

REPORT

Cairo,
Egypt,
2-7 October
1993

**FAO Commission
for Controlling
the Desert Locust
in the Near East**
Nineteenth session



Food and Agriculture Organization
of the United Nations

**Report of the
Nineteenth Session of the Commission
for Controlling the Desert Locust
in the Near East**

Held in
FAO-RNEA, Cairo, Egypt
2 - 7 October, 1993

Summary of the Decisions and Recommendations

The Commission made the following decisions and recommendations:

1. Training

The Commission adopted a training programme that includes:

- training of trainers, whereby each country designates a training officer(s) who, after being trained by the Commission, would carry out training in his own country;
- annual national training programme(s) to be organized by each country on appropriate subject(s) according to their needs;
- holding a biennial regional workshop on desert locust survey and control; and
- organizing training on specialized topics, on an ad-hoc basis (e.g. forecast, data collection and evaluation, remote sensing and control methods, etc.).

The Commission recommended holding an advisory group, to be funded under TF 9409, for undertaking a detailed study on the implementation of the training programme.

The Commission also recommended holding a Regional Workshop, in 1994, on Desert Locust Survey and Control. The Commission Secretariat was requested to prepare, together with FAO, the programme of this workshop, and to decide on its date and place. Member countries were requested to give their views on the topics to be covered by this workshop. Funds for the workshop should be sought through FAO.

2. Research

The Commission recommended that:

- The Commission for Controlling Desert Locust in the Near East be involved in supporting small research projects in the Region;
- the Commission should establish a research coordination mechanism within the Region and prepare regional research projects for donor institutions and international organizations;
- consider/investigate the possibility of establishing a Regional Research Centre in the Near East;
- prepare a directory of published research on desert locust in the Region.

The Commission also recommended donors and the Scientific Advisory Committee to follow the recommendations of the FAO Desert Locust Control Committee, in matters related to undertaking research in desert locust affected countries, and that countries concerned with desert locust control be involved in the implementation of programmes and projects, and to coordinate such activities with the Commission for Controlling Desert Locust in the Near East.

3. Preventive Control in the Central Region

The Commission recommended that the Preventive Control Programme in the Central Region should:

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- contribute, regularly, to survey and control operations in member countries;
 - have a technical and administrative framework;
 - be sustainable;
 - be implemented in coordination with the Desert Locust Control Organization for East Africa (DLCO-EA) and the Commission for Controlling the Desert Locust in the Near East;
 - provide modern survey and control techniques;
 - ensure the availability of adequate funds and allow for decision-taking during emergencies; and
 - not substitute national programmes.

The Commission further agreed that all concerned countries should contribute in the project with their available facilities, and that financial contributions from some member countries shall be considered after receiving the project document.

4. Commission's Stocks of Pesticides and Equipment

The Commission recommended earmarking the amount of US\$ 100,000 from TF 9409, as well as from extra-budgetary resources, for the purchase of pesticides, equipment and other supplies, to support, in cases of emergency, member countries that cannot sustain their efforts in controlling desert locust invasion, until they receive international assistance, through FAO and/or bilateral agreements. The Commission further recommended that the authority of spending such funds should be vested with the Chairman of the Commission, its Vice-Chairman, the Chairman of the Executive Committee and its Vice-Chairman. Such authority shall be renewed by the Commission at each session.

5. The Post-graduate DLCC Fellowship

The Commission recommended that fellowship funds allocated by the FAO Desert Locust Control Committee be used in obtaining two MSc. degrees for two candidates from the region, instead of one PhD. degree. It was agreed that member countries shall submit the names of their candidates and their CVs to the Secretariat of the Commission for selecting eligible candidates, in coordination with the Chairman of the Commission and FAO headquarters.

6. Spraying Equipment used in Desert Locust Control

The Commission recommended holding a Technical Group to study this subject and submit recommendations thereon to the forthcoming Session of the Commission. In order to enable the Technical Group to appropriately fulfill its mandate, the Commission requested member countries to provide it with available reports and studies on this subject, to be put under the disposal of the Technical Group.

7. Potential Expertise in the Region

The Commission agreed on preparing and publishing a directory of expertise available in the fields of desert locust survey and control in the Region. Such a directory would be useful in identifying potential expertise in the Region and would allow better use of them in undertaking the activities of the Commission. Acceptable academic standard and/or accredited field experience were set as criteria for such expertise. The Commission recommended Member Countries to provide the Secretariat with the names of such

experts, their CVs and published contributions.

8. Publications and Manuals

The Commission recommended member countries to submit to the Secretariat the different subjects that should be included in the proposed publications and manuals. The Secretariat would then select appropriate subjects for such publications.

9. Meteorology

The Commission recommended that experts in meteorology be invited to attend its sessions, and that training programmes should cover meteorology as related to desert locust.

10. Annual Accounts and Programme of Work

The Commission approved the Annual Accounts for 1991-1992, and the Programme of Work for 1993-1994. It urged member countries to settle their outstanding contributions. Furthermore, it recommended that the Chairman and the Secretary of the Commission visit some member countries for discussing the settlement of their arrears.

The Commission further recommended that, in addition to activities approved, the Secretary of the Commission, after the approval of the Commission Chairman, be authorized to spend the budget allocations as approved, and within funds allocated for each item.

11. Country Requirements

The Commission recommended that each country be provided with two Global Positioning Systems (GPS) for identifying positions, and to provide a facsimile machine for each of the countries which does not have such machines. It also recommended the Secretariat of the Commission to refer other country requests to the FAO headquarters for considering the possibility of meeting such requests from other sources. It further recommended that its Chairman and Secretary visit the Islamic Development Bank in Jeddah, to explain the Commission's objectives and programmes, and to seek financial support to its activities.

12. Agreement on the Establishment of the Commission

After discussing the definition of the Region, emergency procedures and reporting, the Commission recommended that the subject of amending the Agreement on the Establishment of the Commission be included in the Agenda of the Twentieth Session. It also recommended that Ethiopia, Eritrea and Djibouti be approached for ascertaining their views on joining the Commission.

13. Preparing Rules of Procedures for the Commission

The Commission recommended its Secretariat to cooperate with the FAO headquarters in preparing a draft Rules of Procedures for the Commission.

14. Secretariat Support

In view of the large volume of work assigned to the Secretariat of the Commission in implementing its recommendations and coordinating activities with member countries,

the Commission called upon FAO to support the Secretariat of the Commission for Controlling the Desert Locust in the Near East by:

- establishing a post for an assistant to the Secretary of the Commission;
- provide secretarial services;
- allocate funds for temporary assistance; and
- allocate funds for general operating expenses, communications and travel.

15. Date and Place of the next Session

The Commission recommended that its forthcoming session, as well as the Executive Committee session, be held during 1994 at the seat of the Commission.

Introduction

The FAO Director General invited members of the Commission, Egypt, Sudan, Yemen, Saudi Arabia, Qatar, Oman, Bahrain, Kuwait, United Arab Emirates, Iraq, Syria, Lebanon and Jordan, to attend the Nineteenth Session of the Commission for Controlling the Desert Locust in the Near East, at the FAO Regional Office in Cairo, Egypt, held between 2 - 7 October, 1993.

1. Opening of the Session

The session was opened by Dr. Atef Bukhari, Assistant FAO Director General and Regional Representative for the Near East. He welcomed the participating delegates, and stressed the prevalent problem of the Desert Locust in all countries located in its invasion areas. He also added that locust control can only be effectuated through the cooperation between countries and through a comprehensive programme that guarantees ample facilities and potential for survey and control. Implementing prompt exchange of information, undertaking applied research grants, and allocating priority to those countries in which breeding and upsurges occur was also stressed.

Dr. Bukhari also pointed out that the Desert Locust still threatens the food and national economy of many affected countries located in its invasion areas. He underlined the significance of cooperation, coordination of research and information exchange between member states of the commission and organizations involved in the field of controlling desert locust.

He stressed the importance of regular payments of contributions so as to enable the commission to reach their goals. He also indicated that establishing commissions and international organizations has been affective in enhancing regional and intra-regional cooperation by curbing locust upsurges.

Dr. Bukhari concluded by indicating that the FAO Regional Office for the Near East will provide all possible assistance to support the Regional Commission for Controlling the Desert Locust in the Near East.

Participation in the Session

The following delegations participated in the session:

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Kuwait

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United Arab Emirates

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Yemen

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Kingdom of Saudi Arabia

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Desert Locust Control in North-West Africa

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2. Election of the Chairman and Vice-Chairman of the Session

Mr. Mohamed Samir Simary, Chairman of the Commission and delegate of Egypt, commenced the meeting by welcoming all participants. He requested the members present to observe a minutes silence for colleagues, the late Refeek Sakaf and Moustafa Mohamed El Nahas, in commemoration for their great service in survey and locust control.

Mr. Ahmed El Henai, delegate of Oman, was elected Chairman and Mr. Yacoub Ashour Yacoub, delegate of Saudi Arabia, Vice-Chairman. Mr. Ahmed EL Henai accepted the chair and extended his thanks to the Commission for their confidence in him.

3. The Adoption of the agenda

The following agenda was proposed and adopted by the Commission.

1. Opening of the session
2. Election of the Chairman and Vice-Chairman of the Commission
3. Adoption of the agenda
4. Election of the Drafting Committee
5. The Desert Locust situation in 1992-1993 and forecast to December 1993
6. Control measures undertaken in 1992 and 1993 in the Near East Region
7. Desert Locust survey and control potential available in member countries
8. Activities of the Commission Secretariat in 1992-1993
9. Assistance to member countries of the Commission
10. Implementation of the recommendations of the Eighteenth Session of the Commission
11. Consideration of the report of the Executive Committee
12. Contributions to Trust Fund 9409
13. Election of the Chairman, Vice-Chairman and members of the Executive Committee
14. Any other business
15. Date and place of next session
16. Adoption of the report

4. Election of the Drafting Committee

The delegates of Egypt, Sudan, Yemen and the FAO Secretariat, were selected as members of the drafting committee.

5. The Desert Locust Situation in 1992-1993

The Secretariat presented a summary on the overall desert locust situation and forecast. The representative of FAO complemented the presentation by providing the latest development. The situation is summarized as follows:

West Africa

Small scale breeding occurred in isolated areas during the summer of 1992. The situation remained calm from Autumn to late Spring of 1993 until swarms invaded the region from the east. Maturing swarms first appeared in eastern Chad on 26 June, in eastern Niger on 29 July and in southern Mauritania on 20 July. As the swarms were moving with the easterly winds north of the ITCZ early in the season, few areas were favorable for breeding until their arrival in southern Mauritania. Consequently, no significant breeding has been reported from West Africa except for southern Mauritania where numerous hopper bands appeared during August. In early September, some of these had started to form new swarms after which ground control operations were activated. A few smaller swarms are expected to appear in western Mauritania during September and moving north during October where small scale breeding may occur by the end of the year. Elsewhere in West Africa, the populations are not believed to be of major consequence.

North-West Africa

No significant locust infestations were reported during the summer of 1992. In October, small numbers of adults were present in a few areas south of the Atlas Mountains in Morocco and Algeria as a result of movement from the summer breeding areas of the Sahel. Small populations persisted in central Algeria during the spring of 1993. On 19 July, a low density swarm appeared in the extreme south-west of Morocco as a result of migration from the east. Since then, no reports of significant infestations have been received from the region to date. Because of summer breeding in southern Mauritania, and to a lesser extent in northern Mali and Niger, there is a moderate risk of a few small swarms appearing in the extreme south-west region and along the southern side of the Atlas Mountains in Morocco, and in the central and southern Sahara of Algeria from October.

Eastern Africa

Undetected breeding is believed to have occurred during the summer of 1992 as a result of good rainfall in central, western and northern Sudan and in the interior and coastal areas of Eritrea during autumn. This resulted in swarms first appearing on the southern Red Sea coast of Sudan on 9 November and breeding during the next three months. In Eritrea, breeding continued during late 1992 and early 1993. In Somalia, travellers reported adult and hopper bands along the north-western coast in late December, however, it was unclear if they were Desert Locust or African Migratory Locust. By late February, the situation had improved in Sudan and Eritrea mainly due to control and to the emigration across the Red Sea. From May to July, infestations of small swarms of African Migratory Locust together with Desert Locust, were reported in Eastern Ethiopia and north-western Somalia, and by late July and early August a few small swarms were present on the central-northern coast of Somalia. In early June, swarms re-appeared in Sudan moving westwards from the eastern region towards the central and western areas where they eventually laid. Despite control operations, numerous hopper bands started

forming by mid July in northern Kordofan and probably in northern Darfur, and new swarms were observed in early September. Swarms are expected to move towards the winter/spring breeding areas along both sides of the Red Sea to begin to lay by the end of the year. Based on current information, the migration is expected to be on a small scale but the possibility of moderate scale not to be discounted.

A low risk exists of a few small swarms moving south from northern Somalia towards Kenya from October.

The Near East

Limited control operations were implemented when small scale breeding occurred in the Tihama of Saudi Arabia and when scattered adults were detected in Yemen during the summer of 1992. As a result of migration from the west, several swarms first appeared in the Tihama of Saudi Arabia where they laid in 14 November. To a lesser extent, swarms also laid in the northern Tihama of Yemen at approximately the same time. Swarm invasions continued during January and February and hopper bands were observed along the Red Sea coasts of Saudi Arabia, Yemen and Egypt where control operations were promptly implemented. By late February new swarms were forming and moving towards the northern interior of Saudi Arabia where breeding had occurred over a widespread area due to unusually good rainfall from March to May. Despite large scale control operations, new swarms started moving towards northern Arabia in April and towards Sudan and Yemen where breeding occurred in Ramlat Sabatyn and adjacent desert areas during May. Although control operations were launched, new swarms still started to form by mid June and moved rapidly towards the north-east, reaching the Oman border on 6 July and continued to follow the coast to Sur on 11 July, and further north-east to Pakistan and India. By early August, no significant infestations remained in the Arabian Peninsula.

South-West Asia

Small scale breeding occurred along the borders of India and Pakistan during the summer of 1992. The situation remained calm during the winter and following spring of 1993, where only scattered adults were reported from Makran in Pakistan and Rajasthan in India. As a result of moderate scale migration from the Arabian Peninsula, swarms first started to arrive in the summer breeding areas of Pakistan and India on 12 July and laid shortly thereafter due to favorable conditions from unusually heavy rainfall. Breeding continued over a widespread area and new swarms started to form during August. The scale of current infestations in Pakistan and India are much larger than those in other regions. It is possible that another generation of breeding will occur in currently infested areas. However, as the monsoons draw to an end, swarms will migrate on a moderate scale west to the winter/spring breeding areas of Baluchistan in Pakistan and Iran.

6. Control Measures Undertaken in 1992 and 1993 in the Near East Region

Member countries presented the overall desert locust situation and the control measures implemented in 1992/1993. The following summarises the presentations.

6.1 United Arab Emirates

UAE secured all needed resources for survey and formed survey teams in all agricultural areas to carry out weekly desert locust survey operations. With the

exception of some hopper populations which were detected and controlled on 15 September, 1993, no desert locusts have been detected.

According to the advice of His Royal Highness, Sheikh Zaid Ibn Sultan Al Nahyan, urgent relief aid of ten tons of 90% Malathion pesticide has been sent to Pakistan. This gesture reiterated the willingness of his Highness to support neighboring states and to enhance cooperation between countries.

6.2 Sudan

Winter Campaign (October 15, 1992 - March 1, 1993)

Precipitation

Precipitation rates on the Red Sea Coast were good during October and November in the southern areas of Sawaken, Toker and Aterabeh. These favorable weather conditions led to the gregarization of the desert locust.

Survey Operations

In mid October 1992, the first swarm of desert locusts was observed approaching from Eritrea. Swarms followed until November 1992, invading Aterabeh, Toker and Sawaken. The migratory locusts amounted to 101 swarms during the period of October 1992 to March 1993. Due to excessive moisture, laying started during November and December and eggs began to hatch from November 1992 until February 1993.

A total of 71,113 hectares were infested with swarms; 17,772 being infested with solitary desert locusts.

The area infested with instars during November 1992 to March 1993 reached 72,672 hectares. A total of 143,785 hectares were infested with swarms and instars.

Control Measures Taken

Ground control operations promptly began in October 1993 using motorized sprayers. Insecticides used were 2% Propuxor and 1% Bendiocarb.

Helicopters were utilized when swarm invasions increased. Four aircraft were used:

Antinov (2)

Beaver & Islander (2)

95056 hectares were treated of which:

39,229 hectares by ground equipment

55,838 hectares by aerial means

Some areas were not treated due to the low density of locusts.

Insecticides used in Control Operations

(a) ULV

Fenitrothion	100%	2,500 Lit
Fenitrothion	96%	17,374 Lit
Dursban	45%	8,415 Lit

Total		<hr/> 28,289 Lit.
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(b) E.C and Powder			
Diazinon	60%	EC	164 lLit
Propoxur	2%	Powder	19 500 kg
Bendiscarb	1%	Powder	8 890 kg
Poisonous baits			28 560 kg

Summer Campaign (June 1992 - September 1993)

Heavy rainfall and floods in the Sahel area in mid April 1993 particularly Port-Sudan to Sawaken, Toker and Atebrah, turned this region into a breeding area, attracting locusts from neighboring countries, Ethiopia, Eritrea and Somalia.

On June 1, 1993, swarms of desert locusts began to invade Sudan, passing through the verdant coast penetrating deep inside Sudan in the eastern and northern provinces of Kerdfan and Darfour. Locust invasion continued from June to mid July reaching 123 swarms that infested Sudan during this period. Most of these swarms settled in north Kerdfan due to heavy rainfall and favorable breeding conditions. The locust infested areas are:

- El Mezroub (14.00 N - 29.33 E)
- Soudri (14.41 N - 29.09 E)
- Kegmeer (14.25 N - 30.25 E)
- Um Saiyla (14.25 N - 31.20 E)

As desert locusts did not settle in any particular area, only limited areas of invading swarms were treated.

Whilst laying began on July 1, the control plan focused on monitoring the laying fields and to proceed with ground control immediately after hatching. Control operations also commenced immediately after the instars appeared in mid July.

Control Measures Taken

Instar control operations began in mid July using surface equipment; motor dusters and ULV sprayers. Control operations were intensified due to the gregarization of early instars at a higher density on August 1. In addition to ground control facilities, six aircraft, were used:

Antinove	(3)
Cessna 185	(1)
Beaver	(2)

By the last week of September 1993, the situation was under control. At present, survey operations are being carried out to detect any migratory swarms heading from the western borders.

A total of 192,392 hectares were infested with invading swarms and solitary desert locusts.

The controlled area (swarms)	11,546 hectares
Instars infested areas	243,090 hectares
including the expected and unsurveyed area covering about 80,000 hectares	
The treated areas of instars	139,237 hectares

A total of 159,281 hectares of invading swarms and instars were treated. A total of 435,482 hectares were infested with invading locusts, swarms and instars, including the areas of expected swarms till the end of the campaign.

Insecticides used

Concentrated (ULV)

Dursban	45%	18 905 Lit
Malathion	96%	3 600 Lit
Diazinon	25%	4 088 Lit

Powder

Bendiocarb	1%	18 771 kg
Propoxur	2%	42 268 kg
Sevin	85%	4 326 kg

Forecast of Locust Activity in Winter on the Red Sea Coast (October 1993 - March 1994)

If weather and environmental conditions are favorable for locust breeding in the coastal area, it is expected that the region will be infested with invading locusts from Ethiopia, Eritrea, Somalia and from as far as India and Pakistan.

A total of 300,000 hectares are expected to be infested with locusts.

Insecticides needed for control operations: 150 000 lit of concentrated insecticide (ULV).

Available insecticides: 50,000 Lit

Insecticides needed : 150,000 - 50,000 = 100,000 lit

6.3 Saudi Arabia

The western coastal area of the Kingdom and parts of the southern and central regions, were infested with desert locust swarms from East Africa and Yemen, during the period of November 1992 to the end of June 1993. These swarms of yellow mature locusts amounted to 329. As the weather and environmental conditions improved, part of the swarms managed to lay in some of the abovementioned areas which are now under observation as a prelude to control operations.

The Ministry of Agriculture and Water provided all the necessary facilities to control the desert locust swarms including the instars, to protect the agriculture of the Kingdom. The Ministry successfully managed to eradicate locust pests and prevented their spread, undisturbing the agricultural environment. The Ministry provided all the necessary vehicles, insecticides and aircraft needed to control the operations. They recruited most of the farm laborers and technicians of the ministry to mobilized and maximise efforts to eradicate this pest. Two hundred vehicles equipped with sprayers were used. Ten aircraft; six light aircraft and four helicopters were used. A total of 1,245,950 litres of various insecticides were used during this season to treat 1,688,920 hectares. Six-hundred employees including engineers, technicians, farm laborers and drivers from the different directorates of agriculture participating in the control operation.

6.4 Egypt

Weather conditions were favorable for locust breeding due to heavy rainfall in July, October and November 1992 on the coastal areas of the Red Sea from Ras Ghareb (28N) to the borders between Egypt and Sudan in the south (22N).

By the end of December, some mature desert locusts were reported approaching the southern borders where they began to lay. The pollution of 80 square kilometers from 3000 instars spots were controlled.

From mid February until May 1993, the area was infested with 24 swarms of locusts of medium density covering a total of 482 square kilometers. These swarms were effectively treated except for a few that managed to lay in some of these areas. 14,000 dense spots of instars were treated in different areas. A total area of 300 square kilometers was estimated to be polluted.

Control operations against gregarization of locusts of medium density were carried out in June and July in an area of 60 square kilometers located on the coast of the High Dam Lake and in inner areas of the south-eastern desert.

Control operations consumed:

- 21 tons of insecticide powder
- 55 tons of pesticides
- 600 litres of liquids

Ongoing Field Studies and Research in Egypt

(A) New Trends of Controlling Instars:

- *Anti-Molting*

Experiments using several derivatives of Uria have been conducted to prevent the formation of Chitine, namely, Diaphlo Benzurone (Demileen), Cholorophlo Azorone (IKI) and Ultrauphlo Benzurone (CME). All derivatives proved effective in preventing the molting of instars and even killing them in the proceeding molting season.

- *Hormonic Analogue*

Experiments using Alfenoxascarb, an analogue to the youth hormone, have been carried out and proved effective in control operations against the late instars (5) of desert locust.

One of the new analogues to the youth hormone prepared in the laboratory "Beerazole" was tested against late instars (4-5), resulting in retarding the growth and sloughing the instars (5) until they eventually died.

- *Antifeedants*

Different preparations derived from the Neem tree are available on the market, especially Margozan-5, an antifeedant against mature adults and instars. It has the usual effect on instars ie, high death rates.

- *The integrated effect of Anti-Molting and Antifeedants*

This experiment relied on spraying anti-molting agents on field crops in instar-affected regions to determine the minimum time required for the instars to receive an ample dose of anti-molting. After the spraying of anti-molting agents, antifeedants are sprayed to reduce the damage that may have occurred to field crops.

The experiment proved that instars feeding on crops treated with anti-molting for two days, were quite sufficient for controlling infestations.

Conclusion

Anti-molting could be effective in instar control in breeding areas. Furthermore, benefits from the integrated effect of anti-molting and antifeedants could be obtained for field crops as indicated above.

(B) New Trends in Pest Control

- Sex pheromone
- Egg laying pheromone: the sand where mature adults had been laying their eggs was extracted. This was used together with a new area of laying, attracting the mature adults to lay eggs. This point requires detailed studies.
- Expansion in the cultivation of Neem trees in Egypt to supply ample preparations for locust control as required.

Research and studies on testing of pesticides:

The following pesticides are under testing in the laboratories and fields:

Ficam	20%	(ULV)
Marshal	20%	(ULV)
Traker	16.5%	(ULV)
Fenitrothion	100%	(ULV)

6.5 Jordan

No desert locust invasion was reported in Jordan in 1993. However a few adult locusts were observed in the south-eastern region adjacent to Saudi Arabia. Four to five adult locusts were observed in each farm irrigated by a centre pivot covering an area of 5 to 6 hectares.

Survey teams continued their work in these areas as well as other areas.

6.6 Yemen

During the spring and summer of 1992, Yemen experienced heavy rainfalls in most parts of the country, resulting in favorable environmental conditions for locust activity.

Local breeding areas in December 1992, covered the Tehama region from Hoad in the north (1626N - 4320S) to Bait El Fakih in the south (1413N - 4323S).

A mature swarm was observed in the area of Wadi Ein, north of El Zahra region (1544N - 4318S) on 20 December, 1992. Laying began in a ten hectare area. Local breeding areas commenced in Abyan governorate (1312N - 4523S), Lahj governorate, the western coast of Eden (1245N-45.03S) to Bab El Mandeb. A swarm was also observed in the north of Wadi Asfel Khoudra in the governorate of Hadhramout on 24 December, 1992. As a result of these local breeding areas, a huge number of instars and adult locusts was reported in vast areas, covering thousands of hectares.

Control operations against locusts were therefore carried out on December 28, in an area of nearly 60,000 hectares and continued until the end of May 1993. From the April 25, to May 12, 1993, locust swarms were reported in the governorates of Shabwa, Marib and Jouf. Others were reported in Wadi Jennah (1513N - 4601S), Wadi Behan (1504N - 4553S), and in the governorate of Shabwa on May 3 - 5, and from May 15 - 17, 1993. Some eggs were laid in Ramlet El Sabetien (1521N - 4615S) in the governorate of Marib, in the desert areas adjacent to the Harib region (1403N - 4531S), in Serwah region (1532N - 4503S) and in desert areas in the governorate of Jouf. In the first week of June 1993, huge upsurges of instars and mature insects were reported in vast areas of these governorates.

From May 25 to July 27, 1993, field control operations were carried out. An area of 96,700 hectares was treated, consuming 4,797 lit/kg of insecticides, using 50 ground sprayers and a follow-up car and truck to carry the equipment and supplies. Two helicopters were used at the end of the operations for 70.40 hours,

from July 17 - 27, 1993, 18.16 hours in spraying 6,950 hectares in the governorate of Jouf and 42.20 hours in survey operations in the other affected regions. Two military helicopters were used for twenty five hours in the survey operations and in carrying experts, equipment and necessary materials to the control sites.

Human resources amounted to 126 personnel including engineers, technicians, drivers, escorts and laborers in addition to twenty employees in operation headquarters, accounts and monitoring that took part in preparing and implementing control operations on site. An area of 156,700 hectares was treated from December 1992 to July 1993.

6.7 Kuwait

The rate of rainfall increased unexpectedly in Kuwait compared to the past five years, especially from November 2, 1992 to April, 1993. Due to favorable weather conditions, desert locust breeding areas increased and the weeds that are preferred by locusts began to grow at a fast rate, particularly in the Wafra region in southern Kuwait.

Despite these favorable weather conditions, no desert locusts of any phase, migratory or solitary, were reported.

6.8 Oman

In June, immature adults were reported in Seeh El Khirat at a density of 20 locusts per feddan, covering an area of 25 feddans. On July 1, immature adults were observed in scattered farms, adjacent to Remal Al Wahiba in Badya province. On the July 2, gregarization of immature adults were reported in Sour province, covering 10 feddans.

From July 2 to July 12, swarms of locusts began to infest western parts of the governorate of Dhofar in Serfeet, Delcouth, Rekhyout, Salala City, Seeh El Khirat, Takha, Wadi Derbat and Ouon region.

This wave of locust migrated from the regions adjacent to Hadhramout in Yemen. Swarms of desert locusts were also reported near Mermoul and Shelim heading towards the north-eastern region of the Sultanate.

Beginning July 11 till July 26, the swarms managed to reach Ras El Had, Sour El Wedyan adjacent to Wadi Beni Gaber, Tahwa and Kelhat. Almost simultaneously, dispersed gregarizations were reported in El Kamel, Guelan Beni Bou Hassan. Commencing from July 29 until August 15, desert locusts were also reported in Wadyan Guelan Beni Bou Ali, Wai Sal, Salabeh, El-Guereef and Abou Medrah. Other dispersed gregarizations were discovered in El Shewai in El Medibi province on August 7, in Berzman and Wadi El Lethy in El Medibi province in August, in El Hemra province on August 21 and in Takha in the governorate of Dhofar on August 25.

Control Campaigns

Immediately after reporting desert locust swarms, the Ministry of Agriculture and Fisheries formed a control campaign committee comprising of representatives from each cultivated area to supervise control operations. The committee was headed by the Director General of Agricultural and Animal Affairs.

Several Control operations were carried out in the southern part of Salala City and Seeh El Khirat, in an area of 300 feddans. Due to unfavorable weather conditions, and the locust activity in populated and pastoral areas, it was impossible to begin spraying. Spraying was applied in other areas with AU 700 and high pressure equipment. In the eastern region, the insecticides used in

control operations were Malathion, Dursban and Nogous; spraying was with AU 7000, ULVAMAST and TIFA high pressure equipment. Aerial control operations were carried out with Bell 205 Helicopters, equipped with a special sprayer.

Control operations in the inner region used high pressure equipment.

An area of 10,900 hectares was treated, consuming 7,500 tons of ULV and EC insecticides as follows:

Insecticides			
Malathion	96%	(ULV)	4 tons
Dursban	96%	(ULV)	3,500 tons
Nogous	50%	(EC)	600 lit
Somi Komby		(EC)	1,100 lit
Somathion	50%	(EC)	200 lit

At the end of deleberations, the delegations expressed their appreciation for the strenuous efforts exerted by Saudi Arabia in controlling the desert locust in the Kingdom. The control operations carried out by Saudi Arabia prevented the locusts from moving to the northern part of the Arabian Peninsula and other countries of the region.

6.9 Outlook until the end of 1993

The outlook until the end of 1993 in the Near East Region is dependent on the duration of seasonal rains and the effectiveness of the control campaigns in progress in South-West Asia and Sudan. There is a moderate risk of large scale migration from the summer breeding areas of India and Pakistan to west of the Baluchistan of Pakistan and Iran. Small numbers of swarms may reach the Musandam peninsula and Batinah of Oman and the Fumarah coast of UAE from October. Depending on the scale of the migration, swarms could move further west through the Gulf states or even spread south-west across southern Arabia to Yemen before moving north along the Tihama later in the year. There is a low risk of eastward-moving swarms from the summer breeding areas of Sudan reaching the Tihama of Saudi Arabia and Yemen from October where they could proceed to lay in coastal areas that receive rainfall at the end of the year. Therefore, regular surveys are recommended in all areas throughout this period as a precautionary measure.

7. Desert Locust Survey and Control Potential Available in the Near East Region

Delegates of the member countries presented statements of the available resources. (see Annex 1).

8. Activities of the Commission Secretariat in 1992 - 1993

The following activities were undertaken by the Secretariat:

1. In collaboration with ECLO, the Secretariat organized an emergency meeting in Cairo, Egypt on the situation of the Desert Locust in the Red Sea area on 14 January, 1993.
2. Since March 1995, an Arabic version of the monthly ECLO Desert Locust Bulletin was regularly produced and has been distributed to member states of the Commission and other Arabic-speaking countries.
3. The Secretariat followed the situation in desert locust-affected countries and aided in the exchange of information.

4. The Secretary of the Commission visited Yemen in May 1993 and participated in a desert locust survey in Marib and Shabwa. In view of the extreme seriousness of the situation, the requirements for control were identified, and ECLO and the donor community in Yemen were informed and urged to give immediate assistance.
5. The Secretary also visited Saudi Arabia in May to discuss the activities of the Commission.
6. The Secretary participated in the International Workshop on Research and Planning for Desert Locust Control which took place in May 1993, in Marrakesh, Morocco. He also attended the meeting of the Desert Locust Technical Group held in Rome during September 1993.
7. The Secretary undertook study tours to PRIFAS, France and NRI, UK to improve communications and exchange of information.
8. The Secretariat has installed a fax machine and is in the process of purchasing a personal computer.

9. Assistance to Member Countries

The Secretariat presented a statement on the assistance provided by donor agencies to the locust affected countries in the region. Details of this assistance are listed below.

Project Symbol	Budget	Project Inputs
SUDAN	US\$	
ECLO/SUD/030	143,500	13,600 litres of Ghlorpyrifos delivered to Port Sudan in April 1993
ECLO/SUD/030/USA	760,000	Activities to be implemented as from mid-July: <ul style="list-style-type: none"> • locust expert (3 m/m) • travel/general operating expenses (US\$ 85,000) • 300 flying hours • agricultural maps pesticides: <ul style="list-style-type: none"> • pesticides (50,000 litres of Malathion to be shipped to Sudan)
ECLO/SUD/032/IFA	286,000	26,000 litres of Chlorpyrifos to be ordered upon receipt of funds at FAO Headquarters
ECLO/SUD/033/NET	247,368	24,600 litres of Ghlorpyrifos delivered to Khartoum, Sudan, on 14 June 1993
ECLO/SUD/034/EEC	132,000	6,000 litres of pesticide to be ordered one month technical expertise local general operating expenses
ECLO/SUD/035/SWE	129,000	Radios/protective clothing/local operating expenses
TCP/SUD/1358	170,000	3m/m technical expertise 10,000 litres of pesticide (Chlorpyrifos delivered to Khartoum, Sudan in early July 1993)
TOTAL ASSISTANCE TO SUDAN THROUGH FAO	1,867,868	

YEMEN

TCP/YEM/1355	322,515	4 m/m technical expertise radios, sprayers survey equipment
ECLO/YEM/030/USA	275,000	10,000 litres of pesticide (Chlorpyrifos) general operating expenses (US\$ 125,000) pesticide (US\$ 100,000 on reserve) sprayers (US\$ 50,000)
ECLO/INT/006/FRA	126,000	7,000 litres of pesticide to Yemen local operating expenses (US\$ 26,000)

INTER-REGIONAL PROJECTS

ECLO/INT/030/SWE	1,000,000	including assistance to Sudan and Yemen. Funds approved by the donor but not yet spent as immediate emergency needs have been covered from other funds.
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The representative of FAO presented a detailed review of the international assistance provided to the affected countries in the Near East Region. He referred to the five-million dollar grant from the Islamic Bank to the countries subjected to locust invasion. Till now, 2.9 million dollars has been allocated to enhance the capabilities of these countries.

He reported that the Islamic Bank informed FAO that it is ready to support the needs of the countries and organizations in the area of controlling desert locust.

The Commission expressed its appreciation to FAO for their effort in directly supporting the Commission and member countries through technical cooperation programs and raising revenue by contacting donor countries and institutions. The commission also expressed gratitude to the donor countries and institutions, especially the Islamic Bank, for their unending support to the problem of desert locusts and locust containment. The Commission recommended the Chairman, Vice-Chairman and Secretary of the Commission to brief the Islamic Bank in Jeddah, on the role of the Commission and its programmes, and present the Commission's needs for necessary funding.

10. Implementation of the Recommendations of the Eighteenth Session of the Commission

The Secretariat presented follow-up action on implementing the following recommendations of the 18th session of the commission.

10.1 Secretariat

Since January 1993, FAO has assigned the duties of the Secretariat of the Commission for Controlling Desert Locust in the Near East to Dr. Mahmoud Taher, Regional Plant Protection Officer for the Near East.

The seat of the commission is located in the premises of the FAO Regional Office for the Near East, Cairo, Egypt.

10.2 Training

An Egyptian officer was trained by the FAO in October, 1992 at headquarters in Rome. This training was tailored and implemented by the FAO/ECLO forecasting

officers to meet the needs of the individual and the country. Training concentrated on desert locust survey, reporting, interpretation of satellite photos, forecasting and control.

On the national level, FAO organized training in Oman on locust survey and control by K. Cressman, in May 1993, in Sudan on locust control by H. Dobson, in April 1993, and in Yemen by T. Ben Halima, in April 1993. Field training on locust survey was also undertaken during the missions of K. Cressman, FAO/ECLO Survey and Forecasting officer, in Sudan in December 1992 and Yemen in February and July 1993.

10.3 Assistance

In line with the recommendations of the 18th Session, the following activities have been implemented:

Egypt

One pick-up and 3 sprayers were provided. One ICOM mobile radio was supplied, funds were charged to TF 9409.

Sudan

Pesticides were provided through the 1993 emergency programmes. No charges occurred under TF 9409 for this item.

Jordan

One station-wagon equipped with radio was provided under TF 9409.

The Commission expressed its appreciation for the effort made in implementing the recommendations of the Eighteenth session.

10.4 Countries' Requirements in 1993/1994

The Commission reviewed the different requests for assistance presented by the participants. These were as follows:

Kuwait:	micronair AU 500 for aircraft
Jordan:	2 4x4 vehicles, equipped with radio to help in survey operations
Sudan:	Satellite communications
Oman:	3 GPS
Egypt:	5 Exhaust sprayers 2 double cabin pick-up trucks Support to research facilities
Yemen:	3 micronairs AU 8110
U.A.E.:	training for five trainees during locust invasion in invaded countries 3 consultants during locust invasion.

After thorough discussion on the requests that were presented, the Commission recommended providing all member countries with 2 GPS and a fax machine for countries which do not have one. The Commission asked the Secretariat to refer the other requests to the FAO for consideration from other sources.

11. Consideration of the Report of the Executive Committee

The Commission reviewed the report and approved it.

12. Contributions to Trust Fund 9409

The Commission reviewed all contributions of member countries to trust fund 9409. The Commission shared the Executive Committee's concern regarding the arrears of some countries. As the financial liquidity of the Commission is the basis of any activities or programmes, it urged all countries to pay the arrears and requested delegates to follow-up the matter with concerned authorities in their countries. The Commission made a recommendation requesting the Chairman and Secretary of the Commission to visit some of these countries to discuss payment of contributions.

13. Election of the Chairman & Vice-Chairman of the Executive Committee

Sudan, Yemen, Egypt, Saudi Arabia and Kuwait were elected members of the Executive Committee; Sudan, was elected Chairman and Saudi Arabia, Vice-Chairman.

14. Any Other Business

14.1. Post-graduate DLCC Fellowship

The Secretariat informed the Commission that under the recommendation of the FAO DLCC, the DLCC technical group has selected North-West Africa and the Near East for the two scholarships assigned through the international trust fund No. 9161.

All delegates present agreed that this scholarship would be of more benefit in funding two Masters Degrees instead of one Ph.D. All delegates agreed to hand in the names and personnel files of their nominees to the Secretariat so it can coordinate with the Chairman of the Commission to select the candidate who best meets all requirements.

14.2. Meteorology

Convinced of the important role of meteorology in detecting and locating locust activity, the Commission recommended inviting an expert meteorologist to attend its meetings. It also recommended that training programmes should incorporate meteorology in relation to desert locust.

14-3 Spraying Equipment Used in Desert Locust Control in the Near East

The Commission recommended holding a specialized technical group to examine the utilization of spraying equipment in the field of Desert Locust Control and present its recommendation to the Commission in the coming session. To ensure carrying out this task in the appropriate manner, the Commission called on the member countries to present all available studies and reports on this subject to be put under the technical group's disposal.

14-4. strengthening the Commission

In view of the work load of the Secretariat to implement all the recommendations of the Commission and to coordinate activities between member countries, the Commission called on the FAO to strengthen the Commission in the following way:

- * establish a post for an assistant to the Secretary of the Commission
- * provide secretarial services
- * allocate funds for temporary assistance
- * allocate funds for general operating expenses, communication and travel

In addition to the activities approved by the Commission, the Secretary, after

the Chairman's approval, would be authorized to affect expenditure of the annual budget as approved by the Commission and within fund allocations specified for each item.

15. Date and Place of next session

It was agreed that the next session of the Commission and its Executive Committee would be held in the FAO Regional Office for the Near East in Cairo at a date to be determined later.

Acknowledgments

The Desert Locust Control Commission wishes to extend its thanks and appreciation to the FAO Regional Office for providing all facilities and the necessary support which contributed to the success of the Commission's meeting.

16. Adoption of the Report

The report was approved after discussing the various items.

17. Conclusion of the Session

Dr. Atef Bukhari, Assistant FAO Director General and Regional Representative for the Near East, concluded the session. He paid tribute to all delegates for their effective participation, resulting in a number of recommendations that would enable the Commission to play its role in the region. He urged member countries to implement the recommendations and to exert further effort in Desert Locust Control.

Mr. Mubarak Ghendaz, Chairman of the Desert Locust Control Commission in North-West Africa, expressed appreciation for being invited to the Commission's meeting and hoped for mutual cooperation between the two commissions in the future of Desert Locust Survey and Control.

ITEM	INSECTICIDES (tons)														VEHICLES									
	ULV							E.C.			DUSTS													
Country	Diazinon 90%	Dursban 23.9%	Dursban 45%	Fenitrothion 100%	Fenitrothion 96%	Fenitrothion 50%	Ficam 20%	Karate 4%	Malathion 95%	Other insecticides	Total	Diazinon 60%	Fenitrothion 50%	Total	Propoxur 2%	Bait	Area in Hectares	2 x 2s	4 x 4s	Trucks (2 ton)	Trucks (5 ton)	Unimogs	Total	
Bahrain																								
Egypt	20	30								50					100		80,000		65	20	10			95
Iraq																								
Jordan		0.3	0.3					0.4	9	10							20,000	44	1				45	
Kuwait							2	2				3	5	8	2		10,000		3	6			9	
Lebanon																								
Oman					2		5	2		9			2	8*			18,500		14	1	1		16	
Qatar																								
Saudi Arabia								188	350								1,000,000		200	2	3		205	
Sudan			42					8.5	50				2.5	2.5	20	40	122,000		150		10		3163	
Syria																								
UAE								10	40	50				20	1			15	130	3	1		149	
Yemen			10	16				10	36						1		70,000		36		1		37	
Total	20		82.3	0.3	18		7	2	218.9	399	205	3	9.5	38.5	22	21	1,302,000	59	599	32	26		3719	

* Including 2 tons Dursban 4 EC

1 ton Marshal 25 EC

○ requires maintenance due to heavy use during last campaign

**Report of the Nineteenth Session of the
Executive Committee of the Commission for
Controlling the Desert Locust in the Near East
2-4 October 1993
RNEA, Cairo, Egypt**

Introduction

Mr. M'hamed Gaieb, Deputy FAO Regional Representative for the Near East, welcomed the delegates. He indicated that the Near East Region imports 21 billion dollars yearly in food stuffs, locust invasions could drastically increase this total even further. He emphasised the issue of desert locust as not a regional question but rather a collective responsibility. This gives even greater influence to the vital role of the Commission in coordinating every effort regionally and internationally to contain this problem.

1. Opening of the Session

Members of the Executive Committee, Saudi Arabia, Egypt, Yemen and Jordan, participated in the session. The delegate of Qatar did not attend. The delegates of UAE, Oman, Kuwait and Sudan were also present as observers.

The Secretary of the Commission for Controlling Desert Locust in North-West Africa and a representative of FAO, both attended the meeting. Dr. Mahmoud Taher, Secretary of the Commission, undertook the secretarial work. A list of participants is attached in Annex 1.

Mr. Yacoub Ashour, the delegate of Saudi Arabia and the Chairman of the Executive Committee, welcomed all the delegation and stressed the importance of this session as it coincides with present locust upsurge occurring from Mauritania in the West to India in the East. He stressed the importance of exerting all possible effort to curb locust activity.

2. Adoption of Agenda

The Executive Committee reviewed the proposed agenda and after discussion adopted the following:

1. Opening of the Session
2. Adoption of agenda
3. Election of the Drafting Committee
4. Training
5. Research
6. Preventive control in the central region
7. Annual accounts for 1992-1993 and Programme of Work and Budget for 1993/1994
8. Any other business:
 - a) Agreement on establishment of the Commission
 - b) Reporting and information exchange
 - c) Reserves of pesticides
 - d) Potential expertise in the Region
 - e) Publications and manuals for the Region
 - f) Report of the Desert Locust Technical Group
9. Date and place of the next session
10. Adoption of the report

3. Election of the Drafting Committee

The participants agreed that the Drafting Committee will comprise of all members of the Executive Committee and the Secretariat.

4. Training

The Committee reviewed and discussed the working paper presented by the Secretariat and stressed the need to continue, increase and strengthen training activities in the Region with a view to meeting the needs of the various countries and the policies set by the DLCC. A short and medium training programme was approved. This includes:

- (a) Train-the-trainers whereby each country designates a training officer(s) who after being trained by the commission and would carry out training in his own country,
- (b) Annual training programme(s) implemented by each country in topics appropriate to the country's needs.
- (c) A regional training workshop held bi-annually on Desert Locust Survey and Control.
- (d) Training in specialized topics as required (e.g. forecasting, collecting and assessing data, remote sensing, control methods etc.)

To implement the above mentioned programme, the Committee recommended holding an advisory group to be funded by trust fund 9409 to undertake a detailed study on the implementation of the training programme. The delegates of Egypt, Sudan and Yemen were designated to prepare the terms of reference of this group. The study will be presented to the twentieth session of the Commission through its Executive Committee.

The Committee recommended holding a regional workshop during 1994, on desert locust survey and control. The Committee authorized the secretariat, along with the Organization, to set the workshop programme and determine its place and date. The Committee called on the Commission to request FAO to identify a source for funding the workshop and to call on member countries to express their opinion concerning priorities that will be covered by the workshop.

5. Research

The Committee reviewed and discussed the working paper presented by the Secretariat. They concluded that there are various locust research activities in the region focusing on testing the efficiency of insecticides, pheromones, antifeedants, pathogens and ecological aspects however, the results of this research have not yet been implemented in the field and such research activities in the region are not sufficiently supported and inadequately coordinated within the Region.

The Committee emphasised the importance of research that focuses on development of control agents that are:

- safe to the environment;
- selective and efficient for desert locust;
- cost-effective.

The Commission noted that the international workshop on desert locust research and planning held by FAO in May 1993 in Marrakesh, Morocco has the following research priority areas:

- Improvement of the Desert Locust reporting and forecasting system and desert locust remote sensing.

-
- Development of alternative control methods based on the use of pathogens, behavior-modifying chemicals or the interference of phase changes.
 - Testing of safe and more environmentally accepted pesticides (e.g. chitin synthesis inhibitors) and the development of efficient application methods.
 - Assuming that the aim of research is defining key aspects of locust biology which form the basis for the development of improved control methods.

In order to achieve improvement in desert locust research in the Near East Region, the committee recommended the following:

1. To involve the Commission for Controlling Desert Locust in the Near East in supporting some research proposals in the region.
2. The Commission should establish a research coordination mechanism within the region and prepare regional research proposals to be funded through donor agencies and international organizations.
3. Consider the possibility of establishing a regional research center within the region.
4. Prepare a directory of published research on Desert Locust in the Region.

The Committee recommended that donors and the Scientific Advisory Committee follow the recommendations of DLCC concerning the undertaking of research in locust affected regions and involving countries concerned with Desert Locust control in implementation of these programmes and projects whilst insuring coordination with the Commission.

6. Annual accounts for 1991-1992 and Programme of Works and Budget for 1993-1994

The Committee approved the statement of expenditures for 1991-1992 and the programme of work for 1993-1994 (Annex 2). On discussing the Trust Fund 9409 (contributions as of August 13, 1993), the Committee expressed its deep concern on the accumulation of arrears in contributions of a few member countries, a matter that affects negatively the activities of the Commission. The Committee recommended that the Commission urge these countries to pay their contributions promptly.

The representative of FAO informed the participants that Lebanon paid all the outstanding contributions to the Trust Fund 9409 to the end of 1992.

7. Preventive Control in Central Region

The Secretariat presented a working paper on preventive control and pointed out that the Commission, at its Eighteenth Session, recommended that – "Programmes of preventive control in the central Region should follow the model of the western area with each of the member countries implementing the same procedure, particularly locust survey and preventive control measures. FAO should provide the countries with more data and information and the Commission should participate in the development of this project."

The overall objective in the project will be to minimize the risk of Desert Locust upsurges in the Central Region through coordination and advancement of ground and aerial survey and control capabilities and enhancement of information exchange.

The geographical definition of the central region would include Egypt, Saudi Arabia, Yemen, Sudan, Oman, UAE, Eritrea, Ethiopia, Djibouti and Somalia. The Committee was advised that FAO is preparing various options for consideration, prior to finalisation, of a project document of preventive control in the Region.

The Committee was also informed that several donors expressed, in principle, interest in a medium- to longer-term project for control of Desert Locust in the Central Region and have indicated that a proportion of any project funding should come from within the Region itself.

The Committee expressed interest in this programme that would ultimately minimize the risk of Desert Locust upsurges and further reduce the high expenses incurred by locust-affected countries. Furthermore, such programmes would save enormous funds expended by donors and would effectively contribute to the preservation of the environment and in strengthening coordination among the countries of the Region.

The Committee recommended that the preventative control programs should give consideration to the following:

- Contributing regularly to the survey and control operations in the region;
- Include an administration and technical structure;
- Be sustainable;
- Take into consideration the coordination between the Desert Locust Control Organization in East Africa and the Desert Locust Control Commission in the Near East;
- Provide modern technology in locust survey and control;
- Develop forecast methods;
- Include the means to improve and develop information exchange;
- Acquire necessary funds and allow decision making during emergencies;
- Should never substitute national programmes.

The Committee firmly believes that such a programme required close cooperation and coordination in providing favorable conditions for joint operations.

The Committee approved the contribution of the concerned countries by their available facilities in the project. However, the financial contributions of some countries will be discussed after receiving and reviewing the project document. To insure effectivity of preventive control programs, the Committee stressed the importance of undertaking similar projects in the western and eastern regions.

8. Any Other Business

(a) Agreement for the Establishment of the Commission

The Committee, in light of the presentation made by the Secretariat, discussed introducing amendments to the agreement for the establishment of the Commission, in particular:

- 1) Defining the Near East Region to cover, other than territories of the member countries, Ethiopia, Somalia, Eritrea and Djibouti.
- 2) Adding a new article to deal with required measures in special emergencies. This article reads as follows:
"When situations provided for in paragraph 1 (d) of Article IV require urgent action during intervals between sessions of the Commission, the Chairman may propose required measures to the Commission's Members by correspondence or by other rapid means of communication for the purpose of a postal vote".
- 3) Transmitting information to the Locust and other Migratory Pest Groups' in FAO headquarters in Rome instead of the Desert Locust Information Service in London which is no longer in operation.

The Committee approved points 2 and 3. Concerning point 1, the committee felt the importance of granting the above mentioned countries in upsurge areas, membership to the commission. Furthermore the committee referred to

the necessity of ascertaining the interest of these countries through FAO and the Secretariat.

Due to the necessity of including an "Amendment of the Agreement" in the Commission Agenda and notifying member countries 120 days before conveying the session, the Committee recommends including "Amendment of the Agreement" as an agenda item in the Twentieth Session of the Commission.

(b) Reporting and Information Exchange

Out of the importance of presenting timely reports and exchanging information on the desert locust situation and to implement prompt control measures in the region and in other regions, the Committee approved a report form on Desert Locust survey and control (Annex 3) and recommended that the commission request member countries to utilize this form and return it to the Secretariat with a copy to the FAO headquarters immediately after survey and control operations.

(c) Reserves of Pesticide

The Committee reviewed the working paper prepared by the Secretariat on this issue and approved allocating \$100,000 from Trust Fund 9409 from outside the annual budget, to purchase desert locust control equipment such as insecticides and other supplies, to aid, during desert locust invasion, member countries that lack the required resources for control till they receive foreign assistance through FAO and/or bilateral agreements. The Committee recommended that the Commission authorizes its Chairman and Vice Chairman and the Chairman and Vice Chairman of the Executive Committee to permit such expenditure. This authorization is to be renewed in every session.

(d) Potential Expertise in the Region

The Committee approved the preparation of a directory of personnel qualified in Desert Locust survey and control in the region, with the condition that such personnel possess good academic qualifications or has accredited field experience. Furthermore, the Committee recommended that the countries submit to the Secretariat, names of their specialists along with their C.V.'s and published publications. This directory aims at surveying the availability of qualified personnel within the region and involving them, whenever possible, in the commission activities.

(e) Publications and Manuals

The Committee stressed the importance of publications and manuals on desert locust. The Committee noted that since the commissions' establishment, no publications in this domain were issued. The Committee unanimously agreed that such manuals should be written in Arabic and originated from the conditions of the Region to address all levels of employees in the field of desert locust survey and control.

The Committee also emphasised the importance of producing documentary films and audio-visual aids on Desert Locust control in the Region. The Committee believes that this kind of activity will promote fields of training and education. The Committee recommended that member countries submit topics to be included in such publications and manuals to the Secretariat to enable to select or execute what is appropriate.

(f) Report of the Locust Control Technical Group

The Committee reviewed the report of the second meeting of the Desert Locust

Control Committee held in Rome, from 13 to 17 September, 1993 and approved all recommendations.

(g) Commission By-Law

The Committee pointed out that, in spite of the elapse of 25 years since the inception of the Commission, the by-law have not been enacted yet. The Committee recommended that the Commission calls on the Secretariat in cooperation with FAO, to help in preparing a draft by-law.

9. Date and Place of the Next Session

The Committee suggested that its coming meeting precedes the twentieth session of the Commission for Controlling Desert Locust in the Near East, in a place determined by the Commission.

10. Adoption of the Report

The Commission unanimously adopted the report.

**Participants in the Nineteenth Session
of the Executive Committee of the
Commission for Controlling Desert Locust
in the Near East**

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International Trust Fund 9409: Contributions and Expenditures

Budget for 1988-1992 and 1993-1997

1. The 13th Session of the Commission, 16-18 May, 1993, approved the budget for the five-year period 1983-87. The Budget (shown in section A), is reviewed at the annual sessions of the Commission. Savings under any of the expenditure headings can be utilized to meet shortages under any other heading and similarly, unspent surpluses at the end of any one calendar year are available to supplement allocations under the same heading or any other heading as may be required. The 16th Session of the Commission held in Doha in 1989 approved the budget proposed for 1988-92. The budget proposed for the next five years (1993-97) is indicated in section A (no changes have occurred).

Statement of Accounts for 1991 and 1992 and Budget Estimates for 1993

2. A statement of expenditures for the year 1991 and 1992 is shown in section B, and a breakdown of these expenditures is given in section C. A cost estimate for activities already undertaken for 1993 is also provided in section C.

3. At the 17th Session of the Commission a negative balance of US\$ 72,310 was reported. Consequently, during 1990 and 1991 the activities and related expenditures were kept to a minimum to avoid over-expenditure against the cash availability of the trust fund. At the end of 1990 a positive balance of US\$ 37,025 was available. During 1991 the contributions paid amounted to US\$ 253,112 (including interest) which led to a positive balance of US\$ 229,384 at the end of 1991. To this balance the contributions plus interest in 1992 are to be added leading to a cash balance of US\$ 419,203 at the beginning of 1992. Taking into account expenditures of 1992 of US\$ 90,258, the cash balance at the end of 1992 was US\$ 328,945. The budget for 1993 is therefore largely covered by the cash availability under this trust fund.

Contributions

4. The status of contributions as at 31 May, 1993, is shown in section D. The present scale of contributions is shown in section E.

Annual Budget for Five Years 1993-1997

Receipts	US\$
Yearly contributions of Governments	250,000
Cash Expenditure	
PERSONNEL SERVICE (Short-term specialists, local assistance)	50,000
TRAVEL (Delegates, teams, consultants)	20,000
CONTRACTUAL SERVICES (Printing reports)	15,000
SUPPLIES AND MATERIALS (For field surveys, POL, vehicle maintenance)	20,000
EQUIPMENT	60,000
TRAINING (Group training)	40,000
GENERAL OPERATING EXPENSES	20,000
PROJECT SERVICING COSTS (5% on supplies and equipment, 13% on other items)	22,850
RESERVE	2,150
Grand Total	<u>250,000</u>

Subject to the total commitment at any given time, not exceeding the total contribution pledged at that time, the Director-General shall have discretionary power to vary the allocations between one expenditure heading and another as may be necessary to meet the changing locust situation. All such variations shall be reported and justified when submitting annual accounts to the Commission.

International Trust Fund 4909
Statement of Account (in US\$)

RECEIPTS	Expenditure 1991	Expenditure 1992	Estimate 1993
Balance put forward	37,025	229,381***	328,945
Contributions	252,112	189,822	75,779****
	<u>289,137*</u>	<u>419,203</u>	<u>404,724</u>
EXPENDITURE			
1100 Personnel	-	-	-
1300 Admin supp pres	-	393	-
2000 Duty Travel	6,400	5,732	1,971
3000 Contracts	-	-	-
4000 Gen op exp	691	21,914	8,100
5000 Exp equip	325	365	353
6000 Non exp equip	-	58,195	(2,595)
8000 Fellowships and travel	45,487	(2,579)**	-
9000 Proj serv cost	6,850	6,238	1,018
TOTAL EXPENDITURE	<u>59,753</u>	<u>90,258</u>	<u>8,847</u>
NON-ALLOCATED BALANCE	229,384	328,945	395,877

* Including interest

** Reimbursement to the Trust Fund

*** Due to rounding up cash recorded officially by TF US\$ 229,381 as of 1/192 and US\$ 229,348 at the end of 1991

***** Including interest for '93 up to 31/8/93.

***** Representing expenditures and outstanding financial commitments.

**INTERNATIONAL COMMISSION FOR CONTROLLING THE DESERT
LOCUST IN THE NEAR EAST**

	EXPENDITURES 1991	EXPENDITURES * 1992
1300 Admin support		393
1400 Delegates travel Cairo May '92 Travel Chairman 18th Session N/E Travel Mr. Sander Micronair Lebanon	6,484 ** (84)	6,042 561 (3,657)
Total	6,400	5,732
4000 GENERAL OPERATING EXPENSES		
1 ICOM radio mobile/Jordan		2,144
1 ICOM radio mobile/Egypt unspecified	691	2,019 232
Gen op exp 18th Session		2,610
Hospitality 18th Session		711
Printing cost+translation report 18th session		14,198
TOTAL	691	21,914
5000 EXPENDABLE EQUIPMENT BOOKS	325	365
6000 NON-EXP EQUIPMENT		
1 Toyota Stat. Wagon- Jordan		19,000
1 Toyota Hi-Lux Pick-up- Egypt		16,200
3 Micronair sprayers- Egypt		22,995
TOTAL		58,195
8000 FELLOWSHIPS & TRAINING		
Reimbursement to No 9409 8 participants training course Switzerland	45,487	(2,579)
9100 PROJECT SERVICING COST	6,850	6,238
GRAND TOTAL	59,753	90,258 *

* Expenditures plus outstanding financial commitments

** Cairo meeting June 90, 17th Session and FAO HQ travel

**International Commission for Controlling
Desert Locust in the Near East**

Trust Fund No: 9409

		EXPENDITURE 1993
2000	DUTY TRAVEL	
	Reimbursement of travel expenses to TF 9409	(3,929)
	Travel 4 delegates (S. Arabia, Yemen Qatar and Jordan) to 19th Session, Cairo October, 1993	5,900
		<hr/> 1,971
2000	GENERAL OPERATING EXPENSES	
	Publication costs	1,800
	Invitation letter	1,300
	Operating expenses 19th session, Cairo, October 1993	5,000
		<hr/> 8,100
5000	EXPENDABLE EQUIPMENT/BOOKS	353
6000	NON-EXPENDABLE EQUIPMENT	
	Reimbursement to TF 9409	(2,595)
		<hr/> (2,595)
9100	PROJECT SERVICING COST	,018
GRAND TOTAL		<hr/> 8,847 <hr/>

**Inter-Regional Commission for Controlling
Desert Locust in the Near East**

Trust Fund No: 9409.00 - MTF/INT/007/MUL

Status of Contribution as at 31 August 1993
(expressed in US\$)

Member Governments	Outstanding 31/12/1992	Contribution due for 1993	Received in 1993 up to 31/08/1993	Outstanding 31/8/1993
Bahrain	26,250.00	8,750.00	26,250.00	8,750.00
Egypt	0.00	32,540.00	0.00	32,540.00
Iraq ****	287,500.00	28,750.00	0.00	316,250.00
Jordan	56,887.00	14,357.50	0.00	71,245.00
Kuwait	25,000.00	25,000.00	0.00	50,000.00
Lebanon	114,240.01	11,212.50	0.00	125,452.00
Oman	58,000.00	10,000.00	0.00	68,000.00
Qatar	112,500.00	12,500.00	0.00	125,000.00
Saudi Arabia	44,035.00	44,035.00	44,035.00	44,035.00
Sudan	271,928.54	18,667.50	0.00	290,596.04
Syria	213,600.00	16,687.50	0.00	230,287.50
United Arab Emirates	0.00	26,250.00	0.00	26,250.00
Yemen Arab Republic	8.63	800.00	0.00	808.63
Yemen, P.D.R. of	1,800.00	450.00	0.00	2,250.00
total	1,211,749.68	250,000.00	70,285.00	1,391,464.68

**** Unable to pay since their assets are frozen
(cab from Abdilleh, Baghdad of 18/11/1992)

**** Fiscal year begins in July

**Scale of Government Contributions of the International
Commission for Controlling the
Desert Locust in the Near East**

Trust Fund No: 9409

COUNTRY	SCALE (US\$)
Bahrain	8,750.00
Egypt	32,540.00
Iraq	28,750.00
Jordan	14,357.00
Kuwait	25,000.00
Lebanon	11,212.50
Oman	10,000.00
Qatar	12,500.00
Saudi Arabia	44,035.00
Sudan	18,667.00
Syria	16,687.50
United Arab Emirates	26,250.00
Yemen	1,250.00
	<hr/>
	250,000.00
	<hr/>



COUNTRY: _____

SURVEYED AREA					
STOP & DATE OF SURVEY	survey stop number				
	date of stop				
	name of stop				
	latitude / longitude				
	area (ha)				
INFESTATION	locusts present				
	locusts absent				
FORM	solitary				
	transient				
	gregarious				
BEHAVIOUR	copulating				
	laying				
	roosting				
	flying				
AGE	early instar (1-3)				
	late instar (4-5)				
	fledgling				
	immature adult				
	mature adult				
DENSITY	hoppers / bush or sq. in				
	adults / _____ m foot transect				
	gregarious (low, medium, high)				
ENVIRONMENTAL & ECOLOGICAL CONDITIONS	date of last rain				
	amount (light, moderate, heavy)				
	Vegetation (dense, light, drying, dry)				
	soil moisture (moist, dry)				
CONTROL	pesticide name				
	pesticide formulation				
	quantity used (l)				
	area treated (ha)				
	application method (ground, air)				

Prepared by: _____ Title: _____ date: _____

