REPORT OF

THE TWENTY-NINTH SESSION OF THE FAO DESERT LOCUST CONTROL COMMITTEE

Rome, Italy
13-17 June 1988

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Meeting Report
No. AGP/1988/M/2

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THE TWENTY-NINTH SESSION OF THE FAO DESERT LOCUST CONTROL COMMITTEE

held in

Rome, Italy

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Plant Production and Protection Division
Food and Agriculture Organization of the United Nations
Rome, 1988

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INTRODUCTION

The Twenty-Eighth Session of the FAO Desert Locust Control Committee, which was held in Rome in 8-12 September 1986, agreed that the next Session of the Committee should be convened in Rome at a time to be chosen by the Director-General of FAO.

The Director-General invited the following Governments to be represented at the Twenty-Ninth Session:

Afghanistan
Algeria
Bahrain
Benin
Burkina Faso
Cameroon
Central African Republic
Chad
Djibouti
Egypt
Ethiopia
France
Gambia
Ghana
Greece
Guinea
India
Iran, Islamic Republic of
Iraq
Israel
Ivory Coast
Jordan
Kenya
Kuwait
Lebanon
Libya
Mali
Mauritania
Morocco
Niger
Nigeria
Oman
Pakistan
Portugal
Qatar
Saudi Arabia
Senegal
Sierra Leone
Somalia
Spain
Sudan
Syria
Tanzania
Togo
Tunisia
Uganda
United Arab Emirates
United Kingdom
United States of America
Yemen Arab Republic
Yemen, People's Democratic Republic of

He also invited representatives from the following organizations to attend as observers: Desert Locust Control Organization for Eastern Africa (DLCO-EA), Organisation Commune de Lutte Antiacridienne et de Lutte Antiaviaire (OCLALAV), International Red Locust Control Organisation for Central and Southern Africa (IRLCO-CSA), United Nations Development Programme (UNDP), World Meteorological Organization (WMO) and the Interafrican Phytosanitary Council (IAPSC) of the Organization of African Unity.

The Session was opened by Mr. C.H. Bonte-Friedheim, Assistant Director-General of the Agriculture Department who, on behalf of the Director-General, welcomed the participants to Rome and reviewed the developments in the Desert Locust situation since the previous session. He observed that the Desert Locust situation had deteriorated rapidly from that of a deep recession in 1985 to that of a major plague in late 1987-early 1988 and suggested that there were four main reasons for this: firstly, there had been widespread and abundant rainfall which had allowed successive generations of Desert Locusts to breed successfully ; secondly, some of the major breeding had occurred in areas of civil strife and virtually no control was possible ; thirdly, the pesticides used did not have adequate persistence to control hopper infestations adequately, and fourthly, there was a lack of experienced control staff.

It would require major efforts by all the affected countries and regional organizations on the one hand and very large external assistance on the other to bring the situation back under control but Mr. Bonte-Friedheim warned that it was virtually certain that the plague would continue into 1989 and may be for much longer. He also drew attention to the measures being taken by FAO to assist the countries most affected in West Africa in creating national Desert Locust units and by proposing a multilateral assistance project covering North-West and West African countries. He further announced that FAO would convene a meeting to review locust research in late 1988.

The representative of the Secretary-General of the World Meteorological Organization expressed appreciation for having been invited to the Session and announced activities which WMO had already taken to help its Members provide better meteorological information to the locust control officials in their countries and also to the FAO headquarters here in Rome. These included:

1. the provision of relevant weather observations and forecasts;

2. the upgrading of weather observing networks with unmanned automatic weather stations in desert locations and mobile upper air observing stations;

3. obtaining improved satellite information at the working level for national and regional locust control agencies;

4. holding a joint workshop with FAO, UNDRO and UNEP on the meteorological aspects of locust control;

5. preparing an up-to-date publication summarizing existing information on the meteorological aspects of locust control; and

6. providing training, including roving seminars, on the techniques to provide relevant meteorological information to locust control agencies.

The WMO Executive Council, which was currently meeting in Geneva, had stressed that very high priority should be given to take all possible measures to help Members in the fight against locusts, and the Council had also directed that full cooperation be taken with the FAO and other agencies involved.

Officers of the Session

Chairman: Amor Ben Rondhane (Tunisia)
Vice-Chairman: Salem Bamufleh (Saudi Arabia)

Drafting Committee

The Drafting Committee was made up of the delegates of: Algeria, Egypt and Morocco. Mr. J. Roffey acted as Technical Secretary.

Acknowledgements

The Chairman thanked the Director-General of FAO, Mr. Brader and the FAO staff for the arrangements which had been made for the meeting, which had allowed full and open discussions, and the affected countries and the international donor community for the efforts which they had made to combat the plague.

PARTICIPANTS IN THE SESSION

The following delegations from Member Nations of the Food and Agriculture Organization of the United Nations, observers and members of the FAO staff participated in the Session and contributed to the discussions summarized in this report.

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AGENDA

1. Opening of the Session
2. Election of the Chairman and Vice-Chairman
3. Adoption of the Agenda
4. Election of the Drafting Committee
5. The locust situation 1986-88, forecast to December 1988 and outlook for 1989
   (a) Desert Locust
   (b) Other species
6. Control measures undertaken by various countries and regional organizations
7. Assistance provided to countries and regional organizations (FAO and donors)
8. Review of existing control potential at national and regional levels
9. Reporting and forecasting
10. Review of remote sensing applications to Desert Locust survey and control
11. FAO/GERDAT Desert Locust modelling project
12. Review of work at Desert Locust field research stations
13. Training
14. Trust Fund 9161: contributions and expenditure
15. Status of regional locust commissions/organizations
    (a) Near East Commission
    (b) North-West Africa Commission
    (c) South-West Asia Commission
    (d) DLCO-EA
    (e) OCLALAV
    (f) IRLCO-CSA
    and follow-up of recommendations made at their annual meetings
16. Any other business
17. Date and place of next Session
18. Adoption of Report

SUMMARY OF DISCUSSIONS

THE DESERT LOCUST SITUATION, SEPTEMBER 1986-MAY 1988 AND OUTLOOK TO DECEMBER 1988

1. The reporting period was marked by frequent and successful breeding in the Central and Western Regions, leading to the development of a major plague in late 1987 and early 1988.

2. There were good summer rains in the interior of Sudan and adjacent areas of northern Ethiopia in summer 1985, which resulted in a major upsurge of the African Migratory Locust in eastern Sudan but also, to a lesser extent, of the Desert Locust for, as reported to the 28th Session of the DLCC, day-flying adults were seen from a fishing trawler 40 kilometres west of Jizan in early November and in early December patchy gregarious breeding commenced in the Lith and Qunfidah Tihamas of western Saudi Arabia. Breeding also started on the Red Sea coast of Sudan in early November and in addition two swarms from the interior reached the Red Sea coast between Port Sudan and Tokar in early January 1986. Control

operations were mounted in Saudi Arabia, Sudan and Egypt, which was invaded in early February but there were some escapes and swarms and, subsequently hopper, infestations occurred in the interior of Saudi Arabia between March and August 1986.

3. In early June there were reports of swarms moving south in the Yemen Arab Republic and, later, of gregarious breeding in the People's Democratic Republic of Yemen. There were also several reports of adults in Oman, Pakistan and India indicating that at least some adults had moved east.

4. Migration to the west was, however, much more significant. A swarm was seen at Musmar in the Red Sea Province in late June and in early July an airborne observer reported flying through locusts for 40 minutes between Mersa Teclai and Halibai in northern Eritrea. Subsequently there were numerous unconfirmed reports of swarms in Eritrea and in late August fifth instar hopper bands began to enter Sudan east of Kassala. In the interior of Sudan, where the main control efforts were concentrated on controlling grasshopper infestations in the cultivated areas, the first generation of Desert Locust breeding to the north of the cropping areas was virtually missed until, in September, late instar hopper bands and swarms were found in a broad belt extending from the Red Sea Province to Northern Darfur. Aerial and ground control operations were mounted against these populations and against a second generation of breeding but, again, control was not sufficiently effective and there were numerous reports of swarms in November and December moving east and which reached Red Sea coastal areas of Sudan, Eritrea, Saudi Arabia and Yemen Arab Republic. Control operations in Saudi Arabia completely controlled the infestations by the third instar in mid-January 1987. In Sudan control continued until late April but in Eritrea breeding continued on the coast until July giving rise to swarms which invaded the interior of Sudan in late May and the highlands of northern Ethiopia between May and July.

5. In Western Africa in 1985, adults produced as a result of first generation summer breeding in Niger, Mali and Mauritania increased rapidly in numbers in south-west Mauritania in October 1985, and bred giving rise to gregarising populations. Control was undertaken but some swarms were produced. These subsequently scattered but considerable numbers of adults overwintered in the southern Sahara for in September and October 1986 mixed populations of already gregarised individuals and partially gregarised individuals were found in Niger, Mali and later Mauritania on a scale which suggests that the indigenous populations had been augmented by large numbers of locusts from the east. But, as in the Sudan, the presence of large scale grasshopper infestations in the crop growing areas meant that the first generation infestations in the southern Sahara were not monitored or controlled. Medium scale control operations were mounted against the second generation and it seemed likely that no significant gregarious populations survived at the end of the 1986 summer breeding season in West Africa or western Sudan. However, in May 1987 swarms were seen in Northern Darfur.

6. Unusually early rains in western Sudan and north-eastern Chad at the end of May 1987 provided excellent breeding conditions for the onset of unusually early summer breeding and for two generations of summer

breeding to occur. Aerial and ground control operations were mounted up to about 16°N but in the more northern areas no survey or control operations were possible due to lack of security and in view of subsequent developments it appears that this breeding was on a very large scale. In Darfur a number of swarms were produced in October and November and some were controlled but the extent of the escapes is unknown. Breeding on a smaller scale also occurred in Aïr in Niger.

7. In early October 1987 numerous swarms from north-eastern Chad moved rapidly west and then north-west across northern Niger, the extreme south of Algeria, reaching Tindouf on 17 October and, later, northern Mauritania, south-eastern and south-western Morocco. An intensive aerial and ground control campaign was mounted against them, particularly in Morocco where some 200,000 hectares were treated, but some swarms laid in northern Mauritania, which had received very heavy rainfall in September. Other swarms laid in south-west Morocco which also provided favourable conditions for breeding. Another westward migration in October resulted in swarms reaching north-east Mali and central Mauritania, and breeding also commenced in both areas.

8. Large scale control operations were mounted against all these infestations but the total area treated, some 500,000 hectares, was certainly only a small proportion of the total area actually infested because in late January 1988 new generation swarms began to form. Some of these moved north and north-east into southern Morocco and later across northern-central Algeria reaching Tunisia and north-west Libya in early March and Egypt in late April and May. In Morocco the swarms remained south of the Atlas. In Algeria most swarms remained south of cultivated areas in western and in central-eastern parts of the Atlas Saharien but in Tunisia some swarms did reach cultivated areas. Very large scale aerial and ground control operations were launched against the swarms but many laid and young hoppers started to appear in late March. Further very large scale control operations were mounted against the hoppers but new generation adults started to appear in Morocco in early May. By mid-June some 4,800,000 hectares of hopper and adult infestations had been treated in Morocco, Algeria, Tunisia, Libya and Mauritania. In south-east Algeria and south-west Libya there were several reports of swarms and, later, breeding but its extent was unknown.

9. Other swarms, however, remained to breed again in south-west Morocco and northern Mauritania and, although these second generation hopper infestations were partially controlled, new swarms began to appear in the sub-region in mid-March. Under the influence of an Azores anticyclone these moved first south and south-west to invade southern Mauritania, Senegal and Cape Verde, which was reached on 22 March, and on the 26th flying locusts were seen from a ship about 800 kilometres south-west of the Cape Verde islands.

10. In early April the swarms moved south-east, invading western Mali on about 10 April, causing considerable local damage, and Gambia in mid-April. These were joined by other swarms moving south through eastern Mauritania and by yet others moving south across eastern Mali, which reached the Gao area in mid-April. By 28 April a number of swarms had coalesced to form one reported to measure 120 km by 25-30 km near Niafunke. The swarms continued to move south, invading Guinea and Burkina Faso in early May. Yet another wave of swarms reached western Mauritania from the north in early May.

11. The invasions of the Western Sahel from winter-spring breeding further north on such a scale and so early is unprecedented. After good rains in late April and early May, there was dry period and the number of swarm reports declined, probably as the swarms split up prior to laying.

12. Further east, Niger was invaded in early April, when swarms were reported from Aïr, but later there were several reports from eastern oases, while other swarms moved south towards Zinder and Niamey. In late May swarms were reported from western Chad.

13. Western Egypt was invaded in late April, and again in late May from the south-west and raises the possibility that very considerable numbers of adults may have over-wintered in the Sahara.

14. Apart from the breeding in Western Sudan during summer 1987 there was rather widespread breeding in central and eastern Sudan. This was partially controlled but sufficient adults escaped to commence winter breeding north of Port Sudan and in south-eastern Egypt. This is again an area difficult of access and the breeding was thought to be on a rather small scale but in April several swarms escaped to the South-Eastern Desert of Egypt and northern Saudi Arabia, where they laid and were being controlled.

15. The situation in the rest of the Near East and South-West Asia is calm.

16. Summarizing, the plague developed because suitably timed rains fell in areas which were rapidly reached by increasingly gregarious populations which in 1987-88 allowed virtually continuous breeding in West and North-West Africa. Due to the inaccessibility of certain areas, the lack of adequate control measures in some parts of the infested area, and the use of non-persistent pesticides, the locust situation was not brought under full control in spite of very large scale operations.

Outlook to December 1988 in some parts of the infested areas

17. The three main factors which will determine whether the situation at the end of 1988 will be more serious or less serious than at present are:

- the effectiveness of the current campaigns in North-West Africa;
- the distribution and amount of rainfall in the Sahel countries and Sudan;
- the success of control operations in the Sahel and Sudan.

18. If control in North-West Africa can prevent further swarms being formed it will be a major achievement but because the breeding is so widespread it seems probable that at least some swarms will move south across the Sahara in June and July.

19. The recent decline in numbers of reports of swarms in the Sahel may signify that the swarms are maturing and laying but it is possible that the recent dry spell may have made it difficult for the swarms to find suitable areas in which to lay and a considerable or even large proportion of the population may have died. However it is more probable

that the swarms have found suitable conditions, leading to the possibility of three generations in the summer breeding area.

20. Breeding in the Sahelian zone is usually more difficult to control than in the southern Saharan breeding areas, as the populations are much more dispersed and therefore much less good targets. Major efforts will be required by ground teams and the aircraft units in situ and those being brought in to obtain the high percentage kills necessary to bring down the population levels.

21. If control is not highly effective in the Sahelian countries between July and October, a further invasion of the countries of North-West Africa will occur in October and could be on a considerably larger scale than that which occurred in October 1987. The main thrust of the invasion is likely to be towards southern Morocco but swarms could also reach the Atlas Saharien in Algeria, Tunisia and Libya. Other swarms could move south with the retreating Intertropical Convergence Zone and reach the Guinea savanna zone.

22. Historically Sudan is invaded from the east prior to the summer breeding season but the presence of numerous swarms in West Africa so early in the season suggests that this year Sudan could be invaded from the west, particularly if the Intertropical Convergence Zone reaches 16-18°N over Darfur. If there is a substantial invasion from the west it may be difficult to prevent a major spread of the plague to the Red Sea area and/or to the Horn of Africa in October and November, and of widespread breeding there in the winter of 1988-89. Other swarms could move north into Egypt and Jordan in November and December.

African Migratory Locust

23. There have been several widely spread Locusta upsurges in 1986-88. There were moderate sized infestations in eastern Sudan in September and October 1986 but the expected widespread infestations did not occur. A moderate infestation was controlled in central Mali in October 1986 and another was controlled in Botswana.

24. In 1987 there were further infestations in eastern Sudan and an upsurge in the Moundou Valley of southern Chad. In 1988 there have been outbreaks in northern Botswana, South-West Angola, the Republic of South Africa, in the United Arab Emirates and in Saudi Arabia.

Red Locust

25. In September 1986 numerous swarms were found in the Wembere outbreak area in Tanzania. Some of these were sprayed but a large residual population survived. Also in September, concentrations of adults in three areas were controlled in the Kafue outbreak area in Zambia. Small concentrations were controlled in northern Botswana.

26. In 1987 the most important infestations were in the Iku plains of Tanzania, where 3,405 l of Fenitrothion were sprayed against swarmlets and in the Kafue flats of Zambia where 2,800 l of Fenitrothion were sprayed against dense concentrations over an area of 50 sq. km in September. Aerial control was also carried against adult concentrations in the Wembere outbreak area of Tanzania in September.

Brown Locust

27. The Brown Locust plague which started in 1984-85 peaked in 1985-86. Considerable numbers of swarms overwintered but were controlled in South Africa at the begining of the 1986-87 season and breeding was on a much smaller scale than had been feared. Early in the 1987-88 season the situation was regarded as calm but there has since been a major upsurge with swarms reported nearly as far east as Lesotho.

Control measures undertaken by various countries and regional organizations

28. The control operations undertaken against the Desert Locust between September 1986 and June 1988 are shown in Appendix I. They are based on information provided by the countries and regional organizations in their regular reports, supplemented by information provided at the meeting by delegates and observers.

29. The Committee noted the difficulties experienced in combatting the plague. It recognized that the pesticides currently in use were of limited efficacy due to their lack of persistence and welcomed studies to be taken to increase their efficacy. Concerning the problem of destruction of stocks of dieldrin a majority of the Committee felt that the best approach would be to spray the pesticide. The Committee underlined the danger posed by the need to handle pesticides and emphasized the need to protect people engaged in handling and spraying pesticides.

Assistance provided to countries and regional organizations (FAO and donors)

30. The bilateral and multilateral assistance provided by donors to the Desert Locust campaigns is summarised in Appendix II.

31. The Committee expressed its gratitude to the donor community for the very generous assistance which had been provided to many countries during 1986-88 to help combat the threat posed by infestations of the various species of grasshopper and locust. It was recognised that further very substantial assistance would be required during 1988 and further meetings between donors and the affected countries were planned.

32. In the framework of the session, an extended meeting was held, in which other potential donors took part. During the meeting, the Minister of Rural Development of the Islamic Republic of Mauritania, presented the programme of action for 1988-89 approved by the Maghreb ministers in charge of the locust control campaign, during a meeting held in Nouakchott on 10 and 11 June 1988. (See Appendix III)
Following the Minister's statement, further clarifications were given by the representatives of the Maghreb countries. The donors expressed their support for the approved programme of action. The representatives of other affected countries approved of the programme as well and called for its financing by the international community.

33. The Sahelian countries expressed their concern about the current locust situation in the sub-region and requested the international community to support the programme of work approved by an extraordinary Council meeting of CILSS held in Dakar on 2-3 June 1988.

Review of existing control potential at the national and regional level

34. Delegates were invited to provide the latest status of the locust control potential in their countries and organizations. The latest and most complete information is shown in Appendix IV.

Reporting and Forecasting

35. The Committee recognised that the rapid transmission of reliable information on locust populations and their environment is the key to successful locust plague suppression, as it is to plague prevention. With the onset of a new plague there was an urgent need to strengthen the present services and to take advantage of modern technology.

36. The Committee discussed the joint UK/FAO initiative to seek funding from the EEC for a 3-year project entitled "Desert Locust Information System for Plague Prevention". The Committee welcomed this proposal to strengthen the Desert Locust forecasting system. The Committee expressed the wish to be closely associated in the implementation of the project.

Review of Remote Sensing Applications to Desert Locust Survey

37. The Committee was informed that the FAO ARTEMIS (Africa Real Time Environmental Monitoring using Imaging Satellites) project, developed with the financial assistance of the Netherlands, would commence operations on 1 August 1988. The project involved the acquisition of data from two satellites (NOAA and METEOSAT) and this information would provide full coverage of significant rainfall events and the assessment of habitat conditions within the Desert Locust infestation area.

38. The ARTEMIS system would provide the following products on a 10 day and monthly basis:

- Maps of estimated rainfall;
- Vegetation index maps;
- Potential locust breeding activity maps.

39. The Potential Locust Breeding Activity Maps would represent a combination of remotely sensed data and existing knowledge and experience of Desert Locust habitats.

40. The Committee was also informed of a new project agreement between FAO and the European Space Agency (ESA) to develop and implement a satellite communications network. The communications system, acronym DIANA (Data and Information Available Now in Africa) could have significant implications for the rapid transfer of information on Desert Locust between FAO Headquarters and regional centres in Africa.

41. At the regional level an FAO Trust Fund project on remote sensing based in Nairobi and funded by Japan would provide DLCO-EA with remotely sensed data for survey and control purposes in East Africa. In addition a pilot project on the use of remotely sensed data funded by USA in the Sahelian zone was also noted by the Committee.

Progress of the FAO/PRIFAS/CIRAD (ex GERDAT) Desert Locust Modelling Project.

42. The Committee was informed about the current status of the project, which was aimed at creating a descriptive biomodel of the Desert Locust throughout its distribution area. The central reference table for the solitarious and gregarious phases has been completed, as well as the descriptions of Desert Locust biotopes in Africa west of the River Nile which will be published. The project will benefit from the incorporation of remote sensing data and synoptic meteorological forecasts.

Review of Work at Desert Locust field research stations (September 1986-June 1988)

43. Investigations at the Desert Locust field research stations in India (Bikaner), Saudi Arabia (Jeddah), Egypt (Dokki), Morocco (Agadir) together with field research by DLCO-EA emphasised studies on the testing of alternative insecticides for Desert Locust control and insecticide application methods. Ecological studies on the Desert Locust were also undertaken.

Training

44. The Committee noted the training activities which were undertaken under the DLCC Trust Fund since the last Session in 1986 (Appendix V). Additional national and regional training had also been funded from other sources, notably FAO projects (Commission Trust Funds, TCP and ECLO).

45. The Committee strongly emphasised the importance of training as an essential part of successful locust control. Training activities should comprise all levels of Plant Protection staff, ranging from field scouts to staff involved in planning control operations and strategies. Several delegates expressed concern that staff with substantial experience in locust control were either retired or about to retire and their replacement by trained personnel was essential. The necessity of long term fellowships as part of the training activities was also stressed.

46. The importance of courses in pesticide application and safety was recognised as another urgent requirement, given the large areas which were presently being treated with pesticides, and likely to be treated in the near future. In this respect the initiative of Ciba-Geigy to hold the Montreux pesticide application course in French was welcomed.

47. Finally, delegates expressed a desire for further training courses in locust survey, forecasting and control, logistics, storage, aerial and application, disposal of pesticides and remote sensing.

International Trust Fund 9161 - Contributions and Expenditures

48. The Secretariat presented the statement on the budget and the accounts for 1986, 1987 and 1988 (Appendix VI). The total expenditure in 1986 amounted to US$ 164,126 and in 1987 to US$ 115,269. The overall end of the year balance for 1987 was US$ 266,130. At 30 April 1988 commitments and expenditures already amounted to US$ 122,881. The delegate of Tunisia mentioned that outstanding arrears had been paid recently.

49. The Committee accepted the budget and accounts as presented by the FAO Secretariat.

Status of the Regional Commissions and Organizations

50. The Committee reviewed a document concerning the situation of DLCC Regional Commissions and Organizations prepared by the Secretariat. (See Appendix VII).

51. Certain members of the Committee strongly supported the strengthening of Regional Commissions so as to allow them to fully shoulder their responsibilities, particularly those related to their position in the established warning and forecasting system.

52. The Committee requested that recommendations made by member states of the Commissions be included in the reports prepared after their periodic meetings.

53. The Committee was assured that the Desert Locust Control Organization for Eastern Africa will continue to be supported by member states despite arrears of contributions. The next meeting of the Executive Council will be held in Kampala.

54. The Committee was informed of decisions made to transfer the responsibility for monitoring and preventive control of the Desert Locust in West Africa from OCLALAV to its member states, and the new role proposed by OCLALAV, which would become a Regional Coordination Centre at the end of 1988.

Any other business

55. The Committee noted with satisfaction and interest resolution CM/Res 1173 (XLVIII) of the 48th Session of the Organization of African Unity, presented by the OAU observer concerning the strengthening of national and regional structures and infrastructures in Africa through intergovernmental organizations with various objectives.

Date and place of next Session

56. The Committee agreed that the next session of the DLCC should be held at FAO Headquarters, Rome, at a time to be chosen by the Director-General of FAO.

Appendix I

CONTROL MEASURES UNDERTAKEN, SEPTEMBER 1986 - MAY 1988

1. DESERT LOCUST

September - December 1986

Country Locality	Month	Type of infestation	Area treated Sq. Km	Insecticide used - l/kg	Method of Application
Mauritania					
Khatt el Moinane	Nov-Dec	hopper bands, adult group	458	10445 l Fenitrothion 50% 900 l Fenitrothion 1000 5200 l Malathion 2600 l Dieldrin 5% 3000 kg Propoxur 2% dust	air, ground
Mali					
Adrar des Iforas, Tamesna	Oct-Nov	hopper bands	332	7426 l Fenitrothion 1000 800 l Dieldrin 20% 1570 l Dieldrin 5%	air, ground
Niger					
Air, Tamesna	Sept-Nov	swarmlets, hopper bands	392	16471 l Fenitrothion 1000 10445 l Fenitrothion 50% 5200 l Malathion 95% 2480 l Dieldrin 20% 4170 l Dieldrin 5%	air, ground
Algeria					
Tamesna	Oct-Nov	hoppers, adults	1	480 l Malathion	ground
Tassili-n-Ajjer	Nov	adults	32	1790 l Malathion	ground
Morocco					
Oued Din	Oct-Nov	adults	2	DDVP	ground
Sudan					
Red Sea Coast, Kassala, Sinkat, Nile Khartoum, Gezira, Blue Nile, Northern Kordofan,	Sept - Dec.	hopper bands, swarms (includes grasshoppers)	8244	78810 l Fenitrothion ULV 4750 l Fenitrothion EC 9321 l Diazinon ULV 31865 l Diazinon EC 2200 l Malathion ULV 2000 l Deltamethrin 2000 l Dicrotophos ULV 409 l Turbidan ULV 1517 l Profenofos ULV	Ground, air

Northern Darfur				994 l Dieldrin 9516 l Alamos 7728 l Queletox 2600 l Endosulfan 200 l Formothion 100 l Thiometon 2587 l Metacrifos 4600 l Cypermethrin Dicrotophos 2154 l Monocrotophos 407485 kg BHC bait 2582 kg BCH dust 58 kg Propoxur dust	
Egypt					
South-Eastern Desert	Jan-May	hopper bands, adults	200	50000 kg BHC bait 3850 kg BHC dust 200 l Malathion 59% ULV 440 l Lindane 15%	ground
Western Desert	Nov	Swarm	3	1000 kg BHC dust	ground
Ethiopia					
Eritrean coast	Dec	Adults			
Saudi Arabia					
Southern Tihama	Jan-April	hopper bands, swarms	3000	17650 kg BHC dust 2375 l Malathion 96% 1050 l Fenitrothion 96%	ground
Northern Tihama	Feb-May	swarms, hopper bands	772	1835 kg BHC dust 1205 l Malathion 96%	
Nejd	April-Aug	hopper bands, fleglings	62	250 kg BHC dust 610 l Fenitrothion 96% 175 l Dieldrin 20 %	
Tihama	Nov-Jan 1987	swarms, hopper bands	1000	16330 l Dieldrin 17420 l Malathion	air, ground
Yemen, PDR					
Arqa Wadi Masip	Sept-Dec	hopper and adult groups	750	2000 kg BHC dust 400 l Dieldrin 210 l Fenitrothion 96%	ground
Pakistan					
Cholistan, Khipro	Sept-Oct	hoppers, fledglings	2	168 kg BHC dust 90 l Dieldrin 20%	ground
India					
Rajasthan	Oct	hoppers, swarms	207	52381 kg BHC dust 3100 l Dieldrin 18% 4046 l Malathion ULV	ground, air

1 9 8 7

Mauritania					
Adrar, Tagant, Inchiri, Tiris-Zemmour	Oct-Dec	hopper bands, swarms	269	17418 kg Propoxur 2% 9660 l Fenitrothion 50 ULV	ground
Mali					
Tamesna, Adrar des Iforas	Oct-Dec	swarms, hopper bands	412	2059 l Fenitrothion 1000 11720 l Dieldrin 5% 802 l Dieldrin 20% 3300 l Malathion ULV	ground
Niger					
Air, Tamesna	July-Oct	swarms, hopper bands	753	5545 l Dieldrin 20% 6200 l Fenitrothion 1000 1880 l Fenitrothion 50	air, ground
Chad					
Biltine, Ennedi, Kanem	July-Oct	swarms, hopper bands	580	10955 l Fenitrothion 96% 2630 l Fenitrothion 1000 1080 l Fenitrothion 50 EC 3220 l Fenitrothion 50 ULV	air, ground
Morocco					
Guelmim, Tata, Laayoune, Smara, Dakhla	Oct-Dec	swarms, hopper bands	3000	DDVP Malathion	air & ground
Algeria					
Tindouf, Bechar, Sidi Bel Abbes, Timimoun, Adrar, Bordj Beji Mokhtar	Oct-Dec	swarms, hopper bands	12		ground
Libya					
Fezzan	Nov	swarms	5		
Sudan					
Red Sea - Darfur	Jan - Dec	swarms, hopper bands	876	11396 l Fenitrothion 96 15515 l Fenitrothion ULV 253 l Fenitrothion EC 10454 l Diazinon ULV 2941 l Diazinon EC 38 l Malathion EC 190 l Dursban ULV	air, ground

				542630 kg BHC bait	
				3820 kg BHC dust	
				111 kg Propoxur 75 WP	
				2000 kg Bendiocarb 1% dust	
Ethiopia					
Eritrea, Tigrai, Wollo	Jan-Aug	hopper bands, swarms	9000	23396 l Fenitrothion ULV 6940 l Dieldrin 20% 1335 l Diazinon 400 kg Bendiocarb dust Carbaryl dust	air, ground
Saudi Arabia					
Tihama	Jan	hopper bands	1000	21000 l Dieldrin, Malathion	air, ground
Tihama	May-June	swarms, hopper bands		17000 l Fenitrothion 96%	
Yemen A.R.					
Tihama	Feb-Apr	swarms, hopper bands	84	5000 l Fenitrothion 96% 500 l Dieldrin 20% 800 kg BHC dust	ground

1 January - 31 May 1988

Algeria					
Adrar, Bechar, Naama, M'Sila, El Bayadh, Medea, Laghouat, Biskra, Djelfa, Tebessa, Tindouf	Feb-May	hopper bands, swarms	16207	Carbaryl Malathion Fenitrothion	air, ground
Morocco					
Oudja Bouarfa, Errachidia, Zagora, Tata, Guelmim, Laayoune,	Jan-May	hopper bands, swarms	23684	Carbaryl Malathion Fenitrothion DDVP Diazinon Lamdacyhalothrin 1400000 l	air, ground Dakhla
Tunisia					
El Kef, Kasserine, Siliana, Gafsa, Medinine,	Mar-May	swarms	2885	Carbaryl Malathion Decis Fenitrothion Baygon	air, ground

Tozeur, Kebili, Jendouba, Gabes				Temephos	
Mali					
Adrar des Iforas	Jan	swarms	91	3530 l Fenitrothion 50% ULV 875 l Malathion 95%	ground
Kayes	Apr-May	swarms	19	Fenitrothion Propoxur Dursban	
Mauritania					
Adrar, Trarza, Inchiri, Tiris-Zemour, Brakna, Nouadhibou	Jan-May	swarms, hopper bands	266	95560 l Fenitrothion 50 ULV 17180 l Fenitrothion 1000 540 l Fenitrothion 50 EC 875 l Malathion 95% 65350 l Sumicombi 1.8% 72500 kg Propoxur 2%	air, ground
Niger					
Air, Bilma, Tillabery	May	swarms	148		air
Cape Verde Is					
Fogo Sal	Mar-May	swarms, hopper bands	170	Fenitrothion Propoxur WP	ground
Libya					
Sebha, Marzug, Ghadames, Zania, Wadi el Hayat, Tripoli, Jabal Gharbi	Mar-May	hopper bands, swarm	611		
Saudi Arabia					
Tabouk, Al Ula, El Jawf, Hail, Taima	Apr-May	hopper bands		Fenitrothion	air, ground
Egypt					
Eastern Desert	Jan-May	hoppers, swarms	330	20000 kg BHC dust	
Western Desert	May	swarms	20	4000 l Malathion 57% 3000 Fenvalerate	ground
Sudan					
Red Sea	Feb-Apr	hopper bands, adult groups	20	Diazinon Fenitrothion	ground

Appendix II

ASSISTANCE PROVIDED TO COUNTRIES AND REGIONAL ORGANIZATIONS (FAO AND DONORS)

The emergencies created by the simultaneous development of large gregarious populations of all four species of African Locusts and of grasshoppers in the Sahel between 1985 and 1988 has necessitated very large external assistance to the Plant Protection Services of the affected countries and greatly enhanced coodination of the campaigns. Whereas much of the very generous assistance provided by donor countries, institutions and non-governmental organizations during 1986 and 1987 was given for the grasshopper campaigns, that in late 1987 and early 1988 was mainly given for the Desert Locust campaigns.

The main assistance for the Desert Locust [1/] campaigns has comprised:

African Development Bank

US$ 200,000 for strengthening national Desert Locust services in Chad, Mali, Mauritania and Niger.

Algeria

Algeria sent survey and preventive control teams to Niger and Mali in 1987 and to northern Mauritania in 1988.

Canada

Canada is providing assistance to the national Desert Locust unit in Niger and is making three aircraft and ground support personnel available in West Africa in 1988. Budget Canadian Dollars 1.8 million.

China

China provided pesticides to Ethiopia in 1986 and Algeria in 1988.

Denmark

Denmark provided assistance to the campaign in Mauritania in early 1988, to the value of US$ 315,000.

European Economic Community

The EEC has provided very substantial assistance mainly in the form of pesticides, aircraft flying hours, spraying eauipment, technical assistance and operating expenses to the countries of the Maghreb and West Africa and to the Sudan both multilterally through FAO and bilaterally to the value of some US$ 7.4 million.

1/ As it is known, for example, that some of the pesticides given for the grasshopper campaigns were used against the Desert Locust, the precise level of assistance cannot always be given.

Finland

Finland provided pesticide and operating expenses to Sudan valued at approximately US$ 500.000.

France

France contributed the equivalent of approximately US$ 3 million to the campaigns in West Africa and North-West Africa in 1987 and has pledged some US$ 6 million for 1988, mainly in the form of spray aircraft, helicopters, flying hours, pessticides, technical assistance and operating costs. PRIFAS has issued information circulars (SAS, Sauteriaux aux Sahel en 1988, Surveillance des Acridiens au Sahel) and provided training.

FR Germany

FR Germany contributed some US$ 6 million to the countries of the Maghreb and West Africa bilterally, mainly in the form of pesticides, to the value of approximately US$ 6 million.

Italy

Italy has provided substantial bilateral assistance to the Sahel, Sudan and to Algeria, Morocco and Tunisia mainly in the form of flying hours, pesticides, spraying equipment and technical assistance.

Japan

Japan has increased its assistance under project GCP/RAF/189/JPN from US$ 300,000 to US$ 700,000 annually and has also provided substantial bilateral assistance to Mali, Mauritania, Niger and Chad. This has been in the form of pesticides.

Morocco

Morocco sent survey and preventive control teams to Mauritania in 1986 and 1987, and pesticides and technical assistance to Mali in 1988.

Netherlands

The Netherlands has contributed some US$ 4.3 million to the campaigns in Sudan and West Africa through FAO mainly in the form of pesticides, flying hours, spraying equipment, technical assistance and operating expenses.

OPEC fund

The OPEC fund contributed US$ 300,000 for spraying equipment and training.

Saudi Arabia

Saudi Arabia contributed pesticides, vehicles and spraying equipment bilaterally to Morocco, Algeria, Tunisia and Mauritania valued at some US$ 3 million.

Spain

Spain has provided bilateral assistance valued at some US$ 2 million, mainly in the form of aircraft and pesticides to the Maghreb countries.

Sweden

Sweden provided assistance through FAO to the Sahel countries valued at US$ 1.55 million in 1987 and has recently announced a further contribution of US$ 1.55 million.

Switzerland

Switzerland has provided funds for training in Chad and Niger in addition to financing the purchase of a helicopter for the International Red Locust Control Organisation for Central and Southern Africa.

Turkey

At the extended meeting attended by donors at which the Minister of Rural Development of Mauritania presented the programme of action of the Maghreb countries for 1988-89, Turkey announced a contribution of US$ 500,000 to the Maghreb countries.

United Kingdom

The United Kingdom provided substantial assistance to Sudan in the form of vehicles and pesticides, to Morocco and continuing support to DLCO-EA.

UNDP

UNDP project RAF/81/020, assistance to OCLALAV, terminated at the end of 1986. It provided regional assistance to West Africa in 1987, and to the Maghreb countries through project RAF/87/002 in 1987 and to Algeria, Morocco, Tunisia and Mauritania in 1988. It is also financing the seminar at Nouakchott on 27-30 June 1988 at which plans for the medium term strengthening of survey and preventive control in West Africa will be discussed from its project RAF/87/019.

United States

The United States has contributed very substantial assistance in the form of pesticides, flying hours, logistical support, technical assistance, radios and operating expenses both bilaterally and multilaterally to virtually all affected countries but in particular to Sudan, Chad, Niger, Mali, Mauritania, Morocco and Algeria. In 1987 this amounted to some US$ 11 million and is estimated at US$ 8,5 million in 1988.

USSR

The USSR provided two aircraft, pesticides and technical assistance to Algeria in 1988.

Islamic Development Bank

The Islamic Development Bank has pledged US$ 10 million for anti-locust campaigns but its distribution has not yet been announced.

FAO

FAO, through the Technical Cooperation Programme, has contributed US$ 2.0 million mainly in the form of technical assistance, pesticides, spraying equipment, operating costs to Morocco, Tunisia, Mauritania, Cape Verde, Niger, Mali, Chad, OCLALAV, Sudan, Yemen Arab Republic, Yemen PDR and for regional cooperation in West Africa and East Africa.

Through the Emergency Centre for Locust Operations, ECLO, established by the Director-General in August 1986 FAO has provided the international coordination of the campaign. The Centre deals directly with donors, the affected countries and those at risk and with other organisations and institutions. The Director has extensive delegated authority which allows for rapid decision-making and procurement of supplies.

A major ECLO activity was contact with donors and affected countries through various meetings and seminars on grasshoppers and locusts:

- donor information coordinating meeting to discuss the campaign against grasshoppers in the Sahel. FAO, Rome 19 August 1986;
- informal consultation on medium and long-term policies and actions for improved migratory pest control in Africa. FAO, Rome 21-22 October 1986;
- meeting on the assessment of the 1986 Sahel grasshopper control campaign, and lessons to be learned for future campaigns. FAO, Rome 18-19 December 1986;
- ad hoc consultation on trials of pesticides used in locust control. FAO, Rome 21-22 May 1987;
- ad hoc consultation on the coordination of locust control in 1987, FAO, Rome 12 June 1987;
- ad hoc technical meeting on pest control in Eastern, Central and Southern Africa, Nairobi 23-25 June 1987;
- meeting on planning phase II of 1987 campaign against grasshoppers in the Sahel and the Desert Locust. FAO, Rome 10-11 August 1987;
- meeting to discuss recent trials of pesticides for locust and grasshopper control, FAO Rome 3 December 1987;
- meeting on the evaluation of 1987 grasshopper campaign in the Sahel, FAO, Rome 8-9 December 1987;
- meeting on the Desert Locust in West and North-West Africa, FAO, Rome 6-7 April 1988.

Complementary to these international meetings, FAO has emphasised strongly the need for close collaboration between donors and the affected countries at the national level through the medium of national steering or coordinating committees. These have been established in many countries and have become an important feature of the locust and grasshopper campaigns, where the progress of the campaign is reported and additional needs are assessed with donors.

Another major ECLO activity has been the preparation of ECLO Bulletins, which summarise the locust and grasshopper situation, donor pledges and the further needs of the countries affected and at risk.

Total donor assistance provided for locust and grasshopper control was approximately US$ 49 million in 1986, US$ 44 million in 1987 and has already reached approximately US$ 45 million in 1988. However, depending upon the effectiveness of the current campaigns in North-West Africa and the weather in the Sahel, the total needed in 1988 could be as high as US$ 150 million.

Appendix III

MEETING OF MAGHREB MINISTERS RESPONSIBLE FOR LOCUST CONTROL

Nouakchott, 10-11 June 1988

Summary report

The meeting was attended by the Ministers of Agriculture of Algeria, Mauritania and Tunisia, the Secretary General of the Ministry of Interior of Morocco and the Ambassador of Libya to Mauritania (the Minister of Agriculture could not reach Nouakchott in time due to limited flight connections).

The meeting reviewed the needs for the Desert Locust control campaign and discussed in particular the arrangements for effective coordination and cooperation between the countries.

Since October 1987, the start of the current control campaign, over 5 million hectares have already been sprayed in the Maghreb countries, of which 4 835 000 in 1988. The division of the total amount over the five countries is as follows:

Morocco	2 559 000 ha
Algeria	1 758 000 ha
Tunisia	335 000 ha
Libya	100 000 ha
Mauritania	284 000 ha

Currently, the situation is characterized by extensive hopper infestations in Morocco and Algeria and the appearance of first locally produced swarms of immature adults.

Given the extent of the current invasion, it is foreseen that 4 500 000 ha may well have to be sprayed from June to December 1988. This is divided as follows over the countries:

Mauritania	2 000 000 ha
Morocco	1 000 000 ha
Algeria	1 000 000 ha
Tunisia	300 000 ha
Libya	200 000 ha

The following additional inputs are needed to cover this:

Pesticides	4 500 000 litres
Flying hours	4 940
Vehicles 4 wheel drive	260
Lorries	113
Tankers	41
Exhaust nozzle sprayers	140
Motorized knapsack sprayers	20 000
Protective clothing (units)	60 000
Radios	55
Fuel	710 000 litres

It was decided to develop Atar in northern Mauritania into a major control base. The financial resources needed are in the order of US$ 4 million.

A rapid intervention task force will be established to operate both in the Maghreb and the Sahel countries. A workplan for this task force will be established by the Executive Committee of the FAO Commission for the Control of the Desert Locust in North-West Africa. The funds needed for this task force are US$ 8 million and will be partly paid for by the Maghreb countries. It would consist of nine ground survey and control teams supported by three airplanes.

The existing Trust Fund of the Commission will be used as a special fund to which additional contributions can be made, both by the affected countries and donors for the financing of the joint control programmes. The Executive Committee of the Commission will establish workplans and will supervise the management of the special fund.

Communication systems and the transfer of information will be strengthened, including the holding of meetings in border areas involving the local authorities.

The need for training at various levels was emphasized and a special programme should be established for that purpose.

The Ministers will meet on a monthly basis to review the rapidly evolving situation and to decide on matters of joint interest. These meetings will be preceded by expert meetings.

It was decided to strenthen the cooperation with the Sahel countries and the Commission was requested to work out proposals to this end.

REVIEW OF EXISTING CONTROL POTENTIAL AT NATIONAL AND REGIONAL LEVELS

Country or Organization	Insecticides (litres/kg) x 10^3									Sprayers			Dusters		Vehicles			Aircraft			Radios			Staff	
	Organo-Phosphates		Carbamates		Synthetic pyrethroids	Chlorinated hydrocarbons			Others												HF		VHF		
	ULV/EC	dust	ULV/EC	dust	ULV	ULV	dust	bait		Exhaust nozzle	Manual	Power	Manual	Power	Light 4x4	Medium	Load carriers	Fixed-wing survey	Fixed-wing control	Helicopters	Fixed	Mobile		Technical	General
Benin	12			10		150							15			1									
Burkina Faso									Information not available																
Cameroon									Information not available																
Central African Rep.									Information not available																
Côte d'Ivoire									Information not available																
Gambia									Information not available																
Ghana									Information not available																
Mali									Information not available																
Mauritania									Information not available																
Niger									Information not available																
Senegal									Information not available																
OCLALAV						343.5					13				28	10	4		4		22		10		
Algeria	10						1 500		300		30			700	60		40		10	1		38		200	2 000
Libya	150						200				4	50		300	150	10	25		19	2		20		70	230
Morocco*	100					842	790	406			60	300	100	2 000	105	5	9	15	2	10		35		52	512
Tunisia									Information not available																
Djibouti									Information not available																
Ethiopia									Information not available																
Kenya									Information not available																
Somalia									Information not available																
Sudan									Information not available																
Tanzania									Information not available																
Uganda									Information not available																
DLCO-EA									Information not available																
Bahrain									Information not available																
Egypt	4					2	4				1			70		4	20	10	8			10		90	260
Iraq									Information not available																
Jordan									Information not available																
Kuwait									Information not available																
Lebanon									Information not available																
Oman									Information not available																
Qatar									Information not available																
Saudi Arabia	168										100			10		30	100			6					
United Arab Emirates									Information not available																
Yemen AR	50			35		47					34	190**	**	3	24						10				
Yemen PDR									Information not available																
Afghanistan									Information not available																
India	47					86	1 156				34		5 778	164	72		11		5		34		25	247	
Iran									Information not available																
Pakistan									Information not available																

* Planned for October 1988
** 190 hand sprayers and dusters

Appendix V

TRAINING

The tables below show training courses and short-term fellowships implemented under Trust Fund 9161 since the 28th Session of the DLCC.

International training course in ground and aerial application techniques at 'Les Barges', Montreux, Switzerland

21 September - 3 October 1986

E. Byaruhanga	Zambia (IRLCO)
A.B. Damfa	Gambia
Y.A. Giumale	Somalia
G. Dixon	Ghana
S.E. Mhina	Tanzania

4-16 October 1987

Mr. Ayenekulu Yemane	Ethiopia

Short course on aerial application of pestsicides at Cranfield, UK

22 September - 3 October 1986

A. Alemu	Ethiopia

14 - 25 September 1987

Mr. Manjura Selello	DLCO
Mr. Cecil Hayfron Anamoah	Ghana
Mr. John Geoffrey Ngondi	Kenya
Mr. Abbas Mohammed Nassir	Somalia

Training CNEARC/Montpellier

January-February 1987

1. Rational use of phytosanitary products.
2. Control of locusts and crop pests.

Mr. Essohanam Tahara	Togo

The training of other national plant protection/locust control staff has continued at all levels under the regional and international desert locust trust funds, TCP, ECLO and UNDP.

Appendix VI

INTERNATIONAL TRUST FUND 9161: CONTRIBUTIONS AND EXPENDITURES

Financial Report

1. The above Trust Fund was established by the Director-General of FAO following the recommendations of the Ninth Session of the Desert Locust Control Committee. The Director-General, as Administrator of the Trust Fund, consults with the Desert Locust Control Committee which is responsible for the general policy guidance of the Trust Fund; the Committee also reviews the annual budget and receives financial reports from FAO.

Budget, Statement of Accounts for 1986 and 1987

2. The annual budget of the Trust Fund, approved by the Twenty-Seventh June 1984 Session of the Committee, is shown in Appendix A, together with the accounts for 1986 and 1987, based on the present level of funds and pledges to be received.

3. The total expenditure in 1986 amounted to US$ 164,126 and in 1987 to US$ 115,269. The overall end-of-year position for 1987 showed an estimated balance of US$ 266,130.

Budget and Accounts for 1988

4. A breakdown of expenditure and commitments for 1988 as at 30 April 1988 is also given in Appendix B.

Contributions

5. The scale of government contributions to the Trust Fund is given in Appendix C. Details of outstanding contributions as of 20 May 1988 are given in Appendix D. Arrears prior to 1986 were still outstanding from many countries whose governments are requested to bring their contributions up to date as soon as possible. In view of steeply rising costs, it is essential that all funds pledged should be available to meet the needs of the member countries. Member countries are therefore recommended to respond to the FAO call-in letter as promptly as possible.

Appendix A

INTERNATIONAL TRUST FUND 9161

BUDGET AND STATEMENT OF ACCOUNT (IN US$)

		APPROVED ANNUAL BUDGET	EXPENDITURE 1986	EXPENDITURE 1987	COMMITTED 1988 up to 30 April
RECEIPTS					
Balance brought forward			283,945	249,627	266,130
Contributions from members (including interest)		192,820	129,808 1)	131,772	15,740
		192,820	413,753	381,399	281,870
EXPENDITURE					
10	Personal Services	35,000	8,951	283	-
20	Travel	20,000	11,324	10,495	43,583
30	Contractual Services	20,000	13,631	30,805	172
40	General Operating	5,000	16,102	24,588	63,439
50	Supplies	10,000	62,247 1)	-	-
60	Equipment	35,000	7,782	1,019	-
80	Fellowship and Training	50,000	25,207	34,818	5,051
90	Project Service Costs (13%)	22,750	18,882	13,261	10,636
	TOTAL EXPENDITURE	197,750	164,126	115,269	122,881
	UNALLOCATED BALANCE	-4,930*	249,627	266,130	

* Due to withdrawal of Kuwait and new membership of the Gambia

1) Includes a donation of US$ 62,511 from Spain contributed to the Trust Fund for purchase of pesticides for Sudan. This amount comprises no regular contribution.

INTERNATIONAL DESERT LOCUST TRUST FUND 9161

BREAKDOWN OF 1986 AND 1987 EXPENDITURE AND COMMITMENTS TO 1988

	EXPENDITURES 1986	1987	COMMITMENTS AND EXPENDITURES AS OF 30 APRIL 1988
10 PERSONAL SERVICES			
Consultants: photographer/ radio engineer	8,624		
Various	327	283	
	8,951	283	
20 TRAVEL			
Non-Staff			
DL-Ad hoc meeting Rome; 6/86	7,100		
FAO-experts: England/France; 6/86	3,520		
Organis. DL Research Morocco/ Mauritania; 2/87		2,227	
OCLALAV Conseil d'Admin., Mali; 3/88			37,423
Planning DL-Campaign; 4/88			1,900
FAO-expert: Algiers; Meteo-data supply			2,417
Staff:			
HQ-staff: Brussels-EEC; 6/86	704		
HQ-staff to Montpellier, Mali, Senegal, Morocco, Niger		8,268	
HQ-staff - various			1,843
	11,324	10,495	43,583
30 CONTRACTUAL SERVICES			
Publications (committee docs./ locust forecasting bulletins)	13,631	8,284	172
CIRAD/PRIFAS (posters, manuals)		20,214	
Various		2,307	
	13,631	30,805	172

		EXPENDITURES 1986	EXPENDITURES 1987	COMMITMENTS AND EXPENDITURES AS OF 30 APRIL 1988
40	**GENERAL OPERATING EXPENSES**			
	OCLALAV survey, Mauritania	6,663		
	Pesticide trial, Mali	3,779		
	Clearance Landrovers, Mauritania	5,178		
	OCLALAV, Niger		20,000	
	Airfreight pesticides, Mali		3,948	
	OCLALAV, Conseil d'Admin, Mali; 3/88			12,803
	Transport pesticides, Niger			50,000
	Various	482	640	636
		16,102	24,588	63,439
50	**SUPPLIES**			
	Pesticides, Sudan 1)	61,041		
	Various	1,206		
		62,247		
60	**EQUIPMENT**			
	Radios OCLALAV, Senegal	7,491		
	Communication equipment		1,019	
	Various	291		
		7,782	1,019	
80	**FELLOWSHIPS**			
	(see 'training': AGP-LCC 88/9 for details)	25,207	34,818	5,051
		25,207	34,818	5,051
90	**PSC (13%)**	18,882	13,261	10,636
	TOTAL	164,126	115,269	122,881

1) Spanish additional contribution of US$ 62,511 for 1986 grasshopper/locust campaign in Sudan for which pesticides were purchased.

SCALE OF GOVERNMENT CONTRIBUTIONS TO THE INTERNATIONAL DESERT LOCUST TRUST FUND NO. 9161

COUNTRY	SCALE (US$)
Afghanistan	3,480.00
Algeria	7,700.00
Bahrain	920.00
Cameroon	2,780.00
Chad	3,520.00
Djibouti	1,120,00
Egypt	5,740.00
Ethopia	4,320.00
Gambia	2,420.00
Ghana	3,280.00
India	20,000.00
Iran	20,000.00
Iraq	7,440.00
Jordan	3,420.00
Kenya	3,580.00
Lebanon	3,060.00
Libya	10,640.00
Mali	3,600.00
Mauritania	2,900.00
Morocco	5,360.00
Niger	3,760.00
Nigeria	8,940.00
Oman	2,100.00
Pakistan	6,520.00
Qatar	1,760.00
Saudi Arabia	20,000.00
Senegal	3,520.00
Somalia	3,500.00
Sudan	3,980.00
Syria	4,520.00
Tunisia	4,460.00
Uganda	3,380.00
United Arab Emirates	4,600.00
Yemen Arab Republic	3,580.00
Yemen, P.D.R.	2,920.00
	192,820.00

Appendix D

TRUST FUND NO. 9161.00 - MTF/INT/008/MUL
INTERNATIONAL DESERT LOCUST CONTROL PROJECT
STATUS OF CONTRIBUTIONS AS AT 20/05/88

MEMBER GOVERNMENTS	OUTSTANDING 1976/86	CONTRIBUTIONS DUE FOR 1987/88	RECEIVED UP TO 20/05/88	OUTSTANDING 20/05/88
Afghanistan	12,010.00	3,480.00	0.00	15,490.00
Algeria	23,100.00	7,700.00	0.00	30,800.00
Bahrain	0.00	920.00	920.00	0.00
Cameroon	6,007.05	2,780.00	0.00	8,787.05
Chad	26,680.00	3,520.00	0.00	30,200.00
Egypt	11,480.00	5,740.00	17,220.00	0.00
Ethiopia	18,500.94	4,320.00	0.00	22,820.94
France (Djibouti)	6,580.00	1,120.00	0.00	7,700.00
Gambia	9,680.00	2,420.00	0.00	12,100.00
Ghana	14,075.94	3,280.00	0.00	17,355.94
India	50,000.00	20,000.00	20,000.00	50,000.00
Iran	81,800.00	20,000.00	0.00	101,800.00
Iraq	29,760.00	7,440.00	0.00	37,200.00
Jordan	3,420.00	3,420.00	3,420.00	3,420.00
Kenya	16,452.47	3,580.00	0.00	20,032.47
Kuwait*	0.00	0.00	0.00	0.00
Lebanon	5,808.67	3,060.00	157.00	8,711.67
Libya	46,200.00	10,640.00	0.00	56,840.00
Mali	16,200.00	3,600.00	18,587.00	1,213.00
Mauritania	23,225.09	2,900.00	0.00	26,125.09
Morocco	24,430.00	5,360.00	19.090.00	10,700.00
Niger	16,840.00	3,760.00	0.00	20,600.00
Nigeria	39,410.00	8,940.00	19,235.00	29,115.00
Oman	2,100.00	2,100.00	0.00	4,200.00
Pakistan	6,520.00	6,520.00	6,250.00	6,790.00
Qatar	6,110.00	1,760.00	0.00	7,870.00
Saudi Arabia	0.00	20,000.00	20,000.00	0.00
Senegal	16,646.42	3,520.00	0.00	20,166.42
Somalia	13,274.77	3,500.00	0.00	16,774.77
Sudan	-10,634.30	3,980.00	0.00	-6,654.30
Syria	24,110.00	4,520.00	0.00	28,630.00
Tunisia	4,616.44	4,460.00	0.00	9,076.44
Uganda	6,760.00	3,380.00	0.00	10,140.00
United Arab Emirates	4,600.00	4,600.00	4,600.00	4,600.00
Yemen Arab Republic	0.00	3,580.00	3,580.00	0.00
Yemen, P.D.R.	12,280.00	2,920.00	0.00	15,200.00
	568,043.49	192,820.00	133,059.00	627,804.49

* Withdrew from the Committee as of 1983 (reference memo Skaf/Wrisely dated 17/6/83).

Appendix VII

STATUS OF REGIONAL LOCUST COMMISSIONS/ORGANIZATIONS

1. FAO Commission for Controlling the Desert Locust in the Near East

No session has been held since the 14th Session of the Executive Committee in Rome, 3-5 September 1986.

The next session of the Commission will be held in Rome, 20-22 June 1988.

2. FAO Commission for Controlling the Desert Locust in North-West Africa

The 14th Session was held in Algiers from 18 to 22 April 1987 with the participation of all Member Countries, including meteorologists.

The Desert Locust situation was calm until April 1987.

Control potential was reviewed; countries expressed the wish to strengthen ground control equipment to permit intervention in zones inaccessible to aircraft and vehicles.

Training of specialists in storage of pesticides was recommended. Participants showed interest in the Australian experience in ordering storage of pesticides.

Pesticide specialists from Morocco and Algeria participated in the meeting on pesticide trials in May 1987, Rome.

The decentralization of pesticide stocks in the countries was recommended.

Harmonization of weather data was recommended and this implies a good exchange of meteorological data between the countries and between them and the Commission.

The Commission approved the accounts for 1983-86, the activities foreseen in 1987-89 and the annual budget for the 5-year period, 1988-1992. The next meeting will be held in Tripoli, Libya, in March 1989.

3. FAO Commission for Controlling the Desert Locust in the Eastern Region of its Distribution Area in South-West Asia

No meeting has been held since the 16th Session held in New Delhi in December 1985.

The next Session will be held in Teheran in 1988.

4. Desert Locust Control Organization for Eastern Africa (DLCO-EA)

4.1 The 32nd Regular Session of the DLCO-EA Council of Ministers was held on 4-6 June 1987 at Mogadiscio, Somalia.

4.2 The Council adopted the report of the EEC/ODA funded review mission and the Executive Committee's comments.

4.3 The budget was reduced by US$ 100,000 to US$ 4.520,000

4.4 Total outstanding contributions were US$ 6.266,000 on 1 June 1987. Very substantial assistance had been provided particularly by ODA and EEC.

4.5 The Director-General, the Director of Operations and the Director of Scientific Research would leave their present posts at the end of their present contracts.

4.6 The next meeting was held in Addis Ababa in May 1988.

5. Organisation commune de lutte antiacridienne et de lutte antiaviaire (OCLALAV)

5.1 The Governing Council (22nd Ordinary Session) met in Bamako, Mali, on 27-28 February 1987, preceded by a technical meeting organized by FAO, with the participation of all member countries and observers from CILSS, France, FAO, Morocco, United Kingdom and IPC/OAU.

The Council:

- reviewed the Desert Locust situation and noted the exceptional infestations in 1986 and the important residual populations in 1987 in the Region;

- insisted on the necessity of maintaining a regional structure in charge of preventive control of the Desert Locust;

- noted the deterioration of the financial situation due to non-payment of contributions and recommended that Member States pay one-third of their annual contributions before May 1987 and the balance before end 1987 in order to achieve the restructuring.

5.2 Due to the recommendation of the 22nd Ordinary Session concerning financial measures having not materialized, the Governing Council held an Extraordinary Session in Rome on 12 November 1987 and decided in principle to transfer responsibility for Desert Locust preventive control to the countries concerned and to create a Regional coordinating centre.

5.3 The Council held its 23rd Ordinary Session on 17-18 March 1988 in Bamako, Mali, with the participation of all member countries and observers from FAO, IPC (OAU), CILSS (UCTR/PV) and CEAO.

- The Desert Locust situation was reviewed; it was very serious in Mauritania and North-West Africa and threatened the OCLALAV zone from May 1988; the Council therefore decided on a transition period ending in November 1988, prior to the creation of the Regional coordinating Centre, during which it would still undertake some field operations.

- The Council approved the decision taken at the Rome Extraordinary Session mentioned in 5.2 above. OCLALAV will survive as a regional organization but reduced to a regional coordinating centre (CRC) in charge of information, training, research and coordination dealing with Desert Locust and other migratory pests. All operational bases needed for the preventive control of the Desert Locust will be handed over with their equipment to the countries concerned (Mauritania, Mali, Niger, Chad).

- The new OCLALAV structure, CRC, will be established at the end of the transition period, i.e, November 1988. FAO assistance was requested in order to finalize the meeting documents and procedures and to seek the external assistance needed for the CRC.

- The next meeting will be held at the end of 1988 in Ndjamena, Chad.

6. International Red Locust Control Organisation for Central and Southern Africa (IRLCO-CSA)

6.1 The 16th Ordinary Session of the Governing Council was held at Nairobi, Kenya on 30-31 October 1986 and was attended by all Member Governments at Ministerial level. Rwanda attended, in an observer capacity, for the first time. UK (ODA) and FAO attended as observers.

- The Council reviewed the locust situation in the Region: Brown Locust plague in Botswana and heightened Red Locust activity in Tanzania and Zambia.

- The Council approved an increased budget for 1987 (US$ 2.600,000); 88% over 1986; US$ 1.2 million would be requested from donors; arrears of contributions had declined.

- The Council approved FAO's proposal for a joint FAO /Donor mission to review the organization and its medium and long term needs.

6.2 The 17th Ordinary Session was held in Lusaka, Zambia on 1-2 October 1987 with the participation of all countries concerned except Uganda and Mozambique. The Council:

- reviewed the locust situation: infestations of Red Locust were expected to escalate in Tanzania and Zambia; reinvasion of Botswana by the Brown Locust from South Africa was anticipated; the African Migratory Locust situation was calm;

- estimated medium-term requirements at US$ 5.300,000 ;

- reviewed various assistance received from Japan, TCP (FAO): Danida, UK, UNDP, DLCO-EA, Switzerland;

- approved a programme of work and budget for 1988 amounting to US$ 2.100,000 a 19% decrease compared to 1987;

The next meeting of the Council will be held in August 1988 in Malawi or Tanzania.