

**REPORT**

Rome,  
Italy  
22-26  
September  
2003

# **FAO Desert Locust Control Committee**

## **Thirty-seventh Session**



**Food  
and  
Agriculture  
Organization  
of  
the  
United  
Nations**

**Report of the  
FAO Desert Locust Control Committee  
Thirty-seventh Session**

Rome, Italy, 22-26 September 2003

Food and Agriculture Organization of the United Nations  
Rome, 2003

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OCTOBER 2001-SEPTEMBER 2003

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## LIST OF ACRONYMS

<b>ADB</b>	African Development Bank
<b>AELGA</b>	African Emergency Locust and Grasshopper Assistance (USA)
<b>AGP</b>	Plant Production and Protection Division (FAO)
<b>AGPP</b>	Plant Protection Service (FAO)
<b>CFP</b>	Country Focus Programme
<b>CIRAD</b>	<i>Centre de coopération internationale en recherche agronomique pour le développement</i> (Montpellier, France)
<b>CLAA</b>	<i>Centre de lutte anti-acridienne</i> (Nouakchott, Mauritania)
<b>CLCPANO</b>	FAO Commission for Controlling the Desert Locust in North West Africa
<b>CLCPRO</b>	FAO Commission for Controlling the Desert Locust in the Western Region
<b>CRC</b>	FAO Commission for Controlling the Desert Locust in the Central Region
<b>DGPS</b>	Differential Global Positioning System
<b>DLCC</b>	Desert Locust Control Committee
<b>DLCO-EA</b>	Desert Locust Control Organization for Eastern Africa
<b>DLIS</b>	Desert Locust Information Service (FAO)
<b>DLCTG</b>	DLCC Technical Group
<b>ELO</b>	EMPRES Liaison Officer
<b>Elocust</b>	System of electronic data collection and transmission
<b>EMPRES</b>	Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (FAO)
<b>EMPRES/CR</b>	EMPRES Central Region Programme
<b>EMPRES/WR</b>	EMPRES Western Region Programme
<b>EU</b>	European Union
<b>FAO</b>	Food and Agriculture Organization of the United Nations (Rome, Italy)
<b>GPS</b>	Global Positioning System
<b>GTZ</b>	<i>Deutsche Gesellschaft für Technische Zusammenarbeit</i>
<b>ICIPE</b>	International Centre for Insect Physiology and Ecology (Nairobi, Kenya)
<b>IGR</b>	Insect Growth Regulator
<b>LOCUSTOX</b>	Project on Environmental Impact of Locust Control (Dakar, Senegal)
<b>LUBILOSA</b>	<i>Projet de lutte biologique contre les locustes et suteriaux /</i> Project of biological control of locusts and grasshoppers (Cotonou, Benin)
<b>NPO</b>	National Professional Officer
<b>OCLALAV</b>	<i>Organisation commune de lutte anti-acridienne et de lutte anti-aviaire</i> (Dakar, Sénégal)

<b>PAN</b>	Phenyl-aceto-nitrile
<b>PPD</b>	Plant Protection Department (National)
<b>PRG</b>	Pesticides Referee Group (FAO)
<b>PRIFAS</b>	<i>Unité d'acridologie opérationnelle du Programme protection des cultures,</i> Cirad-amis (Montpellier, France)
<b>RAMSES</b>	Reconnaissance and Management System of the Environment of <i>Schistocerca</i>
<b>RP</b>	Regular Programme (FAO)
<b>SOP</b>	Standard Operating Procedures
<b>SWAC</b>	FAO Commission for Control of Desert Locust in South West Asia
<b>TCP</b>	FAO Technical Cooperation Programme
<b>TF</b>	Trust Fund
<b>ULV</b>	Ultra Low Volume
<b>USAID</b>	United States Agency for International Development
<b>WAU</b>	Wageningen Agricultural University

## LIST OF RECOMMENDATIONS

1. It being noted that the rainfall in 2003 had been altogether exceptional in the Western Region, with some countries having received more rain than the average for ten years, the Committee **RECOMMENDED** that, in the short term, a special and urgent effort be made to study the immediate repercussions that exceptional rainfall conditions might have on the population dynamics of the Desert Locust and on the vegetation with which the species was associated. In the longer term, it was **RECOMMENDED** that the DLCC Technical Group should study the possible links between climate change and Desert Locust population dynamics and distribution.
2. The Committee recognized that conditions were very favourable for locust breeding over extensive areas of prime locust habitat in the other two Regions, albeit that locust populations were very low, and **RECOMMENDED** that National Locust Units in key locust countries should maintain vigilance and carry out regular surveys in the coming months.
3. In respect of false reports of Desert Locust being issued by the Press, it was **RECOMMENDED** that National Locust Units should address the problem where it occurred in their National Press, and that the Secretariat should seek the assistance of the FAO Press Office in approaching the International Press, to encourage that it check with FAO before issuing reports on Desert Locust.
4. The Committee **RECOMMENDED** that the Secretariat, on behalf of the DLCC, approach OCLALAV with a view to creating an electronic database of OCLALAV's archives in the same way that had been done for the archives held by FAO, and that the DLCC contribute to the costs, subject to the availability of funds.
5. The Committee **RECOMMENDED** that member countries and the EMPRES Programme should continue to encourage research and operational trials using alternatives to chemical pesticides such as *Metarhizium* and PAN, and that the Pesticide Referee Group be asked to advise on their suitability.
6. The Committee **RECOMMENDED** that the EMPRES Programme should be extended to the Eastern Region as soon as possible.
7. The Committee **RECOMMENDED** that the awarding of Fellowships should continue.
8. The Committee, being informed that the current inputs being provided by the RAMSES/Remote-sensing consultant were coming to an end in December 2003, and expressing great concern that, without this support, these crucial elements of Early Warning may no longer function properly or be sustainable, **STRONGLY RECOMMENDED** that FAO should find the means by which such support could be maintained at least for the foreseeable future.

9. The delegate from the United States suggested that perhaps an option could be to merge the South-West Asia Commission into the Central Region Commission. After considerable discussion, it was **RECOMMENDED** that first the matter (of re-establishing a full-time Commission Secretary for South-West Asia) should be raised by the concerned countries at the FAO Conference. If that did not resolve the issue, the member countries of these two Commissions could consider the advantages and disadvantages of such a merger, at their upcoming Sessions in 2004. It was noted that there was no suggestion that the Central and Western Commissions should merge, and that in general the existing Commissions had been created because each could address the specificities of the Desert Locust problem in its own region.
10. The Committee **RECOMMENDED** that the Secretariat should consult with the DLCCTG members both on the topics selected for discussion and on the proposed arrangements. The Secretariat should implement the consensus agreed to by TG members.
11. The Committee **RECOMMENDED** that the annual contributions of all member countries, including that of I.R.Iran should remain the same. In recognition of the difficulties that I.R.Iran had suffered, the Committee **RECOMMENDED** that, given the exceptional circumstances, Iran should be requested to pay off 75% of its arrears as quickly as possible, on completion of which the remaining 25% would be waived. The Committee warmly acknowledged and thanked those countries that regularly paid their contributions fully and had no arrears. It further **RECOMMENDED** that other member countries make an extra effort to pay their annual contributions in good time and to settle as much of their arrears as possible before the next DLCC, so that sufficient funds would be available to maintain the momentum that had developed between 2001 and 2003.
12. The Committee **RECOMMENDED** that any additional cash balances that might develop during 2004/2005, should be used to boost the budgets for survey operations, EMPRES and training.
13. The Committee supported the vote with acclaim, and **RECOMMENDED** that the DLCC invite Mr. Hafraoui to the next Session, and award him a medal.

## INTRODUCTION

1. At its thirty-sixth Session, held in Rome from 24 to 28 September 2001, the FAO Desert Locust Control Committee (DLCC) agreed that the thirty-seventh Session should be held in Rome on a date to be determined by the Director-General of FAO. The dates chosen were 22 to 26 September 2003 and the Director-General accordingly issued invitations to Governments and relevant organizations.

2. A list of participants is given in Appendix I.

3. The thirty-seventh Session was chaired by the Director, Plant Production and Protection Division, Mr. Mahmoud Solh, who invited the Assistant Director-General, Agriculture Department, Ms. Louise O. Fresco to open the Session on behalf of the Director-General. Ms. Fresco warmly welcomed participants to the Session. She said that FAO continued to attach high importance to its role as global coordinator of Desert Locust management, as shown by its organization of the DLCC, which is the pre-eminent body advising FAO on the Desert Locust and through its support for the three regional Desert Locust Commissions. FAO had also created the Special Programme EMPRES with a component exclusively devoted to the Desert Locust.

4. Ms. Fresco expressed her concern that vast areas of Desert Locust habitat had received good rains in the last three months and were favourable to breeding. It was also recognized that if the rains did not continue, it was unlikely that locust numbers would reach significant levels. On the other hand, if the rains did continue, the present conditions could be the beginning of increased Desert locust activity. Uncertainty was an integral part of Desert Locust management, but regular monitoring by the locust-affected countries would help to reduce the chances of any surprises.

5. Ms. Fresco noted that, since the last DLCC, there had been two notable events. One was the development of the EMPRES Western Region Programme which was expected to become fully operational by early 2004. She thanked the African Development Bank and the Government of Italy for their contributions which were in the final approval stages. The second event was the formation of the new Commission for Controlling the Desert Locust in the Western Region (CLCPRO). The second meeting of CLCPRO had been held in June 2003 in Algiers and had been opened by the Director-General. Ms. Fresco had also been present and remarked on the importance of the occasion which brought together countries from both north and south of the Sahara in the effort to make preventive control more effective.

6. Ms. Fresco presented a silver medal to Dr. Lukas Brader in recognition of his important contribution to Desert Locust management, in particular during the 1986-1989 plague, and to Plant Protection in general throughout his career.

7. Ms. Fresco went on to say that the 37<sup>th</sup> Session of the DLCC also celebrated 50 years of FAO's involvement in Desert Locust management, which had begun in 1951 with the formation of an Advisory Committee on Desert Locust Control, which later evolved into the DLCC. She remarked that the difference between locust control in 1951 and in 2003 was remarkable. Fifty years ago farmers had no recourse to the attacks of locust swarms other than lighting smoky fires and banging tins, while Governments used chemical control in the form of organochlorine and arsenic-based dusts applied by hand. In 2003, aerial spraying has long



been perfected and great efforts are being made by FAO and its partners to make locust control as friendly as possible to the environment by reducing the amount of chemical pesticides needed and by using biopesticides. She said that FAO was presently sponsoring biopesticide treatments against Red Locust in Tanzania and it was hoped that this would be another step towards the “greening” of locust control in the future.

8. Ms. Fresco said that although it was expected that the EMPRES Western Region Programme would now be adequately funded, EMPRES Central Region was struggling to obtain support for its expected final Phase III. Although good support had been provided by donors for Phase I (1997-2000) and Phase II (2001-2003), Phase III (2004-2006) in which sustainability was a key issue, had so far only less than half the required budget. Ms. Fresco said that it had been estimated that the costs of one year of emergency control of the Desert Locust was the equivalent of more than 20 years of preventive control. Donors should take this into account in their considerations.

9. Ms. Fresco reminded participants that FAO’s Senior Management relied on the DLCC to make recommendations that guide FAO in its efforts to coordinate and manage the Desert Locust. She wished the 37<sup>th</sup> Session all success in its discussions, looked forward to reading the recommendations that would be made, and declared the Session open.

10. Ms. Fresco said that, as agreed at the 36<sup>th</sup> Session, a medal commemorating the 50 years had been minted. She presented a medal, inscribed with the country’s name, to each country representative present.

## **OFFICERS OF THE SESSION**

11. The following officers were elected:

Chairman: Mr. Prem Narain (India)

Vice-Chairman: Mr. N. Sicilima (Tanzania)

Drafting Committee: Mr. Y. Garba (Niger), Mr. M. Lecoq (France),  
Mr. A. Van Huis (Netherlands), assisted by the FAO Secretariat.

## **AGENDA**

12. The Agenda, as adopted, is given as Appendix II.

## **PRESENTATIONS, DISCUSSIONS AND RECOMMENDATIONS**

### **The Desert Locust Situation and Forecast: October 2001 to September 2003**

13. The Desert Locust situation has remained calm since the last session of the DLCC. Small-scale breeding occurred in a few countries in the Western and Central Regions in late 2001 and again in 2002. Limited control operations were conducted against locust populations in Mali (October 2001), Morocco (June 2002), Yemen (October 2002), Niger (November 2002) and in Algeria during the spring and summer of 2003. This year, unusually good rains have fallen in most of the summer breeding areas in West Africa, Sudan and along the Indo-Pakistan border since July causing breeding conditions to become extremely favourable. Although only scattered adults have been reported so far in some of the countries, breeding is likely to occur on a larger scale than in the past few years, causing locust numbers

to increase in the coming months. Regular surveys are recommended to monitor the developing situation with great care. The full text of the presentation is given as Appendix III.

14. In the discussions that followed, the delegate of **Egypt** said that his country had suffered from a prolonged drought. As a result, Desert Locust persisted only in irrigated areas in the south-west, where a favourable habitat for locusts and grasshoppers had been created, but locust numbers were small. The delegate of **Saudi Arabia** said that surveys were being conducted in the south and west where good rains had been received. Up to now, no Desert Locust had been found, but teams were on the alert. The delegate from **Morocco** said that rainstorms had occurred in the south creating favourable conditions and teams were on the way to check the area, which was expected to be favourable for Desert Locust. The delegate of **Niger** said that exceptional rains had fallen in the traditional breeding habitats of the Desert Locust in the north of his country since August and were continuing. Survey teams were currently checking green areas and the results were expected very soon. The delegate from **Algeria** also described heavy rains in the south since July and noted that agriculture was expanding in this region which might make it more attractive for locusts and/or lead to reports from farmers if their crops were attacked. The Secretary of the Central Region Commission reported that, so far, the locust situation was calm and a recently returned survey in **Sudan** had reported only a few locusts being found.

15. The Secretary of the Western Region Commission said that he and others in the region felt that the next two months could be critical. If the ecological conditions remained favourable long enough to encourage further breeding, and then when the vegetation dried out, it was possible that locust populations might clump together sufficiently to allow the beginning of gregarization. He suggested that great care should be taken to follow the evolution of the situation to be sure whether or not this may occur.

16. Participants discussed the problem of inaccurate reporting of Desert Locust outbreaks in the Press, causing confusion and unnecessary panic. Often when an outbreak of a grasshopper occurred, it was immediately reported in the Press as an outbreak of Desert Locust. This was followed by many questions of national locust officers and often to FAO HQ, requesting clarification of the situation.

17. The Secretariat reiterated that successful preventive control depended in the first instance on the proper monitoring of locust habitats that had received good rainfall. He stressed that Locust Units should never solely depend on farmers to report locust concentrations, as such reports might be received too late for effective preventive action. The meeting noted that the northern limit of green vegetation in the Sahel from Mauritania to the Sudan was this year further north than usual in August/September. The delegate of Mauritania suggested that the factors that had contributed to causing the exceptional rainfall should be investigated. The delegate of the Netherlands suggested that any link between this northern limit and global climate change also deserved investigation.

18. In conclusion, it was noted that the rainfall in 2003 had been altogether exceptional in the Western Region, with some countries having received more rain than the average for tens of years. Accordingly the Committee **RECOMMENDED** that, in the short term, a special and urgent effort be made to study the immediate repercussions that these conditions might have on the population dynamics of the Desert Locust and on the vegetation with which the species was associated. In the longer term, it was **RECOMMENDED** that the DLCC

Technical Group should study the possible links between climate change and Desert Locust population dynamics and distribution.

19. The Committee recognized that conditions were very favourable for locust breeding over extensive areas of prime locust habitat in the other two Regions, albeit that locust populations were very low, and **RECOMMENDED** that National Locust Units in key locust countries should maintain vigilance and carry out regular surveys in the coming months.

20. In respect of false reports of Desert Locust being issued by the Press, it was **RECOMMENDED** that National Locust Units should address the problem where it occurred in their National Press, and that the Secretariat should seek the assistance of the FAO Press Office in approaching the International Press, to encourage that it check with FAO before issuing reports on Desert Locust.

### **Implementation of the recommendations of the 36<sup>th</sup> Session of the DLCC**

21. Seventeen recommendations had been made at the last DLCC Session. Each of them was reviewed by the Secretariat and the progress made was reported to the Committee. Additional information was provided from the floor where individuals or other organizations had been involved in implementing a particular recommendation.

22. The delegate of the Netherlands clarified that the Wageningen study, funded by the Netherlands as a contribution to EMPRES Central Region, had dealt with understanding the relation between habitats and the spatial distribution of solitary Desert Locust populations in the coastal plains of the Sudan. The doctoral thesis on the subject was expected to be completed and published by December 2003.

23. The French language version of the Desert Locust Guidelines was now ready and delegates were provided with copies as required. The full distribution of the French version to the relevant National Locust Units would be completed within about one month. A mock-up version of the Arabic language version was available to be seen by delegates. Copies would be printed and distributed within about two months.

24. The Secretary of the Central Region Commission reported that the "Spray Monitoring Form" had been translated from English into Arabic and circulated to all appropriate countries. The form had also been translated into French. The feedback from the Central Region, because of the lack of control operations, had been limited to various training events during which the forms had been used as part of simulated control exercises. Operators had found them difficult to use initially, but after a little practice, they had become accustomed to them.

25. The delegate of India remarked that presentations would be made on the progress of EMPRES in the Western and Central Regions, but there was no item on the Agenda concerning the Eastern Region (Afghanistan, India, I.R. Iran, Pakistan). The last three countries were the most important for the Desert Locust. They were relatively well resourced but needed EMPRES assistance mainly to modernize their technologies and to provide training in their use. The Secretariat had made approaches to a number of donors, but only Australia and the United States had shown some interest. Both donors had been invited to the last Commission Session held in Islamabad, Pakistan, in December 2002. An Australian

observer had attended. A request to Australia for assistance by the Commission was still under consideration.

26. The delegate from Tanzania said that his country was very satisfied with the assistance that FAO had provided for the control of Red Locust using the biopesticide *Metarhizium*, and pleased that this would contribute towards improved locust control. The delegate from Mauritania, noting that the DGPS had been used successfully in Tanzania, asked for clarification as to whether this expensive equipment was really needed or if the improved simple GPS would be sufficient. The Secretariat said that in most countries, spray aircraft were obtained under contract. The inclusion of DGPS in the required specifications should not make much difference to the price. Where certain countries had their own aircraft, efforts should be made to find donor support to have them fitted with DGPS if they were likely to be used for Desert Locust control. Although DGPS was relatively expensive at about US\$ 23,000 for one aircraft, the benefits obtained by more efficient applications requiring less pesticide would very quickly repay the investment. For ground-spraying however, it was agreed that GPS was likely to be sufficient.

27. The delegate of Syria expressed concern about the reportedly few countries that were still not fulfilling their obligations in terms of early warning surveys and the likelihood that locust outbreaks or upsurges in those countries could lead to serious problems for neighbouring countries. The Committee noted that the EMPRES Programme together with the Commissions were trying to address this problem. In the Central Region, where EMPRES had been operating since 1997, only one or two countries were not fully performing. In the Western Region a start had been made to bring about the necessary improvements, but it was expected that, as the Region received the expected donor support, any shortcomings would soon be overcome.

28. Delegates again expressed their concern about the future of the Desert Locust archives held by OCLALAV. The Committee **RECOMMENDED** that the Secretariat, on behalf of the DLCC, approach OCLALAV with a view to creating an electronic database of the records in the same way that had been done for the archives held by FAO, and that the DLCC contribute to the costs, subject to the availability of funds.

29. The Committee recognized the large effort that had gone into the production of the French and Arabic versions of the Desert Locust Guidelines, and expressed its satisfaction with this achievement.

## **EMPRES Progress and Directions**

### **(a) Central Region:**

30. The Coordinator of the EMPRES Central Region Programme (EMPRES/CR) gave a brief review of the history and objectives of the programme, which had begun with its full field programme in 1997, and was now coming to the end of its Phase II, in December 2003. He described the achievements made to date and mentioned that an independent Evaluation Mission in February 2003 had recommended that a three-year Phase III should follow in which the focus should be on establishing the sustainability of EMPRES activities and results. A participatory planning workshop was held in Rome in May 2003, attended by locust-affected countries, donors and FAO staff. The final product of this meeting was an Implementation Document for Phase III, copies of which were available for DLCC

participants. The document made provision for an evaluation early in the third year, and if this showed that progress was satisfactory, Phase III was likely to be the last Phase for the Central Region. The estimated budget requirement for Phase III was US\$ 3.5 million. The Coordinator said that if current donors to EMPRES/CR, namely the Netherlands, Switzerland and the United States maintained their support together with a contribution from FAO's own resources, there was still a shortfall of about half the required budget. New donors were urgently needed to contribute to Phase III, in order to ensure that all the planned activities could be implemented.

**(b) Western Region:**

31. The Secretary of the Commission for Controlling the Desert Locust in the Western Region (CLCPRO), who also acts as the Coordinator of the EMPRES Western Region Programme (EMPRES/WR), gave an account of the various EMPRES activities that had taken place in his region since the last DLCC Session. These, among others, included the formation of the new Commission CLCPRO comprising all nine countries concerned with preventive control, numerous contacts with potential donors that might support EMPRES/WR, the holding of the first EMPRES Liaison Officers Meeting in the region, the initiation of the installation of RAMSES, *elocust*, and satellite image access in several countries, and the holding of several training events.

32. The results of the contacts with donors culminated in a donor meeting hosted by France in Paris in July 2003. There it became clear that the African Development Bank (ADB) was willing to provide a substantial grant to EMPRES/WR, that the United States was likely to be able to continue support although the level was uncertain, and that France would probably be able to contribute from 2004 onwards. Italy, although not present in Paris, also indicated its likely support. Separate contacts were also made with Libya and the Islamic Development Bank.

The delegate from Libya said that possibility of a contribution to EMPRES was being carefully and meticulously studied, but the matter had not yet been finalized. It was hoped that a positive decision could be taken before the end of 2003.

**33. Later in the meeting, news was received that the ADB Administrative board Meeting held on 24 September 2003 had approved a grant to EMPRES/WR of about US\$ 5 million. The news was greeted with delight by the DLCC Member States, and the Secretariat was instructed to send a message of profound thanks to the ADB President.**

34. Several participants asked for clarification on the status of PAN (phenyl-aceto-nitrile), a Desert Locust pheromone discovered by the International Centre for Insect Physiology and Ecology (ICIPE). PAN is said to increase the susceptibility of locusts to conventional pesticides so that 60% less pesticide is needed, and also to speed up mortality achieved by *Metarhizium*. PAN reportedly affects the locust's immune system making it more susceptible to normal pesticides and biopesticides, but PAN's use operationally was still a long way from being realized. It was also noted that mixtures containing PAN would need to be evaluated for their ecotoxicological effects and to be checked for registration requirements.

35. The delegate from India noted that there was no specific presentation on EMPRES Eastern Region (South-West Asia). The Secretariat said the resources available for Desert Locust Control were generally good in the Eastern Region, but that contacts had been made

with potential donors to help with modernizing survey and control methods and providing training. The delegate from the United States said that, following restructuring of the USAID locust project, the coverage of their project was now global as opposed to the earlier project which was only for Africa. The Eastern Region could be assisted in future but the level of funding available was not yet known.

36. The delegate from the Netherlands said that his country had chosen to concentrate its assistance on the Central Region and had been EMPRES/CR's largest donor. Although the project ends this year, a request to the Netherlands, accompanied by a well-argued justification for any unspent balances to be used in Phase III, could be made and might be agreed to, but no-cost extensions of projects were no longer automatically approved. The delegate from France said that a fund was to be established to support EMPRES/WR in respect of institutional support, capacity building, and training. France wanted to see more evidence of serious political will in the region in support of preventive locust control.

37. The Committee **RECOMMENDED** that member countries and the EMPRES Programme should continue to encourage research and operational trials using alternatives to chemical pesticides such as *Metarhizium* and PAN, and that the Pesticide Referee Group be asked to advise on their suitability.

38. The Committee **RECOMMENDED** that the EMPRES Programme should be extended to the Eastern Region as soon as possible.

39. The Committee noted that it had been estimated that one year of emergency control of the Desert Locust costs more than 20 years of preventive control. The international donor community should be asked to recognize the financial advantage of preventive control, as indeed some already had, and come to the support of the EMPRES Programme, particularly in the Central Region.

### **DLCC Fellowship Training**

40. Three graduates who had completed their Ph.D. or M.Sc. degrees with the help of DLCC Fellowships presented accounts of their research. Dr. Khaled Moumene (Algeria) spoke on "Phase change in the Desert Locust *Schistocerca gregaria*: mechanisms and ecophysiological characteristics of the female gregarization foam." Mr. Adnan Suliman Khan, M.Sc. (Saudi Arabia), spoke on "The effect of stage specific pheromones alone and in combination with the insecticide fipronil, on the eggs, hatchlings and fledglings of the Desert Locust." Mr. Cressman, on behalf of Mr. Mehdi Ghaemian, M.Sc. (I.R.Iran), spoke on "Improved Survey Methods for Gregarious or Gregarizing Hopper Patches of the Desert Locust." Mr. M.A. Ould Babah, who is also carrying out a doctoral research project, funded by Western Region Locust Commission (CLCPRO), with support from USAID and France, also gave an account of his results so far.

41. The Committee **RECOMMENDED** that the awarding of Fellowships should continue.

## **Support to Research and Database Development**

### **(a) Use of Geographical Information System and Remote Sensing to Improve Desert Locust Early Warning:**

42. The consultant Mr. P. Ceccato reviewed the progress made in the last two years in introducing, to EMPRES countries, the RAMSES locust management database, the electronic transmission of locust data from the field to national headquarters with *elocust*, and the operational use of satellite images of locust vegetation. Several countries were now making use of these tools and they were beginning to contribute to better targeted locust surveys. Much work remained to be done to extend the systems to all the interested countries and to provide the necessary follow-up until all the teething problems were resolved and the systems became part of the routine.

### **(b) Database on the Desert Locust Archives:**

43. The DLIS Locust Information and Forecasting Officer gave an account of the major work that had been carried out to scan all the records held in FAO's archives, dating from 1975 to 2003. It was expected that this two-year task would be completed by the end of 2003 and copies of the CDs would be provided to locust-affected countries and other interested researchers. Each country would be able to review its own records over this period and use them to build up the information it held in RAMSES.

### **(c) Database on Locust Publications and Reports:**

44. The delegate of France Mr. M. Lecoq gave an account of the locust literature database in which his organization CIRAD/PRIFAS had collaborated with ISPI, GTZ and FAO. The database covering all species of locusts and grasshoppers was now completed. He said that it contained three main parts: one containing 260 complete key publications (full text and figures) from 1948 to the present; the second a database of several thousand references in acridology (with abstracts available); the third a collection of general information on locusts and grasshoppers. Mr. Lecoq demonstrated how the various publications could be accessed. A key-word system allowed publications on particular topics to be reviewed together. Mr. Lecoq asked for an indication of the number of copies that participants felt were needed in their regions.

### **(d) Database on Pesticide Trials for the Pesticide Referee Group:**

45. The delegate of Netherlands introduced the work which had been financed by DLCC through the University of Wageningen. The details were then demonstrated by Mr. Schotman. He explained that the database had been built at three levels, the trial, the insecticide and the plot. It had the capability to search and sort on virtually all data fields in the database. The database was intended not only for use by the Pesticide Referee Group (PRG) but also by locust-affected countries that might find the information useful for registration purposes, for research or to assist locust officers with methodologies. Some of the trial reports were supplied by Industry as confidential documents, but a system had been included whereby only members of the PRG could access these.

46. There was some discussion about making RAMSES available to countries in the invasion area for Desert Locust, i.e. not only the front-line countries, but the Secretariat said

that resources were already stretched to meet the requirements of the EMPRES member countries and no further extension could be contemplated for the immediate future.

47. In clarification of the publications database, Mr. Lecoq explained that CD-ROM still had space where additional articles could be added. The sponsors of the database were hoping for feed-back from users with suggestions for additions. He said that copyright was a limitation to full access but many of the older articles were no longer protected, and for more recent articles, copyright had been waived. A first edition will be issued before the end of 2003. A second edition, suitably improved and completed, would be issued in 2004, subject to the availability of funds.

48. The Secretary of the CLCPRO suggested that the Pesticide Trial Database be provided through the Commissions to the countries in each region. Provision would need to be made for staff to be trained to use the database.

49. The Chairman, on behalf of all the DLCC members, expressed his satisfaction with the development of the three new databases and said that their usefulness should quickly become apparent during the years to come.

50. The Committee was informed that the current inputs being provided by the RAMSES/Remote-sensing consultant would come to an end in December 2003. Great concern was expressed that without this support, these crucial elements of Early Warning may no longer function properly or be sustainable, nor would it be possible to expand these technologies to those countries that had not yet received them. The Committee **STRONGLY RECOMMENDED** that FAO should find the means by which such support could be maintained at least for the foreseeable future.

## **Reports of the Regional Locust Commissions**

### **(a) Central Region Commission:**

51. The Secretary of the Central Region Commission (CRC) reviewed the activities of the Commission since the last DLCC Session. He said that the close collaboration and joint workplans that had been developed with EMPRES/CR was one of the major achievements of the period. Apart from this, the activities of the Commission could be grouped into training, research, the promotion of joint-surveys between neighbouring locust-affected countries, the production of locust publications, and the organization of a Sprayer Testing Workshop. Locust publications had included Standard Operating Procedures (pocket-sized SOPs) for ground and aerial survey and control, and the Arabic translation of the Desert Locust Guidelines. In training, the Commission had been closely involved with EMPRES/CR in promoting the Desert Locust Diploma at the University of Khartoum. Another key event was the incorporation of Djibouti into the membership and the application by Ethiopia for entry. Ethiopia would be the 15<sup>th</sup> member. The only missing country, apart from Somalia, was Eritrea and it was hoped that an application would be received soon.

### **(b) Western Region Commission:**

52. The Secretary of the Western Region Commission (CLCPRO) reviewed the activities of the Commission in the last two years. It had been a momentous period with several radical changes, including the decession of the old Northwest Africa Commission (CLCPANO), the



transfer of the Commission's office back to its original seat in Algiers, and the birth of the new Commission CLCPRO. The Commission's activities could be divided into the following: monitoring country locust survey efforts, training including several regional workshops, supervising a TCP project for capacity building in locust control in Mali, and following up on the recommendations made by the CLCPANO/CLCPRO Sessions. The opening of the Second Session of CLCPRO by the Director-General, and the presence of the Assistant Director-General, Agriculture Department had been one of the highlights of 2003. The budget for CLCPRO for the next two years was US\$ 215,000 p.a.

(c) **South-West Asia Commission:**

53. The Secretariat for this Commission is provided by the AGPP Locust Group. It was reported that the major event since the last DLCC was the holding of the 23<sup>rd</sup> Session in Islamabad, Pakistan in December 2002. For the first time for nearly ten years, an official representative from Afghanistan participated. The Session had been the first one held since official approval of the changes to the Establishment Agreement including the shortening of the Commission's name and the abolishing of the Executive Committee. Activities within the region have involved: the installation of RAMSES, satellite image access and *elocust* in Pakistan and India; technical support to the joint border survey between I.R.Iran and Pakistan, analysis of the frequency, timeliness and quality of locust survey reports received, and the purchase of equipment to assist improvements in locust survey and control.

54. In the discussions that followed, the delegate from Benin requested the Secretary CLCPRO to provide him with full details of his Commission.

55. The Secretariat reminded participants that FAO contributed considerably from its own resources in supporting the three Commissions. There were now two full-time Secretaries whose salaries and some operating costs were covered by FAO's budget. For South-West Asia, the time of the Locust Group staff is only sufficient to carry out the basic function of the Commission available. While expressing their appreciation of what FAO provided, the delegates from I.R.Iran and India both raised the question of re-establishing the Secretary post of the South-West Asia Commission. It was mentioned that such a decision rested partly in the political domain, and the four member countries should consider raising it jointly at the FAO Conference. The Chief, Plant Protection Service, Mr. Van der Graaff, said that the problem was mainly a financial one. FAO's resources are decreasing and establishing a new post would be a difficult task. He agreed with the suggestion to bring the matter up at the FAO Conference. However he said that, from his knowledge, the budget already prepared for 2004/2005 did not include sufficient funds for the post. Given this situation, funds for the post would have to be found from somewhere else in the Organization, and there was not much chance of doing so.

56. The delegate from the United States suggested that perhaps an option could be to merge the South-West Asia Commission into the Central Region Commission. After considerable discussion, it was **RECOMMENDED** that first the matter should be raised by the concerned countries at the FAO Conference. If that did not resolve the issue, the member countries of these two Commissions could consider the advantages and disadvantages of such a merger, at their upcoming Sessions in 2004. It was noted that there was no suggestion that the Central and Western Commissions should merge, and that in general the existing Commissions had been created because each could address the specificities of the Desert Locust problem in its own region.

## The next DLCC Technical Group Meeting

57. The Secretariat gave a presentation describing the topics that had been proposed by the DLCC Technical Group (DLCCTG) during its meeting in June, 2000. The topics included: advances in satellite imagery, contingency planning, the electronic transfer of locust data from the field to the national HQ, progress in the use of biopesticides, research results from the EMPRES Programme, and improvements to the Desert Locust Bulletin. These topics had been endorsed by the 36<sup>th</sup> DLCC, which added: measuring crop damage caused by locusts; and clarifying some negative reports on the usefulness of locust control operations.

58. These recommendations had been reviewed by the FAO Locust Group, and it was considered that all the topics had received or were scheduled to receive satisfactory attention, except for two. These were contingency planning and measuring locust damage to crops. The reasons for this deduction were explained. The Secretariat proposed that one of these topics, contingency planning, which was generally agreed to be a key element of EMPRES, should be examined in depth. It was suggested that the subject would be best addressed by holding a workshop involving not only the DLCCTG members, but also a Locust Unit Head and a very good Locust Survey Officer from each of the three EMPRES Regions, a consultant specialist, and FAO staff, a total of about 18 participants. The suggested venue was Nouakchott and the time period was five days (2 days of field work and computer simulations; 3 days of discussion) in early March.

59. In the discussions that followed the delegate of Syria questioned whether field work and computer simulations would be more appropriate for a training workshop rather than an experts meeting. It was explained that there were still uncertainties about how best to improve contingency planning for different types of Desert Locust scenario and this required in depth examination and discussion in order to suggest suitable directions for the future. Thereafter the focus could be on training.

60. The delegate of Morocco said that the DLCCTG members should themselves be asked to review the topics which had been proposed, to be sure that they agreed with the selection of the topic or if they would propose a different selection. They should also be given the opportunity to comment on the proposed arrangements for the workshop and suggest different or better ones. Only if consensus was reached on the workshop, should arrangements go ahead.

61. The two DLCCTG members who happened to be participating in the Session, Mr. Van Huis and Mr. Lecoq, both said that they considered that the subject of contingency planning was a very important aspect of successful preventive control. Mr. Van Huis also noted that in the presentation on EMPRES/CR, contingency planning was included as a major element for attention during Phase III. Mr. Lecoq said that if the DLCCTG met to discuss contingency planning, the opportunity could also be taken to review research directions in the EMPRES Programme. Mr. Lecoq and Mr. Van Huis endorsed the selection of contingency planning as the main subject for the next DLCCTG meeting, but agreed that the other members should also be consulted.

62. The Committee **RECOMMENDED** that the Secretariat should consult with the DLCCTG members both on the topics selected for discussion and on the proposed arrangements. The Secretariat should implement the consensus agreed to by TG members.

## Reports of the Regional Locust Organizations

### (a) Desert Locust Control Organization for Eastern Africa (DLCO-EA):

63. The working paper provided by DLCO-EA was presented by the Secretariat. Using funds provided by USAID through FAO, a DGPS equipment had been installed in one of the Organization's Beaver aircraft. The equipment had been operationally tested in biopesticide control of Red Locust in Tanzania, and had been found to increase the efficiency and accuracy of the treatment to a remarkable degree. USAID had now agreed to fund the fitting of a DGPS to a further four aircraft. It was noted that another important activity had been the collaboration between DLCO-EA, the Central Region Commission, and EMPRES/CR, which was designed to harmonize the functions of the regional bodies. Two meetings had been held and a third one was scheduled for November 2003.

### (b) Organization Commune de Lutte Antiacridienne et de la Lutte Antiaviaire (OCLALAV):

64. No working paper was received from OCLALAV.

### (c) International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA):

65. The working paper provided by IRLCO-CSA was presented by the Secretariat. An outbreak of Red Locust had occurred in the last two years in Tanzania, but in the outbreak areas in the other countries had been calm. The opportunity had been taken, in collaboration with FAO, to carry out large scale operational trials using the biopesticide *Metarhizium*. One conducted in February had not produced good results because of a problem with the diluent. A follow-up operation in August was recently completed but a full analysis of the results is still to be made. The initial results of this trial were much more encouraging than the earlier one, but mortality was slow in the temperature conditions applying, taking about 28 days to achieve a major impact on the population.

66. The delegates of Kenya and Tanzania both expressed their strong appreciation of the work done by DLCO-EA and IRLCO-CSA, not only in locust control, but also against other migratory pests such as quelea birds and armyworm.

## International Trust Fund 9161: Contributions, Expenditures and Workplan

67. The DLCC Trust Fund continues to support a number of activities which are of crucial importance to improved Desert Locust management, thereby bringing benefit to locust-affected countries. Major activities funded include training at the post-graduate degree level, at the diploma level and of Locust Information Officers. The production of the Desert Locust Guidelines in Arabic and French has been an important expense. The DLCC has also made a significant contribution to bringing remote-sensing images into use as an operational tool, to developing the RAMSES database, and to creating databases for archived locust reports and for locust pesticide trials. Last but not least, the DLCC has supported EMPRES, especially in the Western Region. The details of the financial support provided to these activities were given. The full text of the presentation and the attached tables are included as Appendix IV.

68. In relation to the problem of non-payment of contributions by some member countries, the delegate of Kenya suggested that the arrears in contributions to the DLCC should be made available to the delegations led by Ministers attending the FAO Conference in November 2003.

69. The delegate of I.R.Iran said that his country was facing serious difficulty in settling the huge arrears that had accumulated when a state of war had existed. He requested the Committee to waive half of the arrears and reduce the annual contribution from US\$ 20,000 to 10,000. He assured the Committee that if the request was granted, the arrears would be fully paid within eight years and the annual contribution would be settled routinely.

70. Many delegates contributed to the debate that followed, in which the possibility that a precedent would be set that many other countries might want to follow, was discussed. It was noted that the contribution levels for each country derived from a formula in which the GNP, the importance of agriculture and the risk of locust attacks were taken into account.

71. Given the likelihood that the cash balance available to fund activities in 2004 and 2005 would be considerable lower than the amounts that had been available from 2001 to 2003, several delegates suggested areas in which savings might be made. The delegate from Syria suggested that costs of DLCC Fellowships could be greatly reduced by supporting studies within students' home countries or by encouraging that they study part-time for which the charges were much lower. Other delegates proposed that Fellowship funds would have a greater impact if they were used instead for training events which would involve many more people. However the consensus was that the Fellowships made a long term impact on locust management by providing well-qualified staff who could contribute over many years.

72. The delegate from Cameroon said that he was concerned that no funds were available for locust surveys in 2005. He suggested that if any additional cash became available through the payment of contributions or arrears, they should be used to fill this gap. Other delegates proposed that additional cash should be used to boost the budget allocated for the support of EMPRES and for training events.

73. The Committee **RECOMMENDED** that the annual contributions of all member countries, including that of I.R.Iran should remain the same. In recognition of the difficulties that I.R.Iran had suffered, the Committee **RECOMMENDED** that, given the exceptional circumstances, Iran should be requested to pay off 75% of its arrears as quickly as possible, on completion of which the remaining 25% would be waived. The Committee warmly acknowledged and thanked those countries that regularly paid their contributions fully and had no arrears. It further **RECOMMENDED** that other member countries make an extra effort to pay their annual contributions in good time and to settle as much of their arrears as possible before the next DLCC, so that sufficient funds would be available to maintain the momentum that had developed between 2001 and 2003.

74. The Committee **RECOMMENDED** that any additional cash balances that might develop during 2004/2005, should be used to boost the budgets for survey operations, EMPRES and training.

## **Any Other Business**

75. The delegates of the countries from Western and Central Africa who participated in the 37<sup>th</sup> DLCC, through the delegates of Cameroon and Senegal as their spokesmen, expressed their preoccupation with species of acridids, other than the Desert Locust. The threat posed by these pests, particularly to food-producing crops, undermined the efforts being made to achieve food security, as a result of crop losses and reduced production levels. Faced with this situation, the delegates of all these countries said that they would welcome it if FAO would give particular attention to the acridid pests other than the Desert Locust and would provide operational assistance to the concerned member countries.

76. In response to these concerns, the Committee requested FAO that:-

- (a) The problem posed by acridids other than the Desert Locust should be clarified by providing evidence of the risk, of the resources that should be put in place, and of the cross-border problems;
- (b) The development of preventive control strategies, allowing a reduction in the use of chemical pesticides, should be encouraged, using a regional approach;
- (c) The possibility should be studied of making available the expertise and dispositions developed by the EMPRES Programme to reinforce national capacities in the countries affected by the problem of acridid pests other than the Desert Locust;
- (d) An appeal to donors to provide support to this matter should be made.

77. The Secretariat said that these problems were well understood by the FAO Locust and Other Migratory Pest Group, noting that they fell outside the mandate of the DLCC. The Group would do its best to bring this matter to the attention of senior management and would provide what assistance it could, within the limits of the capacity of its small staff and limited funding.

78. The delegate of the United States, Mr. J. Vorgetts, described the changes that had recently been made to the USAID/AELGA project. The project would now function under the Office of U.S. Foreign Disaster Assistance and had increased its coverage from Africa to global. The staff was being reduced and he himself would be returning to his post in USDA from which he had originally been seconded to AELGA. Both the Committee and the Secretariat expressed their appreciation and thanks of the contribution that the AELGA project had made to Desert Locust management under Mr. Vorgetts' stewardship, and wished him well at USDA.

79. Several delegates said that they were aware that the 37<sup>th</sup> DLCC was also the last of many in which Mr. A. Hafraoui, Senior Officer i/c the Locust Group, had participated as an FAO staff member, as he would soon retire. The Chairman proposed a vote of thanks to Mr. Hafraoui, whose contribution to Desert Locust management would be remembered for ever. The Committee supported the vote with acclaim, and **RECOMMENDED** that the DLCC invite Mr. Hafraoui to the next Session, and award him a medal. The Chairman wished Mr. Hafraoui a long and happy retirement.

### **Date and Place of the Next Session**

80. The Committee agreed that the next Session of the DLCC would be held at FAO headquarters in about two years' time, unless the Desert Locust situation deteriorated markedly, warranting that it should be held earlier. It was also agreed that the precise date should be decided by the Director-General of FAO.

### **Adoption of the Report**

81. The report of the 37<sup>th</sup> Session, with the agreed amendments, was adopted unanimously.

### **Closure of the Session**

82. On behalf of the Assistant Director-General, Agriculture Department and of the Director, Plant Production and Protection Division, Mr. Arturo Martinez, Chief, Seeds and Plant Genetic Resources Service, thanked all the participants of the 37<sup>th</sup> Session of the Desert Locust Control Committee for their contributions which had made the Session a success. He remarked that the Desert Locust was a transboundary species, against which it was impossible for countries to fight on their own. The solidarity shown by participating countries during the Session and their constant support of the EMPRES Programme assured the sustainability of the preventive locust control strategy.

83. Mr. Martinez said that, in addition to the thanks already expressed, a special mention should be made of Mr. Hafraoui, who would soon retire. He gave a summary of Mr. Hafraoui's career, noting that even before he had joined FAO in 1986, he had represented Morocco at the DLCC. From 1992, he had been the Senior Officer i/c the Locust and Other Migratory Pests Group. In these eleven years, he had fulfilled, with self-sacrifice, courage and perseverance, the heavy burden placed on him by the member countries. He had also taken a determining role in restructuring the Commissions and developing EMPRES.

84. The Committee joined Mr. Martinez in applauding Mr. Hafraoui's contribution to Desert Locust management.

85. In conclusion, Mr. Martinez wished participants a safe journey home and declared the Session closed.

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### Approved Agenda

1. Opening of the Session
2. Medal delivery to member countries for the 50<sup>th</sup> anniversary of DLCC
3. Election of Chairman, Vice-Chairman and Rapporteur.
4. Adoption of the Agenda.
5. The Desert Locust Situation and Forecast: October 2001 to September 2003.
6. Implementation of the recommendations of the 36<sup>th</sup> Session of DLCC.
7. EMPRES Progress and Directions:
  - (a) Central Region
  - (b) Western Region
  - (c) Training (Reports of Fellowship graduates)
    - (i) Schistocerca gregaria: Phase transformation
    - (ii) The effects of pheromones on Desert Locust
    - (iii) Improved Survey Methods
8. Support to research and data base development.
  - (a) Remote Sensing and Ramses.
  - (b) Data Base on Locust archives.
9. Reports of Regional Commissions and Organizations:
  - (a) Central Region Commission
  - (b) Western Region Commission
  - (c) South-West Asia Commission
  - (d) DLCO-EA
  - (e) OCLALAV
  - (f) IRLCO-CSA
10. International Trust Fund 9161: Contributions/Expenditure Workplan 2001/2002/2003
11. Any Other Business.
12. Date of next Session.
13. Adoption of Report.
14. Closure of the Session.

## **The Desert Locust Situation and Forecast: October 2001 to September 2003**

### **Overview**<sup>1</sup>

The Desert Locust situation has remained calm since the last session of the DLCC. Small-scale breeding occurred in a few countries in the Western and Central Regions in late 2001 and again in 2002. Limited control operations were conducted against locust populations in Mali (October 2001), Morocco (June 2002), Yemen (October 2002), Niger (November 2002) and in Algeria during the spring and summer of 2003. This year, unusually good rains have fallen in most of the summer breeding areas in West Africa, Sudan and along the Indo-Pakistan border since July causing breeding conditions to become extremely favourable. Although only scattered adults have been reported so far in some of the countries, breeding is likely to occur on a larger scale than in the past few years, causing locust numbers to increase in the coming months. Regular surveys are recommended to monitor the developing situation with great care.

### **Situation by region**

#### ***Western Region***

Breeding continued on a small scale during October and November 2001 in the summer breeding areas in western Mauritania, northern Mali and Niger. Nevertheless, locust numbers remained low except in Mali where nearly 19,000 ha of gregarizing hoppers and adults were reportedly treated. By the end of the year, breeding had ended in these countries. The situation remained calm in North-West Africa where no locusts were reported.

Despite extremely unusual and unprecedented heavy rainfall at the beginning of 2002 in western Mauritania, only isolated adults were present at times in the northwest from January to March and in the centre in May. There were several unconfirmed reports of hoppers, adults and swarms in northern Mali during the winter and spring, and localized breeding occurred in Niger. Localized breeding also occurred in Oued Draa, Morocco in May, perhaps by adults originating in northern Mali, and control operations treated 270 ha of hopper and fledgling concentrations in June. During the summer, solitarious adults started to appear in southern Mauritania and in Tamesna, Niger from mid July onwards. Although good rains fell in the summer, only small-scale breeding was reported in these places during September and October. At the end of the summer, most of the adults in southern Mauritania moved towards the west and northwest where breeding continued to the end of the year, resulting in low numbers of hoppers present from October to December. In northern Mali, there were unconfirmed reports of adults in July and hopper bands in September and October. During November, locust numbers increased in all three countries. In Mali, hopper groups and *transiens* adults were reported in the north, and control operations treated 435 ha of hoppers and adults in Niger. In late October, isolated adults first began to appear from the south in

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<sup>1</sup> This draft contains information received by DLIS up to 5 August 2003. The presentation made at the DLCC will include any additional information received since then.

southern Algeria west of Tamanrasset. At the end of December, a few adults were seen near Oued Draa in Morocco.

Despite poor winter rainfall and dry conditions in early 2003, low numbers of adults persisted in northwestern Mauritania, southern Algeria and in Niger. There were unconfirmed reports of hoppers and adults in northern Mali throughout the spring. Some of these populations may have moved into southern Algeria where breeding occurred during March near Tamanrasset, giving rise to 650 ha of small groups of hopper and adult that had to be treated in late March and early April. Control operations were again undertaken in the same area in early June against 807 ha of adults, some of which were forming groups. Breeding occurred further south near the Malian border in May where 150 ha of hopper groups and adults had to be treated in early July. In Libya, about 400 ha were reportedly infested with hoppers and adults near the northern coast in June. While this is an area where Desert Locusts are rarely reported during recessions, they may have originated from infestations further south. Elsewhere, localized breeding was reported near Arlit, Niger in March and isolated adults persisted there until the summer. Isolated adults were also seen in northeastern Morocco in April.

During the summer of 2003, good rains fell throughout the summer breeding areas in West Africa. By the end of July, conditions were favourable for breeding in large parts of southern and central Mauritania, northern Mali, Niger and in eastern Chad. So far, only low numbers of adults have been reported from Niger, where breeding has commenced, and in Chad, while unconfirmed reports of important populations continued to be received from Mali.

### ***Central Region***

Isolated adults first began to appear on the Red Sea coastal plains in Sudan and Eritrea in November 2001. Poor rainfall and dry conditions during the winter restricted breeding to just one area near the Sudanese/Eritrean border in January 2002. Low numbers of locusts persisted in the Tokar Delta, Sudan until April. Although rainfall was better along the Red Sea coastal plains of Saudi Arabia and Yemen and unusually heavy rain fell in three consecutive months in the southern and eastern interior of the Arabian Peninsula, no locusts were reported and very little breeding, if any, is thought to have occurred.

Despite good rains from June to September 2002 in the interior of Sudan, only a few individual locusts were seen in Northern Kordofan. Good rains also fell during the summer on the Red Sea coast near the Saudi Arabia / Yemen border but no locusts were reported from these areas. Small-scale breeding occurred during August on the coastal plains near Aden, Yemen where small hopper groups mixed with immature adults began to form by the end of September. Limited breeding continued into October and November despite control operations that treated 200 ha of hopper groups and adults. In Egypt, low numbers of Desert Locust mixed with African Migratory Locust were treated in July and September in farms in the Western Desert at Sharq Oweinat near the Sudanese border.

In November, unusually heavy rains fell in northeastern Sudan along the northern Red Sea coast and in adjacent subcoastal areas. Small-scale breeding occurred in these areas in January 2003, giving rise to low numbers of hoppers and adults during February and March. Although isolated adults first began to appear in Tokar Delta and Suakin in late November, there were no further reports of locusts in these areas. Elsewhere, winter rains were generally poor and only isolated adults were present in northwestern Somalia in January.

During the summer of 2003, seasonal rains started during the last week of May in the summer breeding areas in Sudan and have continued on fairly regularly since then. Consequently, conditions are extremely favourable for breeding over a large area extending from Chad to



western Eritrea. So far, only scattered adults were seen in Northern Kordofan in July although similar populations are thought to exist in Northern Darfur and near the Eritrean border. No locusts have been reported from other countries in the region except for a few adults mixed with African Migratory Locust at Sharq Oweinat, Egypt from March onwards.

**Eastern Region**

Low numbers of adults from small-scale breeding continued to be reported in the summer breeding areas along both sides of the Indo-Pakistan border during October. Thereafter, conditions became dry and only a few individual locusts were seen in Rajasthan during the winter.

In 2002, isolated adults started to appear in the spring breeding areas near the Baluchistan coast in western Pakistan during February. Populations spread into the interior reaching nearly to the Afghanistan border during March. Breeding occurred on a small-scale in April but it was limited by poor rainfall. Consequently, locust numbers remained low and no further locusts were seen in Baluchistan after May.

In early June, a few adults moved into the summer breeding areas of Pakistan in the Tharparkar and Cholistan Deserts from Baluchistan. Despite intensive surveys, no locusts were seen in adjacent areas of Rajasthan, India. Very little breeding is thought to have occurred during the summer because of poor monsoon rains and unusually dry conditions. By mid October, no locusts were reported along the Indo-Pakistan border.

No locusts were reported in the region until late February 2003 when isolated adults were seen in coastal and interior areas in Baluchistan, Pakistan. At mid-month, unusually heavy and widespread rains fell in these areas as well as in adjacent areas in southeastern Iran. Very little breeding, if any, is thought to have occurred during the spring because of poor rainfall. By May, there were no further reports of locusts in Baluchistan.

The monsoon rains reached the summer breeding areas along the Indo-Pakistan border in mid June 2003 and have continued to date. Above-normal summer rains have fallen in nearly all typical locust areas and ecological conditions are favourable for breeding. So far, only isolated adults have been reported in the Tharparkar and Cholistan Deserts and in the Lasbela Valley, Pakistan. No locusts have been detected in Rajasthan, India.

**Control operations**

Control operations were undertaken in five countries from September 2001 to the present, treating 21,293 ha. These are summarized below in chronological order.

Mali	18,780 ha	October 2001	important populations
Morocco	271 ha	June 2002	hoppers and young adults
Yemen	200 ha	October 2002	hopper groups and adults
Niger	435 ha	November 2002	hoppers and adults
Algeria	650 ha	March-April 2003	hoppers and adults
Algeria	807 ha	May-June 2003	adult groups
Algeria	150 ha	July 2003	hopper and adult groups

### **Outlook until early 2004**

During the autumn, Desert Locust numbers are likely to increase in all regions because of summer breeding. The extent of this increase depends on the distribution and duration of the summer rains. As this year's summer rains have been unusually good in all regions so far, there is a good chance that sizeable populations could gradually develop. On the other hand, if the rains stop in September, then further breeding becomes less likely and locust numbers will remain low. Historically, rainfall often continues beyond September in some of the summer breeding areas in the Western and Central Regions. This allows another generation of breeding, usually during October, that produces new adults in November and December. In the recent past, this has occurred in western Mauritania, northern Mali, Niger and central Sudan. As a result, larger quantities of adults are available to move into the winter breeding areas in northern Mauritania and along the Red Sea coast. The scale and extent of breeding in these areas during the winter will be determined by rainfall at the end of this year and in early 2004.

In any case, once summer rainfall ends and vegetation starts to dry out, adults usually concentrate in those places that remain green and small groups can form that are good targets for control.

In the Eastern Region, only one generation is expected to develop in the summer breeding areas along the Indo-Pakistan border this year. Consequently, locust numbers are not likely to increase significantly. As the potential for invasions from other regions is extremely low, the situation should remain calm well into next year.

### International Trust Fund 9161: Contributions, Expenditure and Workplan

#### 1. INTRODUCTION

The Desert Locust Control Committee (DLCC) Trust Fund continues to support a number of activities which are of crucial importance to improved Desert Locust management, thereby bringing benefit to locust-affected countries. Major activities funded include training at the post-graduate degree level, at the diploma level and of Locust Information Officers. The production of the Desert Locust Guidelines in Arabic and French has been an important expense. The DLCC has also made a significant contribution to bringing remote-sensing images into use as an operational tool, to developing the RAMSES database, and to creating databases for archived locust reports and for locust pesticide trials. Last but not least, the DLCC has supported to EMPRES, especially in the Western Region. The details of the financial support provided to these activities are given below.

#### 2. CONTRIBUTIONS

**2.1.** Data on the contributions received by the DLCC Trust Fund are provided by the Receipts, Payments and Treasury Service, AFFR of the FAO Finance Division. Tables 1 a), b) and c) show the contributions to the DLCC Trust Fund received for 2001 and 2002, being US\$ 130,847 and 222,710 respectively (**all figures in this working paper are in US Dollars, unless otherwise stated**). An update on contributions received so far in 2003 will be provided at the time of the DLCC meeting, but the current figure as at 28 July 2003 is \$ 75,175. Payments were received in 2001 from 15 different countries and in 2002 from 11 countries, but not exactly the same as the 2001 countries, though a few countries are extremely loyal to the DLCC and pay their contributions routinely. The total membership at the end of 2002 was 33, of which 16 countries have not provided any contribution during 2001/2002. Given the important activities supported by the Trust Fund, and the global efforts being made to make preventive control practices into a sustainable reality through the EMPRES Programme, the need for more countries to contribute routinely is self-evident.

**2.2.** The total cash balance available at the end of the year 2000 was \$ 608,235. To this figure the contributions made in 2001 and 2002, plus so far in 2003, totalling \$ 428,732, should be added. The total interest earned on the account between 2001 and today is \$ 24,742, giving a total cash available 2001/2003 of \$ 1,061,709. Against this, the total expenditure incurred in the same period up to 31 July 2003 was \$ 806,759. The current cash balance is therefore \$ 254,950. This will permit planned DLCC activities up to the end of 2003 but will not cover the budgets that we are proposing for the subsequent years. It should be noted that the accumulated cash balance will have been consumed and future activities of the DLCC will be dictated by the level of incoming contributions. If member countries wish to maintain the level of activities seen in the last three years, more efforts to pay contributions will have to be made.

### 3. EXPENDITURE

**3.1.** Expenditure during 2001, 2002 and 2003 is summarized in Table 2. Details are given in Table 3 a), b), and c). It should be noted that the figures for 2001 and 2002 are final, and for 2003 are up to the end of July.

**3.2.** Compared with expenditure in the years reported at the last DLCC (1999: \$ 229,535;2000:\$ 165,270), the rate of usage of the Trust Fund has increased by 63%. Compared to expenditures discussed at the 35<sup>th</sup> DLCC (1997:\$ 103,786;1998:\$ 93,507), the increase is 226%. The Secretariat considers that the Trust Fund is now making the important contribution to improved locust management that it was always intended to. It is hoped that this view is shared by the membership.

**3.3.** The budgets approved at the last DLCC for 2001 and 2002 were \$ 740,710 (\$ 320,920 and \$ 419,790, respectively), and the expenditures for the two years was \$ 644,040 (\$ 273,900; \$ 370,140), a delivery of 87%. With the costs of the 37<sup>th</sup> Session being incurred now, the Pesticide Referee Group being planned for December, the printing charges for the Arabic and French versions of the Desert Locust Guidelines still to be received, and funds being likely to be needed for additional locust surveys if the rain persists, it is expected that the budget for 2003 will be fully spent, giving a nearly complete delivery rate for the three-year period.

**3.3.** For Fellowships, details of the fellowships funded are given in Table 4. In addition to funding M.Sc. and Ph.D. studies, fellowships have also been awarded for diploma studies in Desert Locust management at the University of Khartoum, Sudan. For the Reproduction and Distribution of the Desert Locust Bulletin and of the Working Papers for the DLCC, relatively high usage of the budget is incurred during years in which the DLCC is held. The expenditure in 2003 will increase markedly before the end of the year. The costs for the Bulletin are decreasing because greater emphasis is being placed on electronic distribution. For the Desert Locust Guidelines, the costs of translation of the documents into French and Arabic, and printing of the English version, have both been higher than expected. On DL Surveys, most of the funds have been used in the Western Region, particularly Mauritania, because the EMPRES Programme in the Central Region has had sufficient resources to cover survey requirements. This position may well be reversed if the expected Trust Fund support for the Western Region becomes available from 2004, while that for the Central Region is reduced. For the DLCC Meetings, the expenditures related to the 36<sup>th</sup> Session amounted to 91% of the estimated requirement, and a similar level is expected for the 37<sup>th</sup> Session. The Training expenditure reflects the initiation of a programme to train Locust Information Officers, selected in rotation from each region. Each selected trainee spends 11 months working at the Desert Locust Information Service (DLIS) at FAO HQ, during which time he learns how locust reports from affected countries are processed, archived and used to develop the monthly Desert Locust Bulletin. Training is also given in using RAMSES, in satellite image interpretation, computer handling and English language, if necessary. Trainees from Sudan and Niger have completed their courses and one from Pakistan is currently on post. It should be noted that the budget for training has been considerably exceeded under the Locust Information Officer initiative. If the system is to continue into 2004, the budget needs to be adjusted upwards.

**3.4.** The DLCC Technical Group has not met during the period under review, hence the minimal expenditure. A meeting is being planned for early 2004. Only one activity took place

under the Technical Experts Meeting budget, namely the funding of participants to the meeting in 2002 held in Rome at which the formation of the new Locust Commission for the Western Region was discussed. The formation of this new Commission is expected to make a major impact on the efforts by EMPRES to establish sustainable preventive locust management in the region. Because of the low populations of Desert Locust, new information on pesticide dosages was limited. As a result, no Pesticide Referee Group (PRG) meeting was held in 2001 or 2002, though one is now planned for December 2003. Instead the Secretariat took the initiative to create a database of all the pesticide trial information so far reviewed by the PRG. The work was undertaken by the University of Wageningen and will be tested during the next meeting. It is hoped that it will improve the efficiency of the PRG's future work. Funds for Consultancy Studies have been used for a small study on developing a cheap all-terrain vehicle that could allow locusts in difficult terrain to be sprayed. In addition, a major undertaking was begun to scan all the archived locust reports received from locust-affected countries from 1952 to 2002, and to create an electronic database of them. Eventually this database will replace the large number of hard-copy files held by the Locust Group and will release a significant amount of space. The database will be made available to affected countries so that they can easily access and check historical information. The costs of this work has exceeded the budget. From mid-2003, the DLCC has funded 50% and the remainder has been shared among the three Regional Commissions.

**3.5.** Expenditure on behalf of the EMPRES Programme has focussed partly on supporting the development of remote-sensing as an operational survey tool, partly on helping to make the RAMSES locust data management system user- and country-friendly, and partly to assist the development of the EMPRES Programme in the Western Region. Separate presentations on the progress achieved will be made to the 37<sup>th</sup> Session.

#### **4. BUDGET AND WORKPLAN FOR 2004/2005**

**4.1.** Given the expectation that the existing cash balance will be used up in implementing the activities that remain to be completed by the end of 2003, it is proposed that the budget and workplan for 2004 and 2005 should not exceed the annual level of contributions (\$ 183,880). The proposed budget for 2004/2005 is given in Table 5. It is suggested that any contributions received before the end of 2003 should be used to increase the funds available for the support of EMPRES.

**4.2.** If the level of contributions received is less than \$ 183,880, cuts in the budget will have to be made. Even if all the member countries fulfil their contributions, expenditure must of necessity drop to about 50% of what was available in 2001/2002/2003. It would seem that there are two possible solutions to prevent a decrease in activity. One is that some countries make an effort to settle their arrears, which, in total, stood at US\$ 1.4 million, or that consideration is given to increasing the level of contributions. The Secretariat will organize a major effort to be made on arrears settlement. If the 37<sup>th</sup> Session supports the idea, the Secretariat will prepare proposals for revised contributions for consideration at the 38<sup>th</sup> Session.

**TABLE 1 a)**

**TRUST FUND No. 9161.00 - MTF/INT/008/MUL -  
Inter-Regional Desert Locust Control Project**

**Oracle Account : TF - AGPD - TFAA97AA89140**

Status of Contribution as at 31 December 2001  
(expressed in US\$)

Member Governments	Outstanding 31/12/2000	Contribution due for 2001/2002 *	Received up to 31/12/2001	Outstanding 31/12/2001
<b>AFGHANISTAN</b>	31,320.00	3,480.00	0.00	34,800.00
<b>ALGERIA</b>	0.00	7,700.00	7,700.00	0.00
<b>BAHRAIN</b>	4,600.00	920.00	0.00	5,520.00
<b>CAMEROON</b>	-722.51	2,780.00	0.00	2,057.49
<b>CHAD</b>	75,960.00	3,520.00	0.00	79,480.00
<b>DJIBOUTI</b>	22,260.00	1,120.00	0.00	23,380.00
<b>EGYPT</b>	11,480.00	5,740.00	11,480.00	5,740.00
<b>ETHIOPIA</b>	8,656.00	4,320.00	12,944.00	32.00
<b>GAMBIA</b>	32,109.50	2,420.00	0.00	34,529.50
<b>GHANA</b>	36,095.00	3,280.00	0.00	39,375.00
<b>INDIA</b>	-213.01	20,000.00	19,786.99	0.00
<b>IRAN, Islamic Rep. of</b>	316,495.24	20,000.00	25,000.00	311,495.24
<b>IRAQ</b>	133,920.00	7,440.00	0.00	141,360.00
<b>JORDAN</b>	3,420.00	3,420.00	3,420.00	3,420.00
<b>KENYA</b>	62,683.39	3,580.00	0.00	66,263.39
<b>LEBANON</b>	29,895.98	3,060.00	1,975.00	30,980.98
<b>LIBYA</b>	79,159.22	10,640.00	0.00	89,799.22

<b>MALI</b>	9,279.60	3,600.00	0.00	12,879.60
<b>MAURITANIA</b>	63,825.09	2,900.00	0.00	66,725.09
<b>MOROCCO</b>	16,080.00	5,360.00	0.00	21,440.00
<b>NIGER</b>	69,480.00	3,760.00	0.00	73,240.00
<b>NIGERIA /a</b>	67,369.61	0.00	0.00	67,369.61
<b>OMAN</b>	21,000.00	2,100.00	0.00	23,100.00
<b>PAKISTAN</b>	6,488.94	6,520.00	6,488.94	6,520.00
<b>QATAR</b>	25,470.00	1,760.00	0.00	27,230.00
<b>SAUDI ARABIA, Kingdom of</b>	30,000.00	20,000.00	20,000.00	30,000.00
<b>SENEGAL</b>	10,667.82	3,520.00	0.00	14,187.82
<b>SOMALIA</b>	62,274.77	3,500.00	0.00	65,774.77
<b>SUDAN</b>	45,085.70	3,980.00	0.00	49,065.70
<b>SYRIA</b>	23,998.12	4,520.00	9,040.00	19,478.12
<b>TUNISIA</b>	66,456.44	4,460.00	0.00	70,916.44
<b>TURKEY /b</b>	0.00	0.00	0.00	0.00
<b>UGANDA</b>	54,080.00	3,380.00	1,912.40	55,547.60
<b>UNITED ARAB EMIRATES</b>	9,223.80	4,600.00	4,600.00	9,223.80
<b>YEMEN</b>	43,065.45	6,500.00	6,500.00	43,065.45

<b>TOTALS</b>	<b>1,470,964.15</b>	<b>183,880.00</b>	<b>130,847.33</b>	<b>1,523,996.82</b>
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a/ Withdrawn from 1995

b/ Withdrawn from 1997

\* Fiscal Year begins in July

**TABLE 1 b)**

**TRUST FUND No. 9161.00 - MTF/INT/008/MUL -  
Inter-Regional Desert Locust Control Project**

**Oracle Account : TF - AGPD - TFAA97AA89140**

Status of Contribution as at 31 December 2002  
(expressed in US\$)

Member Governments	Outstanding 31/12/2001	Contribution due for 2002/2003 *	Received up to 31/12/2002	Outstanding 31/12/2002
<b>AFGHANISTAN</b>	34,800.00	3,480.00	0.00	38,280.00
<b>ALGERIA</b>	0.00	7,700.00	0.00	7,700.00
<b>BAHRAIN</b>	5,520.00	920.00	0.00	6,440.00
<b>CAMEROON</b>	2,057.49	2,780.00	0.00	4,837.49
<b>CHAD</b>	79,480.00	3,520.00	0.00	83,000.00
<b>DJIBOUTI</b>	23,380.00	1,120.00	0.00	24,500.00
<b>EGYPT</b>	5,740.00	5,740.00	11,480.00	0.00
<b>ETHIOPIA</b>	32.00	4,320.00	0.00	4,352.00
<b>GAMBIA</b>	34,529.50	2,420.00	0.00	36,949.50
<b>GHANA</b>	39,375.00	3,280.00	0.00	42,655.00
<b>INDIA</b>	0.00	20,000.00	20,000.00	0.00
<b>IRAN, Islamic Rep. of</b>	311,495.24	20,000.00	0.00	331,495.24
<b>IRAQ</b>	141,360.00	7,440.00	0.00	148,800.00
<b>JORDAN</b>	3,420.00	3,420.00	6,831.69	8.31
<b>KENYA</b>	66,263.39	3,580.00	7,692.76	62,150.63
<b>LEBANON</b>	30,980.98	3,060.00	3,035.00	31,005.98
<b>LIBYA</b>	89,799.22	10,640.00	99,411.00	1,028.22



<b>MALI</b>	12,879.60	3,600.00	0.00	16,479.60
<b>MAURITANIA</b>	66,725.09	2,900.00	9,989.00	59,636.09
<b>MOROCCO</b>	21,440.00	5,360.00	0.00	26,800.00
<b>NIGER</b>	73,240.00	3,760.00	0.00	77,000.00
<b>NIGERIA /a</b>	67,369.61	0.00	0.00	67,369.61
<b>OMAN</b>	23,100.00	2,100.00	0.00	25,200.00
<b>PAKISTAN</b>	6,520.00	6,520.00	6,520.00	6,520.00
<b>QATAR</b>	27,230.00	1,760.00	1,760.00	27,230.00
<b>SAUDI ARABIA, Kingdom of</b>	30,000.00	20,000.00	51,470.28	-1,470.28
<b>SENEGAL</b>	14,187.82	3,520.00	0.00	17,707.82
<b>SOMALIA</b>	65,774.77	3,500.00	0.00	69,274.77
<b>SUDAN</b>	49,065.70	3,980.00	0.00	53,045.70
<b>SYRIA</b>	19,478.12	4,520.00	4,520.00	19,478.12
<b>TUNISIA</b>	70,916.44	4,460.00	0.00	75,376.44
<b>TURKEY /b</b>	0.00	0.00	0.00	0.00
<b>UGANDA</b>	55,547.60	3,380.00	0.00	58,927.60
<b>UNITED ARAB EMIRATES</b>	9,223.80	4,600.00	0.00	13,823.80
<b>YEMEN</b>	43,065.45	6,500.00	0.00	49,565.45

<b>TOTALS</b>	<b>1,523,996.82</b>	<b>183,880.00</b>	<b>222,709.73</b>	<b>1,485,167.09</b>
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a/ Withdrawn from 1995

b/ Withdrawn from 1997

\* Fiscal Year begins in July

**TRUST FUND No. 9161.00 - MTF/INT/008/MUL -  
Inter-Regional Desert Locust Control Project**

**TABLE 1 c)**

**Oracle Account : TF - AGPD - TFAA97AA89140**

Status of Contribution as at 28 July 2003  
(expressed in US\$)

Member Governments	Outstanding 31/12/2002	Contribution due for 2003/2004 *	Received up to 28/07/2003	Outstanding 28/07/2003
<b>AFGHANISTAN</b>	38,280.00	3,480.00	0.00	41,760.00
<b>ALGERIA</b>	7,700.00	7,700.00	0.00	15,400.00
<b>BAHRAIN</b>	6,440.00	920.00	0.00	7,360.00
<b>CAMEROON</b>	4,837.49	2,780.00	0.00	7,617.49
<b>CHAD</b>	83,000.00	3,520.00	0.00	86,520.00
<b>DJIBOUTI</b>	24,500.00	1,120.00	0.00	25,620.00
<b>EGYPT</b>	0.00	5,740.00	0.00	5,740.00
<b>ETHIOPIA</b>	4,352.00	4,320.00	4,335.00	4,337.00
<b>GAMBIA</b>	36,949.50	2,420.00	0.00	39,369.50
<b>GHANA</b>	42,655.00	3,280.00	0.00	45,935.00
<b>INDIA</b>	0.00	20,000.00	0.00	20,000.00
<b>IRAN, Islamic Rep. of</b>	331,495.24	20,000.00	0.00	351,495.24
<b>IRAQ</b>	148,800.00	7,440.00	0.00	156,240.00
<b>JORDAN</b>	8.31	3,420.00	0.00	3,428.31
<b>KENYA</b>	62,150.63	3,580.00	3,832.12	61,898.51
<b>LEBANON</b>	31,005.98	3,060.00	0.00	34,065.98
<b>LIBYA</b>	1,028.22	10,640.00	9,587.81	2,080.41
<b>MALI</b>	16,479.60	3,600.00	0.00	20,079.60
<b>MAURITANIA</b>	59,636.09	2,900.00	0.00	62,536.09

<b>MOROCCO</b>	26,800.00	5,360.00	0.00	32,160.00
<b>NIGER</b>	77,000.00	3,760.00	0.00	80,760.00
<b>NIGERIA</b> /a	67,369.61	0.00	0.00	67,369.61
<b>OMAN</b>	25,200.00	2,100.00	0.00	27,300.00
<b>PAKISTAN</b>	6,520.00	6,520.00	6,520.00	6,520.00
<b>QATAR</b>	27,230.00	1,760.00	26,380.00	2,610.00
<b>SAUDI ARABIA, Kingdom of</b>	-1,470.28	20,000.00	20,000.00	-1,470.28
<b>SENEGAL</b>	17,707.82	3,520.00	0.00	21,227.82
<b>SOMALIA</b>	69,274.77	3,500.00	0.00	72,774.77
<b>SUDAN</b>	53,045.70	3,980.00	0.00	57,025.70
<b>SYRIA</b>	19,478.12	4,520.00	4,520.00	19,478.12
<b>TUNISIA</b>	75,376.44	4,460.00	0.00	79,836.44
<b>TURKEY</b> /b	0.00	0.00	0.00	0.00
<b>UGANDA</b>	58,927.60	3,380.00	0.00	62,307.60
<b>UNITED ARAB EMIRATES</b>	13,823.80	4,600.00	0.00	18,423.80
<b>YEMEN</b>	49,565.45	6,500.00	0.00	56,065.45

<b>TOTALS</b>	1,485,167.09	183,880.00	75,174.93	1,593,872.16
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a/ Withdrawn from 1995

b/ Withdrawn from 1997

\* Fiscal Year begins in July

# Yemen reported on 2/8/03 that \$ 5,173 were in process of being transferred to the Commission.

TABLE 2

**Summary of Budget and Expenditure  
Desert Locust Control Committee Trust Fund 9161**

No.	Item	2001 Final		2002 Final		2003 Interim	
		Budget	Expenses	Budget	Expenses	Budget	Expenses
		<b>58,000</b>	29,356	<b>58,000</b>	92,073	<b>58,000</b>	55,444
1.	Fellowships						
2.	Reprod.Distrib. DLBulletin/ DLCC Papers	<b>25,000</b>	23,158	<b>10,000</b>	4,032	<b>25,000</b>	373
3.	DL Guidelines	<b>30,000</b>	48,017	<b>30,000</b>	37,830	<b>30,000</b>	800
4.	DL Survey	<b>30,000</b>	38,497	<b>30,000</b>	2,596	<b>30,000</b>	3,526
5.	Meeting	<b>50,000</b>	45,243	-	311	<b>50,000</b>	3,773
6.	Training	<b>10,000</b>	23,375	<b>10,000</b>	28,354	<b>10,000</b>	17,717
7.	Technical Group Meeting	<b>1,000</b>	2,950	<b>30,000</b>	-	<b>1,000</b>	-
8.	Technical Experts Meeting	<b>20,000</b>	(162)	<b>30,000</b>	33,504	<b>30,000</b>	-
9.	Pesticide Referee Group	-	-	<b>25,000</b>	27,404	<b>25,000</b>	-
10.	Consultancy Studies	<b>10,000</b>	-	<b>10,000</b>	41,962	<b>10,000</b>	22,903
11.	Support EMPRES (Desert Locust) Programme	<b>50,000</b>	22,818	<b>50,000</b>	55,919	<b>50,000</b>	39,461
12.	Items to be corrected		9,137		3,573		
	<i>Sub-Total</i>	<b>284,000</b>	242,389	<b>283,000</b>	327,558	<b>319,000</b>	143,997
13.	Project Servicing Costs	<b>36,920</b>	31,511	<b>36,790</b>	42,582	<b>41,470</b>	18,720
14.	Contingency/ Emergency Fund			<b>100,000</b>	-	-	-
	<b>GRAND TOTAL</b>	<b>320,920</b>	273,900	<b>419,790</b>	370,140	<b>360,470</b>	162,717

**TRUST FUND  
of the  
Desert Locust Control Committee**

**STATEMENT OF ACCOUNTS FOR THE YEAR 2001**

<u>Account</u>	<u>Description</u>	<u>Cost US \$</u>	
5012	<u>Salaries General Service</u>		
	- Medical examination Maha Zaki (Error: to be corrected: charge to 007/MUL)	115	<b>115</b>
5013	<u>Consultants</u>		
	- Kamal Suliman (Sudan) – Trainee Locust Information Officer, 11 months ;	15,131	
	- Lecoq, M. – Contribution to EMPRES/WR Workshop, Nouakchott, February 2001;	1,637	
	- 2 x messengers for 36 <sup>th</sup> Session DLCC: 24-28.9.01 (Pellegrini/Bilbeisi);	939	
	- Agnes Bouche - Author's contract, publicity poster for EMPRES(PO104566);	6,000	
	- Magor, J. - consultancy to train Trainee Information Officer K. Suliman (11.6-14.7.01);	1,500	
	- Mani Tanko, Trainee Information Officer, December 2001 stipend	1,749	
	- Medical Insurance for Tanko	41	
			<b>26,997</b>
5014	<u>Contracts</u>		
	- Letter of Agreement with Natural Resources Institute/UK, finalization of text, part-printing Desert Locust Guidelines (PO 106198);	8,382	
	- Printing of 1000 copies, in English, of Desert Locust Guidelines (PO 106759);	21,987	
	- Printing of 700 additional copies, in English (PO 106763);	17,363	
			<b>47,732</b>
5020	<u>Overtime</u>		
	- Ms Maha Zaki, Cairo (Error to be corrected: charge to 007/MUL)	2,729	
	- telephone technicians, 36 <sup>th</sup> Session DLCC	111	
			<b>2,840</b>

Travel

- Accrual FAS 2001 transactions, posted in 2002;	2,196
- Everts, J. - settlement DSA, June 2000 participation in DLCCTG (AAF0013835);	534
- Munir Butrous - ticket/DSA, participation 36 <sup>th</sup> Session DLCC, Rome, (AHQ0033505)	2,988
- Ben Ameer - Settlement credit 2000, interpretation at CLCPRO creation (AHQ0012149)	(162)
- Aston , R. – Settlement, participation DLCCTG, June 2000 (AHQ0013923)	419
- Mani Tanko, Trainee Locust Information Officer, appointment travel (AHQ 0039017)	290

*EMPRES/WR Workshop, Nouakchott , Mauritania, 10 to 15 February 2001:*

Everts, J.(AHQ0024507)	581
Hafedh Hamdi, Tunisia(AHQ0024151)	1,558
Djibrine Idrissa, Chad(AHQ0024148)	1,906
Moussa Sissoko, Mali (AHQ0024122)	1,116
Ghaout Said, Morocco(AHQ0024142)	940
Lakdhar Rachid, CLCPANO -	940
Cheferou Mahatan, Niger(AHQ0024145)	1,719
Faustin Diatta, Senegal(AHQ0024146)	940
Mohamed Lazar, Algeria (AHQ0024107)	2,486
Mostafa Aliesh, Lybia(AHQ0024121)	1,989
Magor , J. travel to Rome to train Trainee Information Officer(AHQ0029794)	311
Everts, J., Locustox representative at 36 <sup>th</sup> .DLCC (AHQ0033690)	3,433
(Error: 50% of cost to be charged to 686/NET)	
Bachir Chara, spokesperson for DLCCTG (AHQ 0033881)	1,997
Benhalima, T., - DLCC Rome, 24-28.9.01 (AHQ0033856)	1,356
(Error: to be corrected, charge to RP)	
Taher, M., special guest 36 <sup>th</sup> session DLCC, (AHQ0034889)	1,370
Roy, J., recipient of medal at DLCC (AHQ0033852)	1,094
Oomen, P., spokesperson for PRG (AHQ0033171)	1,589
Fellow Moumene (repatriation, end of studies) (AHQ0030488)	92
Fellow Al-Hariri (repatriation, end of studies) (AHQ0023826)	563
Fellow Ghaemian (to study in UK)	767

**33,012**

5023	<u>Training</u> Fellow Adnan Khan (Saudi Arabia), M.Sc. studies at University of Khartoum, Sudan 18,692 Fellow Al-Hariri Khaled (Syria), Ph.D. studies at University of Faisalabad, Pakistan 393 Fellow Moumene Khaled (Algeria), Ph.D. studies, at INAT, Tunisia 4,673 Fellow Ishfaque Muhammad (Pakistan), Ph.D. studies at University of Faisalabad 4,923 Registration fees for Ishfaque (PO92046) 2,000 Fellow Ghaemian (I.R.Iran), M.Sc. studies at Imperial College at Silwood Park, UK 2,498 Reconciliation from previous years (5,245)	<b>27,934</b>
5024	<u>Expendable Procurement</u> Silver medal for J.Roy, presented at 36 <sup>th</sup> DLCC 112 Power-point projector for DLCC presentations (PO 107113) 4,221 Insurance for projector 11	<b>4,344</b>
5025	<u>Non Expendable Procurement</u> Reimbursement wrong charge laptop computer for Cairo office in 09.1999(PO 69408) (388) Material DL Morocco 3,221 (Error: to be corrected; charge to 006/MUL)	<b>2,833</b>
5026	<u>Hospitality</u> Engraving of silver medal for J.Roy 59 Lunch for visiting EC/Varese delegation, remote- sensing development for EMPRES 111 Coffee breaks, DLCC 36 <sup>th</sup> Session 282	<b>452</b>
5028	<u>General Operating Expenses</u> <b>Mauritania:</b> - CLAA operational costs of locust surveys 24,805 - Operating expenses, Regional Workshop on improved locust control application, Akjoujt 4,246 <b>Mali:</b> - Locust Unit operational costs of locust surveys 10,000 <b>Niger:</b> - Locust Unit operational costs of locust surveys 3,692  Preparation of Desert Locust Guidelines on Environmental Monitoring by Locustox 1,440	

	Error correction on funds to Locustox	(1,155)	
	EMPRES/CR local costs in Cairo:		
	Petty cash beneficiary	28	
	Phone/Fax	867	
			<b>43,923</b>
5050	<u>Chargeback</u>		
	Arabic/English/French interpreters 36 <sup>th</sup> DLCC	28,942	
	Translation/printing of working papers		
	for 36 <sup>th</sup> DLCC into Arabic/English/French	22,598	
	DL Bulletin distribution costs	560	
	English Language training for trainee Kamal		
	Suliman	107	
			<b>52,207</b>
	<u>Total Expenditure 2001</u>		<b>242,389</b>
5029	Support cost 13%		<b>31,511</b>

**GRAND TOTAL EXPENDITURE 2001: US\$ 273,900**



TABLE 3 b)

## MTF/INT/008/MUL

**TRUST FUND  
of the  
Desert Locust Control Committee**

## STATEMENT OF ACCOUNTS FOR THE YEAR 2002

<u>Account</u>	<u>Description</u>	<u>Cost US \$</u>
5013	<u>Consultants</u>	
	- Magor J. - consultancy to train Trainee Information Officer M. Tanko (6.1.- 4.2.02)	1,758
	- Lie, Svein - author's contract: literature review and report on improving traction for an experimental vehicle for locust spraying in difficult terrain;	5,000
	- Ceccato, P. - Remote-sensing/RAMSES improvements through EMPRES (1.1-5.12.02) 50% paid on INT/008; 50% against FAO RP A4	27,734
	- Russel-Smith, M. - French translation of Desert Locust Guidelines (77 days;PO113426)	10,000
	- Russel-Smith, M. - Additional translation of DL Guidelines (13 days;PO119006)	2,000
	- Harb, M. - Arabic translation of DL Guidelines (83 days;PO113543)	10,000
	- El-Guindy, Moshin - Editing Arabic version of DL Guidelines (AC-PO120760)	2,000
	- van der Valk, H. - Revision of DL Guidelines on Safety and the Environment, ready for formatting (30 days;PO 114706)	9,000
	- Roy, J. - Technical revision of French version of DL Guidelines (15 days;PO116106)	1,500
	- Jones, A. - Lay-out formatting to be print-ready DL Guidelines on Safety and Environment (11 days; PO124366)	2,200
	- Mani Tanko (Niger)- Trainee Locust Information Officer, 11 months (01-11.02);(PO 109596)	18,026
	- Balouch, Ghulam (Pakistan) - Trainee Locust Information Officer, 11 months (12.02-10.03;PO 125349)	3,575
	- Rubegni, R. – design and creation of medal for 50 <sup>th</sup> Anniversary of DLCC (PO127279)	1,000
		<b>93,793</b>
5014	<u>Contracts</u>	
	- Credit for overpayment DL Guidelines print in 2001	(870)
	- Letter of Agreement Wageningen University: development of a database for the Pesticide Referee Group	

	archives) (PO 116247)	27,404	
	- Contract El Batawi, Hashim: formatting and lay-out of Arabic translation of DLGuidelines, ready for printing (PO 127711)	2,000	
			<b>28,534</b>
5021	<u>Travel</u>		
	Fellow Mamoon Al-Alawi participation in ULV EMPRES Sprayer testing Workhop(AHQ0051045)	1,707	
	Error corrected: Butrous to 36 <sup>th</sup> DLCC (AHQ0033505)	(1,743)	
	Error corrected: participants in joint OCLALAV /CLCPANO meeting towards creation of new Commission, now charged to DLCC;	5,712	
	Everts, J. - Travel Expense Claim 36 <sup>th</sup> Session DLCC (AHQ0033690)	21	
	Ceccato, P. - TEC for appointment travel (AHQ0039656)	460	
	Ceccato - to Morocco/Mauritania, EMPRES development RAMSES/remote sensing; (AHQ0045236)	3,237	
	Ceccato - to Niger/Mali, EMPRES development RAMSES/ Remote-sensing; (AHQ0053049)	2,476	
	Ceccato - to Mauritania, installing new RAMSES, participating new locust technologies workshop; (AHQ0055189)	2,048	
	Lemine, Mohamed - to Mali to assist in an assessment of the locust management capacity in the Plant Protection Organization; (AHQ0044447)	939	
	Fellow Singh, Satbir (India)- to Sudan, for Diploma studies at University of Khartoum; (AHQ049707)	898	
	Fellow Abubaker, Husin Masaud (Lybia) - to Sudan, for Diploma studies at University of Khartoum; (AHQ0049866)	335	
	Postage charges at FAO Mauritania	38	
	Fellow Adnan Khan end-of-studies repatriation	243	
	Al Oualid, Fathi Omar (Lybia) – to Oman for EMPRES Training of Trainers Workshop; (AHQ0049977)	3,717	
	Magor, J. – travel UK/Rome to train Trainee Information Officer; (AHQ0039690 + AHQ0052993)	769	
	<b>Meeting to form new Locust Commission for the Western Region, (CLCPRO), 18-20.9.02, Rome:</b>		
	Ndoubabe Tigaye (Chad)-(AHQ0050130)	3,405	
	Ould Cheik Bouya (Mauritania)-(AHQ0049829)	2,319	
	Bernard Maiga (Mali)-(AHQ0049821)	2,914	
	Ghaout Said (Morocco)-(AHQ0049253)	2,704	
	Cheferou Mahatan (Niger)-(AHQ0049358)	5,179	
	Mbodj Macoumba (Senegal)-(AHQ0050139)	2,802	
	Moumen Ali (Algeria)-(AHQ0050691)DSA	972	
	Aliesh Mustafa (Lybia)-(AHQ0050135)	1,481	
	Mauritius UNDP (Error: to be corrected)	3,573	
			<b>46,206</b>

5023	<u>Training</u>		
	Fellow Ghaemian (I.R.Iran), M.Sc. studies at Imperial College at Silwood Park, UK (1.10.01-30.9.02)	10,507	
	Fellow Ghaemian, tuition fees, 2001/2002	15,643	
	Fellow Adnan Khan (Saudi Arabia), M.Sc. studies at University of Khartoum, Sudan;	14,092	
	Fellow Adnan Khan, tuition fees	5,000	
	<b>Diploma in Locust Management, University of Khartoum, Tuition fees;</b>		
	Singh, Satbir (India)	5,000	
	El-Tayib (Sudan)	5,000	
	Abubaker (Lybia)	5,000	
	Al-Qataberi (Yemen)	5,000	
	<b>Stipends;</b>		
	Abubaker	7,472	
	Singh, Satbir	7,472	
	El Tayib	4,215	
	Fellow Moumen Khaled (Algeria) - thesis allowance	750	
	Fellow Ishfaque Muhammad (Pakistan) – stipend	3,739	
			<b>88,890</b>
5024	<u>Expendable Procurement</u>		
	Power-point projector ordered in 2001 - carry-forward credit	(134)	
			<b>(134)</b>
5025	<u>Non Expendable Procurement</u>		
	Locust survey equipment for campaign 2002/2003 for Mauritania	2,596	
			<b>2,596</b>
5026	<u>Hospitality</u>		
	Reception for the participants CLCPRO-formation Meeting, Rome, Sept.02	265	
			<b>265</b>
5028	<u>General Operating Expenses</u>		
	Error corrected: costs wrongly charged in 1999 to INT/006, instead of to INT/008	18,472	
	Tel/ fax charges for EMPRES in Cairo	515	
	Cost of 80 copies of book by Jean Roy, distributed to Locust-affected countries	1,167	
	Trainee Information Officer Balouch, Ghulam, Appointment expenses	200	
			<b>20,354</b>
5040	<u>General Overhead Expenses</u>		
	International courier/Pouch, including dispatch of Desert Locust Guidelines	3,246	
			<b>3,246</b>

5050	<u>Chargeback</u>		
	F.Farina, G-2 Clerk, to assist in scanning locust reports from 1952 to 2002, for creation of database for use by locust-affected countries and researchers;	36,962	
	Interpreters CLCPRO-formation meeting, Sept.02	4,303	
	English level A training course Mani Tanko	309	
	Printing DL Bulletin Nos: 279 to 289	786	
	Printing 150 copies Expert Consultation on Mycopicesticides for locust control, Rome,12.2001	201	
	<b>CLCPRO Meeting, Sept.2002:</b>		
	Translation/Printing into Arabic of invitation to CLCPRO-formation meeting;	154	
	Arabic translation Agenda	96	
	Arabic translation working paper	116	
	Arabic translation Provisional Workplan	116	
	Arabic translation Meeting Report	765	
			<b>43,808</b>
	<u>Total Expenditure 2002</u>		<b>327,558</b>
5029	<u>Support costs (13%)</u>		<b>42,582</b>
			<b><u>GRAND TOTAL EXPENDITURES 2002: US\$ 370,140</u></b>

TABLE 3 c)

MTF/INT/008/MUL

**TRUST FUND  
of the  
Desert Locust Control Committee**

**STATEMENT OF ACCOUNTS FOR THE YEAR 2003  
as at 31 JULY 2003**

<u>Account</u>	<u>Description</u>	<u>Cost US \$</u>
5012	<u>Salaries General Service</u> F.Farina, G-2 clerk To assist in scanning locust reports from 1952 to 2002, For creation of a database for use by locust-affected countries and researchers;	22,903
		<b>22,903</b>
5013	<u>Consultants</u> - Duranton, J-F. to Mauritania, to provide technical advice to the Locust Centre on locust surveys; - Balouch Ghulam (Pakistan) - Trainee Locust Information Officer, 11 months (18.11.02-17.10.03) (PO 125349) Ceccato, P. - Remote-sensing/RAMSES improvements through EMPRES, 11months (20.1.- 19.12.03) 50% paid on INT/008; 50% against FAO RP A4; (PO 126157) - Pender, Judith – EMPRES training Saudi Arabian locust officers on RAMSES; (PO 127531) - Mitchell, L. - technical editing DL Guidelines on Safety and the Environment; (PO 128846)	2,723 16,392 33,051 2,261 800
		<b>55,227</b>
5014	<u>Contracts</u> Meteofrance: obtaining missing historical met. data	803
		<b>803</b>
5021	<u>Travel</u> Ceccato, P. - repatriation cost at end 2002 contract (AHQ0039656) Fellow Ishfaque (Pakistan), to UK for research studies required to complete Ph.D. Credit travel claims Ceccato year 2002 Consultant Pender, J. to Saudi Arabia to carry out RAMSES training for EMPRES; (AHQ0056673) Balouch, Ghulam – appointment travel to Rome	493 454 (234) 3,545 820
		<b>5,078</b>

5023	<u>Training</u> Fellow Ishfaque (Pakistan) for 12-month research progr. on Desert Locust control at NRI/UK (PO129362)	14,779	
	NRI fees (PO 131830)	17,152	
	<b>Diploma in Locust Management, University of Khartoum, 2002/2003, Second Stipend payment.</b>		
	Abubaker Hussin (Lybia)	7,627	
	Singh Satbir (India)	8,077	
	El-Tayib, El Balla (Sudan)	7,355	
			<b>54,990</b>
5024	<u>Expendable Procurement</u> Production of 100 silver medals for 50 <sup>th</sup> Anniversary DLCC	2,230	
			<b>2,230</b>
5028	<u>General Operating Expenses</u> Engraving Names for 50 <sup>th</sup> DLCC medals EMPRES Office, Cairo: Phone/fax charges	1,543 345	
			<b>1,888</b>
5050	<u>Chargeback</u> Printing DL Bulletin Language training, Trainee Inf. Officer, Balouch,G. Computer training, Trainee Inf. Officer, Balouch,G.	373 55 450	
			<b>878</b>
	<u>Total Expenditure 2003, as at 31 July</u>		<b>143,997</b>
5029	<u>Support costs (13%)</u>		<b>18,720</b>
	<b><u>GRAND TOTAL EXPENDITURES 2003:</u></b>		<b><u>US\$ 162,717</u></b>

TABLE 4

Fellowships Awarded by DLCC under DLCC TF-MTF/INT/008/MUL											
	1999		2000		2001		2002		2003		
Fellow	Budget USD	Expend	Budget USD	Expend	Budget USD	Expend	Budget USD	Expend	Budget USD	Expend	Comments
Khaled Moumene (Algeria) (completed)	68,000		68,000		68,000	-5,245	68,000		68,000		Reconciliation year 2001  Extended from 1.1.2001 to 30.6.2001 with PO 76284 - No further extension authorized after 30.6.2001 Studying in Tunisia; Doctorate in Acridology based in the Institut National Agronomique (INAT) Period: 1.11.1995 - 30.6.2001
AL-SHAIBANY, Adel (Yemen) (completed)		6,884		504							Nationality: Yemen Country of study: India Programme: M.Sc. Entomology (Desert Locust) Host Institute: Rajasthan College of Agriculture Period of study: 40 months Starting/ending date: 27.8.96 - 31.12.99
AL-HARIRI, Khaled (Syria) (completed)		8,235		9,054		956					Nationality: Syria Country of study: Pakistan Programme: M.Sc. Entomology (Desert Locust) Host Institute: University of Agriculture, Faisalaba Period of study: 24 months Starting/ending date: 20.1.99 - 19.1.2001
Muhammad ISHFAQUE (Pakistan)				585		6,923		3,739		32,385	PO 90503- Extension until 31.12.2001 Country of studies: Pakistan and UK Programme: Agricultural Entomology, Ph.D.

(On-going)											Host Institute: University Faisalabad/Natural Resources Institute Period: max 36 months Starting date: 20.12.2000 Expected conclusion date: December 2003
Adnan KHAN (Saudi Arabia)		3,132		5,744		18,692		19,335			Country of studies: Sudan Programme: Crop protection, M.Sc. Programme
GHAEMIAN Mehdi (I.R.Iran) (completed)						3,265		26,150			To participate 12 months MSc Pest Management at Imperial College, Silwood Park, UK (1.10.01-30.9.02)
	<b>1999</b>	<b>2000</b>		<b>2001</b>		<b>2002</b>		<b>2003</b>			
Fellow	Budget USD	Expend	Budget USD	Expend	Budget USD	Expend	Budget USD	Expend	Budget USD	Expend	Comments
	68,000		68,000		68,000		68,000		68,000		
Abubaker Hussin Masaud (Lybia)								12,807		7,627	12 months University of Khartoum Programme: Diploma on Desert Locust management) (24.8.02-23.8.03)
Singh Satbir (India)								13,370		8,077	12 months University of Khartoum Programme: Diploma on Desert Locust management) (24.8.02-23.8.03)
El Tayib El Balla (Sudan)								9,215		7,355	12 months University Khartoum on Desert Locust control Programme: Diploma on Desert Locust management) (24.8.02-23.8.03)



Al-Qataberi  
(Yemen)

5,000

12 months University Khartoum on Desert Locust control  
Programme: Diploma on Desert Locust management  
(24.8.02-23.8.03)

TABLE 5

## Desert Locust Control Committee

## PROPOSED BUDGET (US\$)

		2004	2005
No.	Item	Budget	Budget
1.	Fellowships	30,000	30,000
2.	Reprod.Distrib. DLBulletin/ DLCC Papers	5,000	25,000
3.	DL Guidelines	25,000	-
4.	DL Survey	20,000	-
5.	DLCC Meeting	-	50,000
6.	Training	25,000	25,000
7.	Technical Group Meeting	30,000	-
8.	Technical Experts Meeting	-	-
9.	Pesticide Referee Group	-	25,000
10.	Consultancy Studies	-	-
11.	Support EMPRES (Desert Locust) Programme	27,726	7,726
	<i>Sub-Total</i>	<b>162,726</b>	<b>162,726</b>
12.	Project Servicing Costs	21,154	21,154
13.	Contingency/ Emergency Fund	-	-
	<b>GRAND TOTAL</b>	<b>183,880</b>	<b>183,880</b>