. The results of the 2005 post-campaign evaluation sessions are satisfactory and confirm the validity of this approach, as was already demonstrated in the Central Region. However, they should on no account be viewed as an end in themselves, for the outputs in terms of improved pedagogical skills of master trainers, technical know-how of field staff and quality of training materials need to be constantly refined through regular refresher sessions, new training and the updating of training resources. After the countries of the Sahel and the Southern Circuit, the countries of Northwest Africa should also be able to benefit from such a programme. It is in fact part of the EMPRES mandate to conduct such activities with donor support. The ToT approach should also continue in the Central Region and extended to the Eastern Region. The endorsement of the Committee is needed for such national programmes of basic and refresher training to be renewed and pursued, and to encourage the Regional Commissions to contribute more to related national efforts.

- (a) Should this "Master-Trainer Training (ToT)" approach be pursued?
- (b) If yes, how can the different levels of training be provided and extended to other regions?
- (c) What improvements need to be brought to the training methods?