

REPORT OF THE

Held in Rome
7-11 September 1981

**TWELFTH SESSION OF THE COMMISSION
FOR CONTROLLING THE DESERT LOCUST
IN THE NEAR EAST**



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Meeting Report No.
AGP:1981/M/5

REPORT OF
THE TWELFTH SESSION OF THE COMMISSION
FOR CONTROLLING THE DESERT LOCUST
IN THE NEAR EAST

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Rome (Italy)
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Plant Production and Protection Division
Food and Agriculture Organization of the United Nations
Rome 1981

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INTRODUCTION

The Commission for Controlling the Desert Locust in the Near East held its Twelfth Session in Rome from 7 to 11 September 1981. The Director-General invited the following member States of the Commission to attend this session: Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Kingdom of Saudi Arabia, Sudan, Syria, United Arab Emirates, Yemen Arab Republic and the People's Democratic Republic of Yemen. He also invited Turkey, the League of Arab States, the Arab Organization for Agricultural Development, the Palestine Liberation Organization and the Desert Locust Control Organization for Eastern Africa to attend as observers.

The session was opened by Mr. Salah Jum'a, FAO Regional Representative, on behalf of Mr. Edouard Saouma, Director-General. He welcomed the participants and appreciated the survey and control operations undertaken by member countries in cooperation with regional control organizations and FAO technicals units, thus largely contributing to the continuation of the present recession of the Desert Locust and confirming the importance of strengthening the cooperation and exchange of information between the Members of the Commission, the necessity of modernizing technical equipment, training staff of various levels and pursuing locust research.

The Regional Representative wished every success to the participants, whose recommendations will certainly receive the fullest consideration of the Director-General of FAO.

The session was preceded by a meeting of the Executive Committee on the morning of 7 September 1981 during which it was decided to merge the Agenda of the Commission and that of the Executive Committee in a single Agenda. The Executive Committee continued its meeting during the Session of the Commission in order to submit its recommendations progressively. This measure was undertaken to save both time and effort, to avoid repetition and to achieve better concentration of discussions.

Officers of the Session

Chairman: Dr. A.M. Karrar (Sudan)

Vice-Chairman: Mr. Nasser El Muafa (Yemen Arab Republic)

Drafting Committee

Delegates of Jordan, Kuwait, Saudi Arabia and Yemen Arab Republic. Messrs. R. Skaf, A. Khasawneh, M. Shafi and J.T. Awad acted as technical secretaries.

Obituary

The delegates expressed their deep regret at the passing away of Mr. Ahmed Ali Shaqra (Auhali) of PDR Yemen, who was a pioneer of locust control in Yemen and started the first surveys in the southern parts of the Arabian Peninsula. He was known for his devotion to work, his permanent dynamism and distinguished human qualities.

Acknowledgements

The Chairman welcomed the two locust officers recently appointed by FAO in the region: Mr. Joseph Tawfik Awad in the Yemen Arab Republic starting from 1 July 1981 and Mr. Hani Haddadin in the United Arab Emirates from 26 September 1981. Participants expressed their appreciation to the Chairman for conducting the session in an efficient manner and their appreciation of the assistance provided by the Secretariat. They also thanked the Organization for holding the session at its Headquarters and the facilities provided for the meeting.

PARTICIPANTS

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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 Desert Locust Situation 1980-1981
 - (i) Significant developments in 1980-81 and forecast.
 - (ii) Arrangements to strengthen locust survey and control activities to maintain recession
6. Special surveys carried out in strategic areas during 1981 and future plans
7. Implementation of the previous Session's recommendations
8. Anti-locust survey and control potential available in member countries of the Commission and steps to strengthen it
9. Training and research
 - (i) training
 - (ii) research activities in the region
 - (iii) research activities in other regions
 - (iv) application of remote sensing in locust survey and research
 - (v) meteorology
10. Assistance to member countries of the Commission
11. Programme of work and budget for 1981 and accounts for 1980
12. New scale of contributions
13. Establishment of an aerial unit in the region
14. Organization of future sessions of the Commission and organization of meetings of the Executive Committee
15. Any other business
16. Date and place of next session
17. Adoption of the report.

SUMMARY OF DISCUSSIONS

The Desert Locust situation 1980-81

1. The Commission received a report on the locust situation in the region from the Secretariat.

Saudi Arabia

2. The Kingdom of Saudi Arabia was free from any locust breeding during October, November and December 1980. Only a few maturing solitarious locusts at densities of 100 to 150 per hectare were reported in the Rabigh area (1148N/3902E) during November. Meanwhile, during November, maturing adults at the rate of 150 adults per hectare were reported near Jeddah airport (213Q/3912E). Further, on 20 November maturing adults were reported in Yanbu in a valley (241N/3826E) over 36 km²; Yanbu received rain during this period. In the southern part of Tihama solitarious locusts were reported at Shagqah Shamiyah near Qunfidah at a density of 100 adults per hectare. During December a few solitarious desert locusts were reported at various localities in Qunfidah area, three locusts were reported at Doga (194Q/4057E) and other five solitarious were found east of Qunfidah and more than 12 locusts were also reported at another locality east of Qunfidah. South of Qunfidah about 150 solitary adults per hectare were reported; the whole Tihama received rain during December.
3. In January 1981, solitarious locusts persisted in the Qunfidah area, but the population during that period was quite low. Ecological conditions improved and the vegetation flourished. During this month extensive survey operations by Saudi teams were made to both southern and northern Tihama and the whole area of northern Tihama was found free from locust activity except for a few solitarious hoppers which were found near Yanbu on cultivated plants under suitable ecological conditions.
4. Locust activity was observed during the month of February, when three swarms of 6 km² each entered the country from the west and landed near the shore of Umm Lejj. These swarms were mature and started pairing, and laid their eggs east of Umm Lejj in Semina (251Q/3715E) and Murran (253Q/3736E). During February a convergence zone existed over the Red Sea and these swarms were carried by southerly wind. Rainfall was reported earlier in that area where green vegetation and other ecological conditions were suitable. Control operations were immediately undertaken. During February, solitarious locusts at low density persisted in the Qunfidah area and the maximum densities were estimated at 70 adults per hectare.
5. During March another three small swarms of 3 km² each were reported entering the country in the same Umm Lejj area. These swarms were mature, pairing and laying their eggs. During the second week of March hoppers started emerging. These were the progeny of the first swarms which reached Umm Lejj on 25 February. By the end of March the total infested area around Umm Lejj was about 700 km². Control operations continued during this month against adults and hoppers. Chemicals used were dieldrin 20% ULV, malathion 96% ULV and BEC dust.
6. During April, the infested areas increased and were estimated at 900 km², and because egg fields were located in time control operations were immediately applied. During the month about 4 867 hopper bands at different stages, of about 100 m² each, were successfully controlled. Solitarious locusts persisted during this period in Jizzan, Yanbu and Qunfidah areas but at low densities.
7. The Umm Lejj area was free from locust activity during May due to successful control operations. On 20 May locust activity was reported to the south of Al ULA at a village called Judaida (2603N/3809E) on cultivated plants over an area of 25 km² at a density of 4 000 adults per hectare. Control measures were undertaken using malathion 96% ULV because all locusts were on cultivated plants. In late May locust activity was reported in the

Hail area at Shamli (265QN/401OE) in a lava belt over an area of 100 km² at a density of 600 solitarious adults per hectare. Hoppers in the fifth instar and fledglings were also reported in this area at a density of 3 hoppers per bush over an area of 4 km². Control operations were undertaken using dieldrin 20% ULV, malathion 96% ULV and BHC dust.

8. During June, locust control was successfully concluded in Hail area, and no locust activity was reported there subsequently. A few solitarious locusts were reported during June and July south-east of Jizan.

Yemens

9. The locust situation was quite calm in both Yemens during October and November 1980. However, a very few solitarious adults were reported in the wadi Hyran area, north of Hodeidah. In the PDR of Yemen only three solitarious locusts were found at Uzafa (1239N/4401E).

10. During January 1981 a few solitarious adults persisted north of Hodediah in the wadi Hyran area. In the PDR of Yemen low density adults were reported at Am-Surayh (1235N/4413E) and wadi Al-Fajarah (1259N/4418E). During this period coastal areas of the Yemen received rain and ecological conditions were suitable for breeding. In February two solitarious locust adults were reported at wadi Siham (1443N/4305E). In PDR of Yemen 13 solitarious adults per hectare were reported at Dar-as-Assyallah (1253N/4411E). No locust activity was reported in both Yemens during March or April 1981. During May high solitarious adult populations were observed in Al-Lajafah (145QN/463OE) of PDR of Yemen in wadi Markhah. During June and July the situation continued to be calm in Yemen AR, but solitarious persisted in wadi Markhah in PDR of Yemen.

Egypt

11. In Egypt desert locust adults were reported during October and November in the south-eastern desert in Abu-Simbel, Abu-Hamad and wadi Daieb areas close to the Sudan border. Solitarious locusts persisted during December 1980 at Abraq (2324N/3447E) and wadi Daieb (221QN/360OE at a density of 7 adults per km² over 50 km².

12. In January 1981 mature adults were reported at wadi Daieb (along with patches of solitarious hoppers). Ecological conditions were reported at that time to favour breeding and development. In February and March joint surveys by Egyptian and Sudanese teams were conducted on the borders, the areas surveyed were Elba mountain, wadi Daieb and Halaib areas but no locust activity could be traced during survey operations. Also Egyptian teams surveyed New Valley, Abu Simbel to Aswan but no locust activity was reported. Surveys were undertaken by Egyptian aircraft. Egypt watched carefully the south-eastern desert until June but no locust activity was reported up till the end of July.

Sudan

13. In Sudan mature adults and groups of hoppers and fledglings in large numbers were reported in Tokar delta on the Red Sea coast on 12 November 1980. The area had received rain in early October and November, and ecological conditions were suitable for breeding. Control operations started from November onward against all stages of the desert locust, and continued during December and January 1981. During January 1981 two mature swarms of about 55 km² were seen in the Tokar delta. Hopper bands in the second, third and fourth instars measuring over 6 000 m² were also reported and controlled in the Tokar delta.

14. During February-March control operations continued against swarms at Khor-Safiah (2147N/3612E) over 8 200 hectares in Shalalvalley (222QN/3638E) over 800 hectares and another red swarm of 8 km² in Ahallak on the Red Sea (2207N/3637E). Red locusts of high densities were controlled on the Red Sea coast north of the Tokar delta over an area of 1 915 hectares. The total infested area controlled was 29 574 hectares using 2 790 gallons of fenitrothion. In April ecological conditions started to change. Vegetation dripped up and after April no locust activity was reported on coast.

15. In May, June and July a few solitarious locusts were reported on the west bank of the Atbara river of Nile province. Total area controlled during 1980/81 campaign in Sudan: 13 940 ha by ground equipment
30 000 ha by aerial spraying.

Eastern part of the Arabian Peninsula

16. Oman, United Arab Emirates, Qatar, Bahrain and Kuwait remained free from October 1980 to September 1981.

Other Regions

17. The delegate of DLCO-EA presented a report on the locust situation in Eastern Africa; the region was free from locust concentrations and heavy rains fell in the North-West of the Somali Republic when low density populations of desert locusts were observed in July and August.

18. Scattered locusts observed by a ship in the Gulf of Aden during July were later determined as Anacridium sp. A ship also reported a locust swarm on 5 August in the sea 30 miles south of Mukalla but its identity and destination remained unknown. Locust control teams did not find any trace of it.

19. India and Pakistan remained free from major locust activity. Heavy rain occurred in desert regions.

20. Locust swarms escaped from control in north Mali and Niger in October and November 1980 and moved to central Algeria where control started. Breeding occurred in February and March 1981 and control was undertaken over 4 000 ha. Locust populations left the area for Mali where control operations are currently being undertaken against hoppers in north-west Adrar des Iforas (Mali).

Forecast for 1981/82

21. Breeding will continue in Mali and Niger until November 1981 but no significant numbers of locusts are likely to arrive from west and north-west Africa before May 1982. Breeding is likely to occur in areas in India which have received rain; any escapes may move west to the Arabian Peninsula during October and November. Locust activity may start in the winter breeding zones of the Red Sea coasts of Sudan and the Arabian Peninsula during the following months.

Summary of control operations undertaken in the region

22. Control operations during 1980/81 were restricted to Saudi Arabia and Sudan.

	Control		Insecticides used (in tons)				
	Hoppers (bands)	Swarms	Malathion	Dieldrin	Fenitrothion	BHC dust	BHC baits
Saudi Arabia (over 900 km ²)	5 000	6	7	6	2	4	-
Sudan (over 44 000 ha)	6 780	4			2 834 (gallons)	207	296

Arrangements to strengthen locust survey and control activities to maintain the recession

23. Taking into consideration the frequency of desert locust upsurges in the region, mainly in those countries bordering the Red Sea, the Commission reiterated its recommendations made at previous sessions concerning the continuation of locust surveys, the control of any concentrations as soon as they are formed and maintaining the exchange of reports and information between Member Countries, FAO and regional and international organizations concerned.

Special surveys carried out in 1980/81 and future plans

24. Both Egypt and Sudan undertook specific ground and aerial surveys in border zones of strategic importance for locust development.

25. The Commission was of the opinion that the locust control potential available in Member Countries permits them to carry out survey operations successfully. Consequently it does not see the need to undertake special surveys at the Commission's expense. This also applies to the eastern part of the Arabian Peninsula due to the establishment of a special locust unit in the United Arab Emirates, with the assistance of the FAO locust expert whose responsibilities cover Oman and Qatar.

Implementation of the previous session's recommendations

26. In accordance with paragraph 23 of the report of the 11th session, the Government of the United Arab Emirates has approved the establishment of an FAO locust expert post as requested by the Commission and the Government will study the financing of the project in the future. FAO has already appointed an expert who will soon join his duty station.

27. In accordance with paragraph 24 of the same report, both Egypt and Sudan carried out survey operations on their adjoining border areas which are considered to be strategic for locust development. Locust units of both countries cooperated closely during these successful operations.

28. In conformity with paragraph 28 of the report, FAO has requested the PDR of Yemen to take over the responsibility of meeting operational costs in the future; however, the Government has asked FAO to maintain this assistance during the coming year only in order to enable the Government to include this item in its future plan.

29. As mentioned in paragraph 29, UNDP agreed to extend the sub-regional project (Hodeidah - Aden) until 31 December 1981. Both Governments have already included a locust project in their respective UNDP IPF in the 1982-86 cycle, for a period of three years. It is expected that UNDP will approve both projects.

30. In accordance with paragraph 30, FAO contacted member countries whose contributions are in arrears; some countries have already responded and settled their payments. Egypt, Saudi Arabia, Kuwait, Jordan, Yemen Arab Republic and Iraq have agreed to the proposed increment in annual contributions. FAO has also assisted Dokki station in cash and kind amounting to a total of US \$15 000.

31. As requested in paragraph 34, a regional training course was held in Sana'a and Hodeidah for 18 days during April 1981.

32. FAO provided some governments with films and slides for training purposes in accordance with paragraph 35 of the report.

Anti-locust survey and control potential available in the Member Countries of the Commission

33. Appendix I gives the situation of total potential available at present in the Member Countries of the Commission.
34. The Commission was informed about the PDR of Yemen's decision to constitute a special locust control section within the Plant Protection project run by the Department of Research and Agricultural Extension. Related implementary action was in progress.
35. The Commission was informed about the strengthening of locust control potential in Saudi Arabia, including the construction of two new insecticide stores of 30 000 tons capacity each, the purchase of new vehicles, the appointment of additional recently graduated technicians and the allocation of funds for the purchase of pesticides as necessity requires.
36. The delegate of Yemen Arab Republic expressed the need of his country to build an adequate new insecticide store in Hodeidah within the locust compound situated 16 km from the town and covering 2.5 ha. The costs were estimated at US \$ 1 million. The Commission recommended that FAO evaluate the insecticide store construction project as far as its location, capacity and costs are concerned and assist the Yemen Arab Republic Government in obtaining the funds necessary for implementation.
37. The Commission requested FAO to undertake at the expense of the Commission's Trust Fund a comprehensive study in order to assess the need of establishing strategic stores in the region for emergency purposes provided Member Countries undertake the responsibility of meeting the costs of construction, maintenance and administration of these stores.

Training, fellowships and exchange visits

38. The document prepared by the Secretariat was reviewed; it showed the progress achieved as follows:

(i) Group training course

A regional group training course was held in Sana'a on 1 April 1981 for the countries of the region lying in the Arabian Peninsula. Invitations were sent to eight countries, but unfortunately only two countries were represented by two trainees each, besides 13 trainees from the host country. The course dealt with locust control and radio communications and was concluded on 17 April. The syllabus included lectures on the desert locust and radio communications, practical and field work in Sana'a, Taif and Hodeidah. The course was successful and expenses did not exceed US \$17 500 representing DSA for instructors and trainees and operational expenses. Training was provided by the FAO Regional Locust Officer, Jeddah, the FAO Radio Communications Consultant and the FAO Locust Officer, Aden.

(ii) Short-term training courses

- Mr. M. Harb from Egypt concluded a four-month training course in India where he conducted toxicological research work at the Plant Protection Institute in New Delhi.

- Mr. S.A. El Ghamdi from Saudi Arabia concluded a three-month training course on aerial spraying techniques in Sudan. Mr. Ghamdi reported that he had gained good experience, as he was able to visit northern, southern and western parts of Sudan where aerial spraying activities were taking place.

- Mr. M. Shahari from Yemen Arab Republic attended an English language training course in London, but he could not join Riyadh University for an M.Sc. degree.

- Mr. Y. Ashour from Saudi Arabia followed a training course in London on pest management for three months (1 May to 31 July 1981).

- Mr. A. Arafa and Mr. A. Bazwibir (Saudi Arabia) did not attend the one-month training course in India.

- Mr. Ali Omar (PDR of Yemen) did not attend the one-month training course in India for personal considerations.

(iii) Fellowships

Mr. F. Bahkim (PDR of Yemen) was pursuing his studies for a Ph.D. degree at Khartoum University.

(iv) Exchange visits

Dr. M.S. El Garhi (Egypt), who was granted an exchange visit to India, Pakistan and Ethiopia, started his tour on 1 September 1981.

Future training

39. Egypt nominated Mr. Mamdouh Ibrahim for one year's training in UK to carry out research work. The Commission reiterated its previous Session's recommendation concerning the restriction of training to short-term fellowships, practical and group training courses on locust control and radio-communications.

40. The Commission regretted the low participation at the training course organized in the Yemen Arab Republic during 1981 and recommended that similar courses should continue to be run in the region, with the obligation for those selected to attend. The Committee took note of the invitation extended by Egypt to hold the next training course in this country during 1982.

41. Egypt nominated the following personnel for training courses abroad:

- Mr. Samir Samry, pilot and agricultural engineer for 5-6 months training on aerial spraying techniques.

- Mr. Shabata Bakry and Mr. Ali Shaheen for one month's training in Rome on reporting and forecasting.

- Mr. Mahmoud Harb for a one-month visit to COPR in London and a one-month visit to the Pasteur Institute in Paris, in order to become acquainted with their toxicological research.

42. Following a memorandum received from the Regional Locust Officer, Jeddah, Saudi Arabia requested three training fellowships on locust control and agricultural aviation, for a period of three months in Sudan or any other country to be decided by FAO.

43. The delegate of PDR of Yemen requested an increase in training fellowships for his staff, due to the lack of qualified personnel and to the Government decision to finance and establish the desert locust project starting in 1982.

44. The Commission recommended that FAO study training possibilities in various host countries and assess the relevant costs in order to plan training in various fields, and then approach Member Countries to submit nominations.

Research

Jeddah Research Station

45. Research at Jeddah station is concentrated mainly on the toxicological action of some chemicals as alternatives to dieldrin, BHC and other chlorinated hydro-carbons. Chemicals which are being tested are pyrethrins and their derivatives. This kind of work started in 1980 with the aim of determining the effectiveness of these chemicals against desert locust adults and other stages. Since these chemicals are comparatively safe for man and animals laboratory tests were undertaken to decide the lethal and sub-lethal doses for adult insects and all five hopper instars. The method used was topical application by using microapplicator. In the meantime vegetation at the station was sprayed with these chemicals and locusts were placed on this poisoned vegetation to determine the oral dosage. Similar tests will be applied in the field on a large scale. Although the results achieved up till now are promising, further research needs to be done to ascertain the final results.

Future plans

46. Jeddah research station will continue to be engaged in toxicological studies of some economical insecticides.

Dokki Research Station

47. In accordance with paragraph 19 of the report of the 11th Session of the Commission held in Amman in October 1980, FAO provided Dokki station with US \$ 15 000 for purchasing necessary equipment. Out of this amount US \$ 3 000 were paid in cash to provide cages locally for locust breeding. According to the programme of work for Dokki station which was provided by Dr. Gharhi, Director-General, the Commission gave first priority to the equipment necessary for the fulfilment of the research plan, according to the mentioned programme. The FAO Regional Locust Officer visited Cairo in late June 1981 and visited the station. The staff of the station briefed him on the progress made after receiving the \$ 3 000, which enabled them to construct a very big cage (35 x 22.5 x 2.5 m) in order to conduct research under semi-natural conditions; vegetation was planted under this cage for feeding locusts. In addition, cages of different sizes were prepared for future work which indicates that new developments are taking place at this station. As for the equipment and apparatus ordered for the station, purchase orders were made early this year but nothing has reached the station yet; it is expected that most of them will arrive before the end of this year.

48. Research programmes: The following research programme has been completed or is still underway:

- (a) The effects of some ecological factors on the external form of the desert locust. The effects of three ecological factors on morphometrics were selected for study (density of insects, temperature and type of vegetation).
- (b) The physiological effect of nematode parasites on the desert locust. High numbers of nematodes had a sizeable effect on amino-acid content in the blood of insects; amino-acids decreased as long as the parasites were available. Parasitic action also affected positively the enzymic activity of the insect.
- (c) Studies on predators.
- (d) Equipment and spraying machines to determine sizes of droplets carried by wind during aerial spraying.
- (e) Comparative studies of various insecticides in the field such as sumithion, DDT, lindane and dieldrin. Knapsack sprayers were used during these operations.

- (f) Studies on the efficacy of Solo knapsack sprayers.
- (g) Studies on the action of hormones on the desert locust in the following ways:
 - relation between the hormone, the growth and morphological changes of the insects;
 - effect of hormones on the metabolism of food, the respiratory system and the development of ovaries.
- (h) Toxicological studies of several insecticides.
 - effect of light spectrum colours on desert locust growth and development.

Most of the research mentioned is still underway.

Future plans

49. The following equipment was requested by research officers at Dokki station in order to implement the planned research programmes:

- (a) Potter tower
- (b) mini Potter homogenizer
- (c) spectrophotometer
- (d) spraying equipment.

Research in other regions

50. It was noted that research activities in other regions were limited. In West Africa, it is centred on the use of exhaust nozzle sprayers on various types of vehicles, the motorized knapsack sprayers with ULV insecticides, and the location of areas of concentration and gregarization. In northern Africa, studies deal with vegetation distribution, the location of areas of gregarization and the use of remote sensing in the survey of locusts.

51. The Commission recommended the following:

- the coordination of research in the region.
- the determination of priorities as agreed by the DLCC (Rome, November 1980).
- the evaluation of studies and research undertaken in the locust research stations existing in Member Countries; the Commission will have to lay down the broad lines of research activities to be carried out in the existing stations.
- to take advantage of research undertaken in other regions and implement similar activities in the Arabian Peninsula.
- to undertake operational research on the various modern spraying machines.
- to provide Dokki station with the equipment required for implementing the planned research programme, for an amount not to exceed \$ 5 000.
- that research stations submit a summary of the development of research activities supported by the Commission.

Application of remote sensing in locust survey and research

52. The Commission heard with interest the positive results of the use of remote sensing in locust survey in North-West Africa and South-West Asia. It was also informed about future plans of this project including the coverage of new regions including the Near East on the completion of the Nairobi receiving station for satellite data.

Meteorology

53. The Commission was informed about the project "Strengthening of the locust information Centre at FAO Headquarters, Rome" through the establishment of a meteorologist post financed by assistance from the Belgian Government. It recommended that advantage should be taken of this project to improve the national locust information systems.

Assistance to member countries of the Commission

54. Over the past decade the Commission provided the People's Democratic Republic of Yemen with US \$ 20 000 per annum to assist with the operational cost of the locust project. During its last Session (Amman, 1980) the Commission recommended (paragraph 28 of the report of the 11th Session) that the Government of the People's Democratic Republic of Yemen take over this responsibility in the future. Following a request by FAO in this respect, the Government agreed to assume responsibility for this after the 1981/82 period financed by FAO. The Commission recommended that the assistance requested for 1982 should be provided.

Programme of work and budget for 1981 (Appendix II) and accounts for 1980

55. The Committee studied the 1981 budget (Appendix III) and recommended its approval.

56. The Committee reviewed FAO statements and these included the balance of the Trust Fund at the middle of 1981 and recommended that such statement continue to be presented in the future.

Expenditure for the year ending 31 December 1980

57. A statement of expenditure for the year ending 31 December 1980 is shown in Appendix IV. The Committee approved it.

Contributions received and outstanding

58. Appendix V shows the annual scale of contributions to the Trust Fund 9409, i.e. the annual contributions of Member Countries and the position of arrears. The Committee expressed its appreciation of the fact that most countries were paying their contributions regularly and again requested other member Governments to settle their arrears.

New scale of contributions

59. The Committee was informed that several Governments have approved the proposed increment of scale of contributions: Egypt, Saudi Arabia, Kuwait, Jordan, Yemen Arab Republic and Iraq and that some of them have already settled their contributions for 1982 according to the proposed increment. The Commission recommended that all Member Countries implement this recommendation and that FAO contact the Governments concerned for this purpose.

Establishment of an aerial unit in the region

60. In accordance with recommendation 25 of the report of the Executive Committee (Amman, 1980) concerning the preparation of a detailed study on the creation of an aerial unit in the region to serve Member Countries in locust survey and control, FAO made a comprehensive study on the subject covering technical, economic and operational aspects, which showed the following:

- (a) An aerial unit covering the needs of the Arabian Peninsula in the field of locust survey and control requires a number of aircraft, support and maintenance, equipment and others costing not less than US \$ 1 million.
- (b) Running such a unit can only be economical if almost permanent operations were available for aircraft over the year. This is not the case in the Arabian Peninsula for the desert locust, unless other activities are covered. This would come beyond the Commission's terms of reference as the responsibilities of pest control operations lay directly on Member Countries.
- (c) Enough agricultural aerial units are now available in the region, i.e. in the United Arab Emirates, Sudan, Egypt, Syria and Iraq with several aircraft for pesticides spraying, apart from DLOC-EA to which one can appeal in the field of desert locust control.
- (d) The Commission was informed about the establishment of private aerial spraying companies in Saudi Arabia with highly qualified pilots which are available whenever necessity arises.

61. The Commission therefore recommended not to envisage the establishment of an aerial unit belonging to the Commission.

Organization of future sessions of the Commission and of the Executive Committee

62. The Commission reviewed the situation of sessions during the previous years concerning their frequency, the representation of Member Countries and programmes of work of both the Commission and the Executive Committee in accordance with the Convention establishing them. After discussion it was decided to keep the present status of the Commission.

63. The Commission requested FAO to translate the Convention establishing the Commission into Arabic and distribute it to Member Countries.

Election of Members and Chairman of the Executive Committee

64. The Commission unanimously elected Saudi Arabia, PDR of Yemen, Kuwait, Iraq and Sudan members of the Executive Committee for the year 1981/82. It also elected Saudi Arabia as Chairman of the Executive Committee for 1981/82 until the next ordinary session of the Commission.

Other business

65. The Commission took note of the importance of other locust species such as grasshoppers, the tree locust and the African Migratory Locust in the Yemen AR and Sudan and of the substantial damages caused to crops. It requested FAO to pay due attention to this problem and explore the possible assistance which could be given to Member countries within the Action Programme for Improved Plant Protection.

66. The Commission was of the opinion that the responsibility of controlling grasshoppers and locust species other than the desert locust lies on Member Countries, similarly with other local agricultural pests, and recommended that potentials for controlling the desert locust be maintained for emergency situations.

Date and place of next session

67. The Director-General of FAO will decide on the place and date of the Thirteenth Session of the Commission.

APPENDIX I

ANTI-LOCUST SURVEY AND CONTROL POTENTIAL AVAILABLE IN THE MEMBER

COUNTRIES OF THE COMMISSION

<u>Country</u>	<u>Insecticides (tons)</u>	<u>Equipment</u>	<u>Vehicles</u>	<u>Aircraft</u>	<u>Staff</u>
Bahrain	Malathion 96% ULV 8	Power dusters 2 Trailed sprayers 32	Light 8		General 16
Egypt	Dieldrin 20% 3 Fenitrothion 96% ULV 2 BHC 15% Gamma liquid 5 BHC dust 25% 16 BHC bait Gamma 250	Exhaust nozzle sprayers 5 Power sprayers 50 Power dusters 8 Hand dusters 40	Light 30 Medium 40 Heavy 8	Chartered	Tech. 90 General 300
Iraq	Malathion 96% ULV 6 Dieldrin 20% 2	Exhaust nozzle sprayers 20 Power sprayers 20 Knapsack 1 000	Light 50	Fixed wing 10	Tech. 50 General 100
Jordan	Dieldrin 20% 2.5	Exhaust nozzle sprayers 2 Power dusters 2 Hand dusters 40 Power sprayers 10	Light 8		Tech. 15 General 50
Kuwait	Dieldrin 20% 13 BHC dust 10% 59	Power sprayers 32 Power dusters 9 Hand dusters 15	Jeeps 3 Half trucks 7		Tech. 33 General 20
Lebanon	BHC solution 12 Others 5	Hand sprayers 14	Light 5	Helicopter 1	Tech. 22 General 20
Oman	Dieldrin 20% 1 Fenitrothion EC 5.5 BHC dust 10% 6	Exhaust nozzle sprayers 4 Power sprayers 50 Others 75	Light 4		Tech. 12 General 160
Qatar	Dieldrin 20% 4		Heavy 1		General 2
Saudi Arabia	Dieldrin 20% 150 Malathion 96% 75 Fenitrothion 96% 22.5 BHC dust 5% 200 Gammatox 25	Exhaust nozzle sprayers 80 Power dusters 142 Sprayers 80	Light 120 Medium 120 Lorries 15	Chartered	Tech. 120
Sudan	Dieldrin 20% 4200 gal. Fenitrot.96% 5300 gal. BHC dust 2.6% 150 Poisoned bait 4 300	Exhaust nozzle sprayers 20 Hand sprayers 700 Knapsack spray. 500 Dusters 40	Light 40 Heavy 50	Fixed wing 7	Tech. 15 General 70

Syria	Dieldrin 20%	4.2	Exhaust nozzle		Fixed wing 8		
	BHC dust 10%	400	sprayers	13			
	BHC solution	9.5	Power dusters	204			
	Aldrin	5	Hand dusters	230			
	DDVP	2.5	Hand sprayers	256			
United Arab Emirates	Dieldrin 20%	20	Exhaust nozzle		Light 10	Fixed wing 2	Tech. 4
	Malathion 96% and 57%	15	sprayers	15			General 15
			Power sprayers	10			
	BHC dust 10%	3					
	BHC solution	1					
	Others	3					
Yemen Arab Republic	Dieldrin 20%	58	Exhaust nozzle		Light 17		Tech. 3
	Fenitrothion 96% ULV	5	sprayers	35	Heavy 1		General 14
	BHC dust 25%	170	Sprayers	133			
	Dimethoate E.C 40%	80	Hand dusters	136			
			Power dusters	8			
PDR of Yemen	Dieldrin 20%	23	Exhaust nozzle		Light 16		Tech. 4
	Fenitrothion 96%	4	sprayers	22	Load carriers 2		General 11
	BHC dust 10%	88	Hand dusters	46			
	Acrodel 15%	9	Power dusters	8			

PROGRAMME OF WORK AND BUDGET

Programme of Work and Budget for 1978-1982

1. The Seventh Session of the Commission in October 1976 approved a programme of work and budget for the five-year period 1978-1982, which was endorsed by the FAO Finance Committee at its 39th Session, 25 April - 9 May 1977. The budget (shown in Appendix III column 1) 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 headings and, similarly, unspent surpluses at the end of any one calendar year are available to supplement allocations under the same headings or any other headings as may be required.

Expenditure for the Year ending 31 December 1980

2. A statement of expenditure for the year 1980 is shown in Appendix III, column 4, and a breakdown of this expenditure is given in Appendix IV.

3. Expenditure in the year 1980 for contractual services (printing) exceeded the approved budget; however, less was spent on Personal Services, Travel, General Operating Expenses, Supplies, Equipment and Fellowships. Total expenditure remained within the approved budget.

4. The overall end-of-year position showed a balance of \$ 348 968, which can be held as a reserve, showing an increase of \$ 172 180 on the reserve position at the end of 1979.

Estimated Expenditure for 1981

5. A breakdown of expenditure and commitments incurred in 1981 up to 30 June 1981 is given in Appendix IV, last column. Costs of the annual session of the Commission, local operating costs in PDR Yemen and costs of the training course held in Yemen Arab Republic are the main commitments entered into in the first part of 1981.

Contributions Received and Outstanding

6. Appendix V shows the annual scale of contributions to the Trust Fund 9409 and the position of contributions outstanding as at 30 June 1981. Member Governments are requested to arrange for payment of outstanding contributions.

7. The new scale of contributions incorporating an increase of 25% approved by the Commission at its 11th Session held in Amman, October 1980, is also shown in Appendix V. This scale is operative from 1 July 1981 as recommended by the Commission.

Programme of Work and Budget for 1983-1987

8. A new five-year budget should be approved by the Commission for submission to the FAO Finance Committee prior to its implementation. A proposed budget is given in Appendix VI based on current expenditure estimates.

COMMISSION FOR CONTROLLING THE DESERT LOCUST IN THE NEAR EAST

TRUST FUND No. 9409

Statement of Account (expressed in US dollar equivalents)

<u>Receipts</u>	Approved budget <u>1978-82</u>	<u>Actual Costs</u>			<u>Budget</u>	<u>Estimate</u>
		<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Balance brought forward from previous year	-	53 363	137 380	176 788	348 968	389 568
Contributions	200 000	218 675	151 079	229 623	250 000	250 000
Interest		5 011	12 882	32 306		
	<u>200 000</u>	<u>277 049</u>	<u>301 341</u>	<u>438 717</u>	<u>598 968</u>	<u>639 568</u>
<u>Cash Expenditure</u>						
<u>Personal Services</u>						
Short-term experts, local assistance	35 000	31 020	48 297	16 971	35 000	35 000
<u>Travel</u>	15 000	5 698	17 368	4 264	15 000	15 000
Delegates, teams, consultants						
<u>Contractual Services</u>	5 000	3 495	3 118	15 740	5 000	5 000
Printing reports						
<u>Supplies and Materials</u> for field surveys, POL, vehicle maintenance	20 000	13 130	6 447	15 585	20 000	20 000
<u>Equipment</u> for field projects	60 000	68 229	24 165	7 428	60 000	60 000
<u>Fellowships and Grants</u>	20 000	-	626	12 136	40 000	20 000
Individual and Group Training						
<u>General Operating Expenses</u> Misc., rent, communications	15 000	7 368	11 653	8 420	15 000	15 000
	<u>170 000</u>	<u>128 940</u>	<u>111 674</u>	<u>80 544</u>	<u>190 000</u>	<u>170 000</u>
Project Servicing Costs (5% on Supplies and Equipment 14% on the other items)	16 600	10 729	12 879	9 205	19 400	16 600
	<u>186 600</u>	<u>139 669</u>	<u>124 553</u>	<u>89 749</u>	<u>209 400</u>	<u>186 600</u>
Reserve	13 400	137 380	176 788	348 968	389 568	452 968

Subject to the total commitments at any given time not exceeding the total contribution pledged and received at that time, the Director-General shall have discretionary powers 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.

APPENDIX IV

TRUST FUND No. 9409

BREAKDOWN OF 1980 EXPENDITURE AND CURRENT 1981 EXPENDITURE AND COMMITMENTS

	<u>1980 Expenditure</u>	<u>1981 Expenditure and commitments (30.6.1981)</u>
10. <u>Personal Services</u>		
Yemen Arab Republic Training Course		1 000
Temporary staff, sessions of Commission	567	
Local costs, People's Democratic Republic of Yemen	16 957	23 107
Consultants (Moukarzel - radio)		2 500
Exchange visit of Locust Officer, PDR Yemen	(553)	
	<u>16 971</u>	<u>26 607</u>
20. <u>Travel</u>		
Session of Commission, delegates	1 164	5 857
Staff travel to Commission	1 508	274
Exchange visits of Locust Officers Saudi Arabia	924	1 233
" " " " Egypt	668	
Yemen Arab Republic Training Course		5 160
	<u>4 264</u>	<u>12 524</u>
30. <u>Contractual Services</u>		
Printing, reports	15 740	2 627
	<u>15 740</u>	<u>2 627</u>
40. <u>General Operating Expenses</u>		
Session of Commission	(266)	400
PDR Yemen operating expenses	7 578	11 303
YAR Training course	1 108	1 500
Radio training, PDR Yemen		91
	<u>8 420</u>	<u>13 294</u>
50. <u>Supplies and Materials</u>		
PDR Yemen, radio parts	4 327	
YAR training course		1 000
Qatar, insecticides	10 642	6 747
Egypt, laboratory supplies		3 000
Miscellaneous	616	
	<u>15 585</u>	<u>10 747</u>
60. <u>Equipment</u>		
PDR Yemen, typres, office equipment, radio instruments	7 015	9 528
Egypt, radio instruments		2 010
Insurance, etc.	413	
	<u>7 428</u>	<u>11 538</u>

APPENDIX IV (cont'd)

30. Fellowships and Training

Al Kawari, Qatar (withdrawn)	(97)	
Training course, Yemen Arab Republic	(44)	27 102
Large participants, India study tour (withdrawn)	(9)	
Harb, Egypt to India	2 710	790
Al Jaidi, PDR Yemen to India	2 282	
El Ghamdi, Egypt to Sudan	4 022	2 178
Refaat, Egypt to India, Pakistan	995	1 528
Audhali, PDR Yemen to Pakistan	2 277	2 337
Yagoub, Saudi Arabia to United Kingdom		9 500
	<u>12 136</u>	<u>43 435</u>
TOTAL	<u>80 544</u>	<u>120 772</u>

APPENDIX V

TRUST FUND No. 9409 - INTERNATIONAL - COMMISSION FOR CONTROLLING

THE DESERT LOCUST IN THE NEAR EAST

Pledge position at 30 June 1981 (US dollars)

	New scale of contribution from 1.7.1981	Annual scale of contribution up to 30.6.1981	Outstanding				Total outstanding contributions due
			1977/78	1978/79	1979/80	1980/81	
Bahrain	8 750	7 000	-	-	-	-	8 750
Egypt	32 540	26 032	-	-	-	-	32 540
Iraq	28 750	23 000	-	-	-	-	28 750
Jordan	14 357.50	11 486	-	-	-	-	14 357.50
Kuwait	25 000	20 000	-	-	-	-	25 000
Lebanon	11 212.50	8 970	-	-	-	8 970	11 212.50
Oman	10 000	8 000	-	-	-	-	10 000
Qatar	12 500	10 000	-	-	-	-	12 500
Saudi Arabia	44 035	35 228	-	-	-	-	44 035
Sudan	18 667.50	14 934	14 934	14 934	14 934	14 934	18 667.50
Syria	16 687.50	13 350	-	-	13 350	13 350	16 687.50
United Arab Emirates	26 250	21 000	-	-	-	-	26 250
Yemen Arab Republic	800	640	-	-	-	(456.77)	800
Yemen PDR	450	360	-	-	-	360	450
	<u>250 000</u>	<u>200 000</u>	<u>14 934</u>	<u>14 934</u>	<u>28 284</u>	<u>37 157.23</u>	<u>250 000</u>
							<u>345 309.23</u>

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APPENDIX VI

COMMISSION FOR CONTROLLING THE DESERT LOCUST IN THE NEAR EAST

TRUST FUND No. 9409

Proposed Annual Budget for the Five Years 1983-87

<u>Receipts</u>	US\$	
Yearly Contributions of Governments	250 000	
 <u>Cash Expenditure</u>		
<u>Personal Services</u>		
Short-term experts, local assistance	35 000	XS - 175 000
<u>Travel</u>		
Delegates, teams, consultants	15 000	75 000
<u>Contractual Services</u>		
Printing reports	15 000	75
<u>Supplies and Materials</u>		
for field surveys, POL, vehicle maintenance	20 000	100
<u>Equipment</u>		
for field projects	60 000	300
<u>Fellowships and Grants</u>		
Individual and Group Training	25 000	125
<u>General Operating Expenses</u>		
Misc., rent, communications	15 000	75
	<u>185 000</u>	
Project Servicing Costs (5% on supplies & equipment, 14% on the other items)	18 700	
	<u>203 700</u>	
 <u>Reserve</u>	 <u>46 300</u>	
	<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 powers 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.

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