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DESERT LOCUST CONTROL COMMITTEE

Thirty-ninth Session

Rome, 10-13 March 2009

Environmental impact monitoring and quality control. The QUEST approach: perspectives and challenges (Agenda Item 19)

Background

The initiative by FAO to develop specialist teams to monitor and evaluate health and environmental aspects of control operations against the Desert Locust during the 2003-05 locust upsurge is an example of applying lessons that were learned from previous locust campaigns regarding environmental safety. In earlier campaigns, large quantities of pesticides were used with very little consideration of 'Good Practices' for pesticide applications, for the health of individuals handling the pesticides, or for environmental side effects.

The creation and evaluation of the QUEST teams

The development of specialist teams, called QUEST (**Q**uality, **E**nvironmental Protection, and **S**afety of **T**reatments) began with the integration of environmental and health monitoring in some FAO and donor-funded projects from about mid-April 2004. An Environment Officer was attached to the Emergency Centre for Locust Operations (ECLO) at FAO HQ in August 2004 and international environmental consultants were fielded during control operations. The implementation of QUEST started with a regional 'training-of-trainers' workshop for all EMPRES Western Region countries in Akjoujt, Mauritania (April 2005) with the aim to qualify national QUEST teams in systematically monitoring of the control operations. The training of QUEST teams continued until 2008. By then, QUEST teams had been created in 11 countries (Burkina Faso, Cape Verde, Chad, The Gambia, Guinea Bissau, Guinea, Mali, Mauritania, Niger, Senegal, and Tunisia).

Several groups have reviewed the progress of the QUEST programme, including the Desert Locust Control Committee (2006), the Multilateral Evaluation of the 2003-05 Desert Locust Campaign (2006), and the EMPRES Liaison Officers Meeting (2007). It was recommended that the QUEST teams be institutionalized under the supervision of the National Locust Control Units. Concern was also expressed about the sustainability of QUEST activities once project funding terminated. In December 2007- January 2008, a consultant evaluated the performance of

seven QUEST countries: Burkina Faso, Chad, Mali, Mauritania, Niger, Senegal and Tunisia. It was concluded that the teams provided a necessary task, and that all affected countries should have the facility for this task, in one way or another. It was also concluded that, given the young history of QUEST, much has to be done to fulfil the requirements in all affected countries, such as training and institutionalization.

The principal activities

The QUEST programme covers five principal activities:

- (1) Checking of locust control operations in the field to ensure that the Good Practices indicated in the *FAO Desert Locust Guidelines* are followed. These Good Practices cover all aspects of locust control operations from the reception of the pesticides in the host country and correct labelling, correct storage, safe transport to the operations site, correct calibration of spray equipment and application, the use of protective clothing by all staff handling pesticides, and proper cleaning and ensuring that pesticide drums are made unusable for domestic purposes or are correctly disposed of, and the identification of seriously polluted sites resulting from spillage or accidents during operations;
- (2) Routine monitoring of the health of personnel taking part in control operations and handling organophosphate pesticides, by checking acetyl-cholinesterase (AChE) levels in the blood. Depressed AChE levels, as compared with pre-operations levels, are reported to the National Locust Control Unit authorities and normally result in the person concerned being put on non-pesticide work or being given time off to recuperate;
- (3) Undertaking rapid assessment surveys of locust targets that have been sprayed to check for serious environmental side-effects including unusually high mortality of non-target fauna, spillage of pesticide, or pollution of water bodies;
- (4) Collecting samples of soil, water or vegetation in case of significant pesticide contamination. Remedial action, such as removing, incinerating or cleaning of contaminated soil, is an expensive procedure and require unequivocal proof;
- (5) Verifying that rural populations have been properly informed of the dangers of the pesticides being used in locust control, the need for local people to keep their livestock away from sprayed area for the appropriate withholding period, and not to use empty pesticide containers for domestic purposes. If the teams find that rural populations have not been informed, they should be able to provide the correct information themselves.

Activity 4 is carried out in close collaboration with the African Stockpile program. The provision of information under Activity 5 depends if the National Locust Control Unit has its own sub-unit for information dissemination. If this is the case, then verification that the correct information has been given out is a QUEST activity.

The institutionalization of QUEST

There is a link between the existence of an autonomous National Locust Control Unit and the degree to which QUEST teams have been established and institutionalized. Mali and Mauritania both have QUEST teams that function well within their autonomous structure. Chad and Niger are in the process of establishing autonomous units. When locust outbreaks occurred in November 2006 in Mauritania and Niger, Mauritania had mobilized its QUEST team to monitor operations but Niger failed to do so. Senegal and Tunisia have had major problems in making QUEST operational. In Senegal, the problems are being overcome by creating a QUEST team within the DPV.

Is QUEST sustainable?

The sustainability of the teams will depend on their ability to address other pesticide applications, for example by expanding QUEST activities to bird control and grasshopper control, as Mauritania has already done, and possibly to cotton, rice and vegetable cultivation. When there are no locusts, QUEST teams need to be active at least twice a year to keep their knowledge and skills up to standard.

QUEST teams contain at least three specialists: a locust expert for evaluating Good Practices related to locust control, a health expert for monitoring and evaluating AChE measurements with the TestMate kit ®, and an ecotoxicological/environmental expert to evaluate non-target fauna side-effects and other contamination problems. Teams have been institutionalized in Mali and Mauritania, each in the way that has been found to suit conditions in those countries. The specialists in Mauritania are fully integrated into the National Locust Control Unit. Mali has two staff including the QUEST Coordinator within the National Locust Control Unit but the relevant Ministries provide the health and environment experts under a written agreement with the Unit. Chad, Niger, and Burkina Faso are similar to Mali. Arrangements between Ministries have to be robust enough that the experts from other Ministries are always available when needed. If this cannot be guaranteed, then these countries should consider following the Mauritanian approach.

In conclusion, the institutionalization and sustainability of QUEST teams are linked to the autonomy of the National Locust Control Unit, which brings with it a national budget that can be used to fund QUEST activities once project resources terminate. National Directors need to work on finding ways around the problems that are likely to affect not only QUEST but also all locust field missions or surveys.