

REPORT OF THE
FIRST SESSION OF THE
FAO DESERT LOCUST CONTROL COMMITTEE

Held in
Rome, Italy
from
12-16 April 1955

Agriculture Division
Food and Agriculture Organization of the United Nations
Rome, Italy April, 1955

MR/34635/E

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INTRODUCTION

The Director-General of the Food and Agriculture Organization of the United Nations convened a Working Party on Desert Locust Control at Rome from 13 to 17 September 1954 at which plans were prepared for the 1954/55 international campaign against the Desert Locust in the Arabian Peninsula. The Working Party also examined the status of the various FAO Desert Locust Control committees and recommended that the previous Coordinating Committee for the Control of the Desert Locust in the Arabian Peninsula should be expanded into an FAO Desert Locust Control Committee, the terms of reference of which should include:

- (a) keeping the Desert Locust situation under review;
- (b) coordinating Desert Locust control campaigns in the Arabian Peninsula;
- (c) coordinating Desert Locust control campaigns elsewhere when such coordinating activities are considered desirable by the Committee.

In accordance with these recommendations, the Director-General established the present Committee and, in his letter of 21 January 1955, invited the following governments to be represented at its first session: Afghanistan, Egypt, Ethiopia, France, India, Iran, Iraq, Italy, Jordan, Lebanon, Libya, Pakistan, Saudi Arabia, Spain, Sudan, Syria, Turkey, the United Kingdom, the United States of America and the Yemen.

The Government of Canada, the World Meteorological Organization and the Arab League were invited to send observers.

Dr. Philip V. Cardon opened the session and welcomed the delegates and other participants. He recalled that the Committee had been established to keep the overall Desert Locust situation under review, to explore how affected governments may best cooperate to combat Desert Locust plagues and to recommend what action FAO might take to support Desert Locust control on a regional and international basis. Although the immediate objective was the subjugation of the present locust plague, he considered that any organization designed for that purpose should be capable of developing into the type of international service required to prevent the development of future plagues.

Dr. Cardon suggested that the Committee should give particular attention to two urgent issues:

- (a) a review of the 1955 anti-locust operations in the Arabian Peninsula, to determine how successfully the plans of the Working Party were being implemented and how deficiencies might be remedied;

- (b) the preparation of plans for the 1955/56 campaign in the Arabian Peninsula with particular emphasis upon the provision of adequate and timely contributions in cash and kind.

Dr. Cardon said that he was deeply impressed by the determination with which so many governments were participating in the 1955 campaign and with the results being achieved. He realized that there remained many shortcomings and difficulties to be overcome and he hoped that the present session would determine how such handicaps might be surmounted in time to permit an even more effective campaign next season. Furthermore, if it were agreed that a suitable pattern for future cooperation was being established, he believed the Committee should determine how a more permanent cooperative structure might be evolved and maintained, and how adequate financial support could be provided.

Following his opening address, the Director-General called upon the session to elect a chairman and two vice-chairmen and, upon his unanimous election, the Egyptian delegate, Mr. Younis Sabet, occupied the chair. Mr. Abdel Rahman Helalissi, delegate of Saudi Arabia, and Mr. Sami Fakhri, delegate of Jordan, were elected as vice-chairmen.

Before the close of the session, Dr. F.T. Wahlen, Director of the Agriculture Division of FAO, expressed on behalf of the Director-General his gratification at the response of so many governments to his invitation to attend the session. The progress of the 1955 campaign in the Arabian Peninsula demonstrated the wish of many governments to participate in or support this cooperative effort, and he believed that the present session, whilst exposing some divergent views on the best manner of approach to the problem, had led to a better understanding of the issues and would result in a more effective campaign next season. Dr. Wahlen reiterated the Director-General's declaration that it was one of the most important functions of FAO to foster this type of work to the best of its ability.

PARTICIPATION IN THE SESSION

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

Delegations from Member Countries of FAO

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Officers of the Session

As previously recorded, the delegates elected Mr. Younis Salem Sabet, Permanent Under-Secretary for Agriculture, Egypt, as chairman of the session, and Mr. Abdel Rahman Helaissi, Deputy Minister of Agriculture, Saudi Arabia, and Mr. Sami A. Fakhri of Jordan, as vice-chairmen. Mr. O. B. Lean of the FAO staff served as technical secretary.

The delegates also elected a drafting committee consisting of the delegates from India, Jordan, Saudi Arabia, the United Kingdom and the United States of America.

Apologies

Apologies were received from the Governments of France and Libya for being unable to send delegates to attend the session.

Acknowledgements

At the close of the session, the delegates expressed their thanks to the Director-General for his action in convening the Committee and for the lead which the Food and Agriculture Organization of the United Nations had given to the development of cooperative control measures against the Desert Locust and for the part it had already played in coordinating this work. The delegates also wished to place on record their thanks to the chairman, to the vice-chairmen who had deputized for him and to the FAO secretariat.

SUMMARY OF DISCUSSIONS

Present Desert Locust Situation and Forecast

1. A summary of the Desert Locust situation during the period since that covered by the Report of the Working Party on Desert Locust Control in September 1954, prepared by the Anti-Locust Research Centre, London, was presented by Dr. B.P. Uvarov of the United Kingdom delegation and was supplemented by reports from other delegates.
2. During the summer months of 1954, the breeding areas of the Desert Locust were very widespread in India and Pakistan. In the Arabian Peninsula breeding was heavy in the Asir and also in the Yemen coastal areas. Very heavy and widespread breeding occurred in the Sudan and in a belt across French Chad Territory and French West Africa, as well as in northeastern Ethiopia, northern Somali Peninsula and in parts of eastern Africa.
3. The Arabian Peninsula received swarms, resulting from summer breeding, from August onwards. Swarms moving from the summer breeding areas invaded southern Iran and in October reached eastern Arabia, when other swarms arrived from across the Red Sea. They bred heavily in the coastal plains and the infestation gradually spread to the inland areas of Saudi Arabia.
4. Swarms produced during the summer in western Africa resulted in an invasion of Morocco, Algeria and Tunisia. Some of these swarms invaded the Canary Islands and others reached Libya and northwestern Egypt. Although many of these swarms perished in the Atlantic, the invasion of North Africa and the crop losses incurred there were on a scale without precedent during the present plague.
5. The breeding of swarms normally occurring during October/November in the Somali Peninsula did not take place, except on a small scale, as, owing to the drought, the mass of swarms moved southwestwards, resulting in a heavy invasion of Kenya and Tanganyika, with some swarms reaching the Belgian Congo. Breeding occurred over the invaded territories between late October/December 1954. Some young swarms resulting from escapes were present in East Africa where they will breed as soon as rains commence.
6. The latest reports showed that a large section of the central region, comprising the Sudan, Eritrea, northern Ethiopia, southwestern Arabia and northern Somali Peninsula, was either free or only lightly infested, but as this was a normal seasonal feature of the locust breeding cycle it should not give rise to optimism.

7. In the eastern region, some winter/spring breeding was in progress in Iran and Pakistan.
8. The situation in the western region could only be described as very critical, since large scale breeding was in progress throughout northern Africa, from Morocco to Libya, with some slight breeding also occurring in Egypt.
9. The current situation in the Arabian Peninsula was also serious, as even the incomplete information available suggested a widespread infestation in many areas of central and eastern Arabia, where the conditions for breeding were very favourable owing to good rainfall.
10. Spring breeding in the Arabian Peninsula could be expected to continue for some weeks while in some areas new swarms might appear in late April or early May. From April to June any swarms escaping from this area would provide a serious threat to all the surrounding countries, and they might later contribute to the invasion of Pakistan and India in the east, while others would augment the infestation of African countries as far westwards as French Equatorial and West Africa. The latter territories would also be subject to invasion by new swarms produced in North Africa, which in their turn may reach as far east as the Sudan and western Ethiopia.
11. The Committee concluded that, viewed as a whole, there were no signs that the present plague of the Desert Locust was beginning to decline, as its geographical extent was at a maximum and very large reserves of swarms were present in several areas.

Progress of the 1954/55 Campaign in the Arabian Peninsula

12. The Committee took note of the details of governmental contributions and of the operations of the various national teams given in the three campaign Progress Reports issued by FAO.
13. The Committee noted with particular satisfaction the additional information provided by the Saudi Arabian delegate regarding the locust control measures being undertaken by the Saudi Arabian Government, summarized below and given in full in Appendix I.

The Saudi Arabian Government was increasing its control teams from seven to ten and had increased its contribution of 100 tons of bait by purchasing a further quantity of 100 tons. A special locust bureau had been established at Jeddah.

The first seven control teams in the field were headed

by Saudi Arabian and Egyptian locust officers and were fully equipped. Each team was composed of one locust officer, one guide, three drivers and ten labourers. The teams were working in the Riyadh and Qasim areas and had also undertaken control operations in Hasa.

The Saudi Arabian Government's initial contribution for Desert Locust control during 1955 was nearly 802,000 rials, equivalent to US\$220,000.

To establish the three additional teams, a further contribution of 200,000 rials raised the total contribution during 1955 to nearly 1,000,000 rials, equivalent to US\$266,666, compared with the original proposal for a contribution of 400,000 rials.

The funds already appropriated and those which the Saudi Arabian Government hoped to contribute towards the 1956 control operations by the formation of fifteen teams, might total nearly 1,000,000 rials, equivalent to US\$266,666.

14. Recent field operations in the Arabian Peninsula undertaken by other participating governments and the material contributions received from others may be summarized as follows:

Operational Teams

Egypt: An anti-locust mission with seven locust officers had reconnoitred the northern tihama since early 1955. Latterly, four of the teams were operating in the Hail area against extensive hopper infestations with the assistance of FAO in providing operating expenses and some vehicles.

India: Since early March, five self-contained teams had been operating in Kuwait, the southern Neutral Zone and Hasa against widespread hopper infestations. FAO was meeting the cost of petrol and local labour. By the end of March, 3,500 acres of hoppers had been controlled.

Iraq: Reconnaissance was being undertaken by three teams, one in Kuwait, one in the western Neutral Zone and one in northeast Saudi Arabia. The cost of petrol and local labour in Saudi Arabia was being met by FAO.

Jordan: Periodical reconnaissance of northwest Saudi Arabia (Haql-Tebuk-Teima) was being undertaken by teams using FAO vehicles and with FAO paying petrol and local labour.

Pakistan: An anti-locust mission with two technical officers arrived in Oman during the third week of March and had commenced control operations.

Syria: Teams using some FAO vehicles and with FAO paying for petrol and local labour had reconnoitred northern Saudi Arabia from Wadi Sirhan to Kuwait. One team remained at Sakaka.

United Kingdom: Since January, nine completely self-contained teams had been operating along the southern tihama and eastwards to Bisha, against widespread and intensive hopper infestations. By the end of March over 10,000 hopper bands had been destroyed. One locust officer with field supervisors, operating from Sharjah, had controlled a widespread but light hopper infestation in Oman and, with financial assistance from FAO, had also dealt with a small infestation in Qatar.

Yemen: With the assistance of an FAO locust officer, two Yemen teams had reconnoitred the tihama and two teams were being formed for work in the interior. Fourteen Yemenis were being trained in locust control at Sana'a. To supplement the transport provided by FAO, the Government had provided one lorry and had promised another two. The Government was also meeting operational costs.

FAO: The international centre at Jeddah had been staffed by one senior locust officer, three locust officers and one administrative officer. Two self-contained teams were operating against hopper infestations in the central area, near Hail and near Hanakiya.

Material Contributions (1955)

France: 100 tons of bait delivered to Hodeidah, Yemen.

Iran: 100 tons of bait, 10 tons of BHC 12% gamma, delivered to Dammam.

Iraq: 200 tons of bait; delivery to Dammam awaited.

Sudan: 200 tons of bait delivered to Jeddah.

Syria: 100 tons of bait delivered to Mafrak and Ma'an.

Turkey: 300 tons of bran, 30 tons of BHC 2.6% gamma, being delivered to Jordan; 3 jeeps delivered to Damascus.

FAO: 176 tons of bait at Jeddah.

The distribution of the main items of FAO equipment in Saudi Arabia is given in Appendix III.

A summary of the distribution of FAO equipment in the Arabian Peninsula and elsewhere is given in Appendix IV.

15. The Committee noted that, whilst some excellent progress was being made in the control of hopper infestations in southwestern, central and eastern Saudi Arabia and in Kuwait, it was too early to assess the full results of the present campaign. Nevertheless it was concluded that the organization of the campaign and its effectiveness showed marked improvements on the previous season.

16. The Committee invited the Executive Committee for Desert Locust Control in the Arabian Peninsula to consider further the situation with particular reference to possible deficiencies in man power, materials and equipment, and organizational and operational difficulties; to make recommendations and to report back to the main Committee.

17. Of the recommendations subsequently submitted by the Executive Committee, the following were approved:

(i) The Executive Committee noted that the present anti-locust operations in central Saudi Arabia, particularly in the Riyadh/Qasim and Hail/Hanakiya areas, were severely handicapped by continuing lack of bait supplies and operating expenses.

(ii) The Executive Committee noted that some of the governmental contributions anticipated by the Working Party in September 1954 had not been provided, whilst others had been long delayed. All such contributions were taken into account when preparing the Operational Plan for the 1954/55 campaign, and the Executive Committee considered that the present critical situation was due to certain governments not having fulfilled their obligations.

(iii) The Executive Committee recommended that those governments which had not yet fulfilled their obligations should now be requested to contribute in cash, as it was too late for material supplies to be of practical use this season.

(iv) With respect to the bait shortage, the Executive Committee recommended that FAO should borrow from Desert Locust Control stocks at Jeddah, 200 tons of bait, for transportation to the Qasim and Riyadh areas as soon as possible. This quantity is to be replaced as soon as possible by the 200 tons being contributed

by the Government of Sudan.*

(v) Owing to the grave shortage of bait, the Executive Committee recommended that all existing supplies of insecticidal dusts and sprays should be taken into immediate use.

(vi) The Executive Committee emphasized and supported the recommendation of the Working Party that all participating governments should, wherever possible, mount self-contained teams. The Executive Committee considered that normally it would be more efficient for governments to provide a reduced number of teams so long as they were entirely self-contained, rather than a larger number of teams requiring financial or material support from international resources.

(vii) The delay in receiving all the cash contributions for the 1954/55 campaign greatly handicapped the initial control preparations and the Executive Committee recommended that the attention of governments should be drawn to the need for contributions to be provided not later than September each year. The Executive Committee noted that some governments which had contributed cash in 1954 had not yet contributed in 1955, and it hoped that countries which had previously made cash contributions would continue to do so on an annual basis.

18. In regard to the overall progress in the control of the Desert Locust, the Committee gave recognition to the competence and facilities for locust control that countries of the Near East and southwestern Asia had built up. Emphasis was placed on the need for continued development and maintenance of strong, competent control organizations in each of the countries in order that they may increasingly assume their basic responsibilities for the control of locusts within their own borders and in cooperation with other countries and agencies affected by, or interested in, the Desert Locust.

19. The Committee noted with appreciation the constructive remarks of Dr. Wahlen which included a statement authorized by the Director-General of FAO to the effect that the particulars outlined by the U.S. delegate (Appendix II) were in accord with FAO policy. This policy has always consisted of aiding Member Countries to strengthen their own services, to enable them to cope to the fullest extent possible with the problems

*Note: Before the conclusion of the session, the Committee was informed that this contribution had been delivered to Jeddah.

affecting their agriculture. Nevertheless, in many cases, of which the control of epizootics and of pests like the Desert Locust were striking examples, there remained a clear need for coordination of national efforts to make them fully effective, and FAO stood ready to assume its constitutional responsibilities in this respect and would continue to do so in the future.

International Financial Resources

20. The Committee noted that during 1954 the following expenditure on Desert Locust control had been incurred by FAO:

(i) Regular Program	Budget US\$150,000	Expenditure US\$148,935
(ii) Expanded Technical Assistance Program	" US\$ 91,596	" US\$ 85,513
(iii) Cash contributions received	US\$ 19,980	" Nil

In relation to (i), Appendix V lists the assessment of governmental contributions to the 1954 campaign, which FAO was authorized by the Seventh Session of the Conference to match up to an amount of US\$150,000. This list amends that given in Appendix I of the Report of the Working Party on Desert Locust Control, September 1954.

21. The Committee noted that the 1955 ETAP appropriation for Desert Locust control stood at US\$149,671, whilst the provisional figure for 1956 was US\$94,000. No Regular Program funds were available for this purpose in 1955.

22. Cash contributions received by FAO were as follows:

Sudan	US\$14,266.42	on 9. 9.54
France	5,714.29	" 26.10.54
Jordan	1,393.37	" 10. 1.55
United Kingdom	27,846.16	" 29. 1.55
Kuwait	14,001.68	" 29. 1.55
Bahrein	<u>2,800.34</u>	" 29. 1.55
	US\$66,022.26	

In addition, the Government of Syria had placed at the disposal of FAO the sum of £S20,000 (US\$5,602).

Contributions of US\$2,000 from Iran and £E2,000 by the Arab League had been offered.

23. The Committee took note that the Government of France had indicated its intention to provide a cash contribution in 1955 and the Committee expressed its hope that other governments which had contributed in cash during 1954 would renew their contributions on at least the same scale in 1955 and on an annual basis.

24. Reviewing FAO expenditure during 1955 in relation to existing assets totalling US\$215,693.26, the Committee took note of the following summary of actual expenditure and existing commitments. Although the available uncommitted balance as on 14 April was impossible to assess precisely owing to outstanding advances and unpaid accounts held at Jeddah, the Yemen, and by various national teams, it appeared that it stood at about US\$86,381. Whilst this should be sufficient to meet normal operating expenses during the remainder of the current campaign ending 30 June 1955, it would leave little or no surplus to cover the cost of preparations for the 1955/56 campaign and operating expenses during the second half of 1955.

Consolidated Statement of Expenditure for the
period 1 January to 14 April 1955

	<u>Actual Expenditure</u>	<u>Outstanding Commitments</u>	<u>Total</u>
Salaries, allowances and travel - FAO staff	\$ 12,620.43	\$ 17,870.95	\$ 30,491.38
Casual labour	-	22,997.67	22,997.67
Purchase of equipment and supplies	12,338.87	23,992.49	36,331.36
P.O.L.	-	26,000.00	26,000.00
Handling and movement of governmental contribu- tions and bait	-	12,783.86	12,783.86
Miscellaneous	187.51	520.00	707.51
Total	\$ 25,146.81	\$104,164.97	\$129,311.78

25. The Committee requested FAO to provide all contributing governments as soon as possible after 1 June 1955 with an up-to-date statement of expenditure incurred during the 1954/55 campaign.

Plans for the Desert Locust Control Campaign in the
Arabian Peninsula for the year 1 July 1955 to 30 June 1956

26. The following estimate of requirements for an international anti-locust campaign in the Arabian Peninsula 1955/56, prepared by the Executive Committee, was approved by the Committee for submission by FAO to those governments concerned, in order that they may consider in advance of the next meeting of the Committee to what extent they may be able to contribute to the campaign.

Estimate of Requirements for an International Anti-
Locust Campaign in the Arabian Peninsula, 1955/56

As there was no indication whatsoever that the present locust plague was dying down and, in view of the current serious breeding taking place in the Arabian Peninsula, it was considered necessary to plan for a campaign in 1955/56 of at least similar proportions to that of 1954/55.

The present campaign in the Arabian Peninsula could be expected to continue until mid-June 1955 after which time immediate preparations should be made during the relatively quiet summer months in order to ensure full implementation of this plan by 1 October 1955.

Phasing of Plan

Phase I (mid-June to September)

- (a) Overhaul and repair of transport and equipment.
- (b) Review and arrangements for the provision of requirements of bait, insecticide, machinery, P.O.L., spares and connected equipment, to implement the plan.
- (c) Preparation by international centre in Jeddah of a report of the 1954/55 campaign.
- (d) Establishment of international locust compounds in Jeddah, Hail and Riyadh, with stores and facilities for vehicle repair work.
- (e) Control measures in southwestern Arabia.

Phase II (Approximately September to February)

- (a) Finalizing restocking of stores and preparations for the campaign in north, central and eastern Arabia.
- (b) Main control campaign in western Arabia.
- (c) Maintenance of continuous scouting watch by mobile detachments in the likely breeding areas in north, central and eastern Arabia.

Phase III (Approximately January to June)

- (a) Completion of control campaign in western Arabia.
- (b) Control campaign in north, central and eastern Arabia.

Distribution of Field Personnel

The initial centres of locust activity at the start of the seasonal locust campaign in the Arabian Peninsula will be in western and southwestern Arabia and the following distribution of locust officers to cover these areas is proposed.

Phase II

YEMEN	1 Officer in charge	Sana'a
(By the end of August)	1 Locust officer	Midi-Zohra
	1 Locust officer	Zohra-Hodeidah
	1 Locust officer	Hodeidah-Mocha
	1 Locust officer	Hujjariya Province
SAUDI ARABIAN TIHAMA (SOUTH)	1 Officer in charge	Jeddah
(By November)	1 Locust officer	Lith
	1 Locust officer	Qunfidah
	1 Locust officer	Hali
	1 Locust officer	Jizan North
	1 Locust officer	Jizan South
	2 Locust officers	Mobile reserve
SAUDI ARABIAN TIHAMA (NORTH)	1 Officer in charge	Jeddah
(By November)	1 Locust officer	Jeddah/Mecca
	1 Locust officer	Rabigh
	1 Locust officer	Yenbo
	1 Locust officer	Wejh
	1 Locust officer	Medina
	1 Locust officer	Dhubba/Haql
EAST HEJAZ/ASIR	1 Locust officer	Bisha/Abha/Najran
(Scouting watch by end November)		
NORTHWEST ARABIA	1 Locust officer	Saudi/Jordan frontier
(Scouting watch by December)	1 Locust officer	South to Tebuk-Teima
		Tapline West
HAIL (Scouting watch by December)	1 Locust officer	Hail
QASIM (Scouting watch by December)	1 Locust officer	Buraida area to Marrat
	1 Locust officer	Rass-Duwadami
RIYADH (Scouting watch by December)	1 Locust officer	Al Kharj
	1 Locust officer	Riyadh/Ma'aqala

EASTERN ARABIA	1 Locust officer	Hofuf/Jabrin
(Scouting watch by	1 Locust officer	Kuwait
December)	1 Admin. officer	Handling incoming stores Dammam
MUSCAT/OMAN (Scouting	1 Locust officer	Oman Peninsula
watch by December)	1 Locust officer	Muscat coast

Phase III

NORTHWEST ARABIA	1 Locust officer	Tebuk
(By end January)	1 Locust officer	Jauf/Sakaka
	1 Locust officer	Wadi Sirhan
	1 Locust officer	Tapline West
	2 Locust officers	Mobile reserve

HAIL (By end January)	1 Locust officer	Hail
	1 Locust officer	South Nefud
	1 Locust officer	Baqa'a
	1 Locust officer	Ghazzala
	1 Locust officer	Hanakiya
	2 Locust officers	Mobile reserve

QASIM (By mid-	1 Locust officer	Buraida/Aneiza
January)	1 Locust officer	Rass
	1 Locust officer	Shaqra/Marrat
	2 Locust officers	Mobile reserve

RIYADH (By mid-	1 Locust officer	Riyadh
January)	1 Locust officer	Al Kharj
	2 Locust officers	Mobile reserve

EASTERN ARABIA	1 Locust officer	Hofuf
(By mid-January)	1 Locust officer	Kuwait North
	1 Locust officer	Kuwait South
	1 Locust officer	Tapline East
	2 Locust officers	Mobile reserve

MUSCAT/OMAN	1 Officer in charge	Sharjah
(By mid-January)	1 Locust officer	Oman Peninsula
	1 Locust officer	Muscat coast
	1 Locust officer	Mobile reserve

EAST HEJAZ/ASIR	1 Locust officer	Bisha
(By mid-January)	1 Locust officer	Hamdha/Tathlith
	1 Locust officer	Abha/Najran

(Additional reserve officers will be available if required as and when operations on the southern tihama are concluded. By end of February it is likely that 8 locust officers could if necessary be available for this area)

SAUDI ARABIAN TIHAMA (NORTH) (Scouting watch from April)	1 Locust officer	Jeddah/Haql
SAUDI ARABIAN TIHAMA (SOUTH) (Scouting watch from March)	1 Locust officer	Jeddah/Jizan
YEMEN	1 Locust officer	Sana'a
	1 Locust officer	Marib
	1 Locust officer	Harib
	1 Locust officer	Ta'izz
	1 Locust officer	Hujjariya

Distribution of Transport

Details of the required transport distribution are given in Table 1 below.

	Landrovers or jeeps	15cwt.-30cwt.	3ton-5ton					
Yemen	5	6	2					
South tihama	8	8	5					
North tihama	8	8	6					
East Hejaz/Asir	4	4	5					
Hail	7	7	7					
Northwest Arabia	7	7	4					
Qasim	5	5	3					
Riyadh	4	4	3					
Eastern Arabia	8	8	8					
Muscat/Oman	<u>4</u>	<u>4</u>	<u>2</u>					
	<u>60</u>	<u>61</u>	<u>45</u>					
	Land-rovers	15/30 cwt.	3-ton	5-ton	10-ton	Petrol tanker	Water tanker	Breakdown lorry
International Centre H.Q.	7	5	2	9	2	2	3	1

It is emphasized once again that all transport contributed should be fit and suitable for a full campaign season in the Arabian Peninsula. The Senior Locust Officer at the International Centre should ensure that arrangements are made in advance for the provision of adequate spares for current and future needs and for the overhaul, maintenance and storage of vehicles, so that they can be brought to readiness at very short notice prior to the start of the campaign.

Distribution of Bait

The proposed distribution of bait is given in Table 2 below.

<u>Strategic Reserves</u>		<u>Field Depôts</u>	
Jeddah	350 tons	Yemen	250 tons
Ma'an	200 "	South tihama	250 "
Ma'fraq	100 "	North tihama	250 "
Dammam	100 "	East Hejaz/Asir	200 "
		Hail	400 "
		Northwest Arabia	400 "
		Qasim	250 "
		Riyadh	250 "
		Eastern Arabia	300 "
		Muscat/Oman	<u>150 "</u>
	<u>750 tons</u>		<u>2,700 tons</u>

With regard to the provision of bait by contributing countries, the following important needs are stressed:

- (i) bait should be good quality wheat bran mixed at 4% with 2.6% gamma isomer BHC and despatched in good sacks;
- (ii) bait contributions should include funds for delivery of bait to main stores;
- (iii) bait contributions should be made before or at the latest by the end of September to enable complete field distribution to be made.

Distribution of Insecticides

Requirements of BHC (6.5% gamma isomer) are given in Table 3 below.

Yemen	10 tons
South tihama	10 "
North tihama	10 "
East Hejaz/Asir	8 "
Hail	10 "
Northwest Arabia	10 "
Qasim	10 "
Riyadh	10 "
Eastern Arabia	10 "
Muscat/Oman	<u>5 "</u>
	<u>93 tons</u>

In addition, it was considered that provision should be made for the supply of 2,000 gallons of Dieldrin emulsifiable concentrate.

Active consideration should be given to the employment of both spraying and dusting methods which may be of the greatest use in areas difficult of access for heavy transport with bait.

These techniques which have been employed successfully elsewhere and which should be tried in the Arabian Peninsula on a larger scale are:

- (i) Dieldrin emulsifiable concentrate;
- (ii) gamma isomer liquid BHC;
- (iii) Aldrin emulsifiable concentrate.

This does not imply any restriction upon the selection of insecticides by participating teams operating in the Arabian Peninsula, nor does this necessarily imply any recommendation of the Committee in favour of any particular insecticides.

Distribution of Dusting and Spraying Equipment

Requirements of dusting and spraying equipment are given in Table 4 below.

	<u>Power dusters</u>	<u>Power sprayers</u>
Yemen	4	-
South tihama	6	-
North tihama	6	2
East Hejaz/Asir	4	-
Hail	6	-
Northwest Arabia	6	-
Qasim	5	-
Riyadh	4	-
Eastern Arabia	6	4
Muscat/Oman	<u>3</u>	<u>3</u>
	<u>50</u>	<u>2</u>

Petrol, Oil and Lubricants

If all contributing teams are self-contained there will not be any necessity to lay down large stocks of petrol as was envisaged in the Operational Plan for 1954/55. In some areas, however, no government or public bulk petrol stocks are normally available and it may be necessary for the International Centre to establish field stocks on a repayment basis. These areas are:

Hanakiya	Midi)	
Tebuk	Marib)	Yemen
Al Ula	Heis)	
Sakaka		

The Senior Locust Officer of the International Centre should keep in the closest possible touch with the fuel

companies and agents concerned in each main breeding area, to ensure that adequate supplies of P.O.L. are available and that control operations will not be held up by temporary shortages of supplies.

Stores

A list of field stores which would ensure adequate decentralization of supplies throughout the main likely breeding areas was given in the Operational Plan for 1954/55 to which reference should be made.

It is essential that accurate records of the contents of such stores are obtained at the end of the current campaign to enable plans for restocking to be drawn up.

If the system of field issue vouchers has not worked satisfactorily, the Senior Locust Officer at the International Centre should submit an alternative scheme.

Scouting and Reporting

It is emphasized once again that a successful locust control campaign demands amongst other things active scouting prior to the arrival of swarms and the rapid and accurate reporting of locust movements from all areas to enable the Senior Locust Officer to adjust operations according to the situation as it develops.

It is also of primary importance that a large-scale map covering the whole of the Arabian Peninsula be kept marked up to date, at the International Centre in Jeddah, so that the general situation can be seen at a glance.

In his campaign report for 1954/55, the Senior Locust Officer should comment on the locust reporting procedure, its success or otherwise, together with suggestions for future improvements.

Communications

Although the fifteen portable radio sets ordered for the 1954/55 campaign arrived too late to be brought into general use, these will be available for 1955/56.

Arrangements have been made for the training of a suitable candidate by the Saudi Arabian Ministry of Communications who will on completion of his course of instruction be able to take the sets out into the field and instruct field teams in their operation and maintenance.

The Executive Committee decided that the sets should be distributed as follows:

Kuwait	1	Tebuk	1
Hofuf	1	Sakaka	1
Riyadh	1	Rafha	1
Buraida	1	Wejh	1
Rass	1	Yenbo	1
Hail	1	Marrat	1

Reserve 3

For the dissemination of the general locust situation to neighbouring countries, arrangements were made for Radio Mecca to broadcast a summary to be provided weekly by the Senior Locust Officer at the International Centre and the Ministry of Agriculture. This service should be maintained and all neighbouring territories be informed of the day and time of the broadcast.

It is essential that adequate supplies of maps for all teams are available at the International Centre in Jeddah. If Arabic copies of the 1:1,000,000 maps are now available these should be obtained.

It is considered that light aircraft could with advantage be employed in liaison and communication duties between teams operating in the Arabian Peninsula. If suitable aircraft are purchased or obtained on contract, or provided by contributing countries or appropriate agencies, they could combine communication duties with aerial spraying operations as and when opportunity occurs.

Accounting and Finance

It is essential that an account should be rendered monthly by the administrative and accounting officer at the International Centre in Jeddah to FAO showing the expenditure during the month and the balance of funds remaining at the disposal of the Senior Locust Officer.

Lessons from the 1954/55 Campaign

(i) It is desirable that all bait contributions be delivered at the latest by the end of September and that such contributions should include transportation charges of bait to field stores.

(ii) It is desirable that all cash contributions for the daily running costs of the campaign be received at the latest by September and an adequate working amount should be available to the Senior Locust Officer of the International Centre in Jeddah for initial expenses during the preparatory phase.

(iii) It is desirable for FAO to establish a compound for storage of bait, vehicles and equipment in Jeddah, Hail and Riyadh and to provide overhaul facilities for their transport.

(iv) All teams should preferably be contributed on a fully self-contained basis.

(v) The International Centre now in Jeddah should be maintained in Saudi Arabia for the duration of the cooperative work in the Arabian Peninsula.

(vi) In view of transportation difficulties, it is essential to have three strategic reserves of bait, insecticides and machinery at Jeddah, Hofuf/Dammam and Mafraq/Ma'an.

(vii) All bait should be distributed to field stores by the end of November.

(viii) All vehicles contributed should be in a fit mechanical state to operate in the arduous campaign conditions likely to be experienced in the Arabian Peninsula.

Summary of Distribution of Forces and Supplies for Operations in 1955/56

The proposed lists of requirements have been drawn up, taking into consideration some of the lessons already learned during the 1954/55 campaign in the Arabian Peninsula. The requirements listed do, however, only form a basis for consideration and can be altered or modified before being finalized. The following plans envisage a large-scale simultaneous effort throughout the whole of the Arabian Peninsula, with the exception of the Aden Protectorates which are already covered by units from the Desert Locust Control Organization, and the Rub' Al Khali.

YEMEN	4 Field officers	5 Landrovers
	4 Locust assistants	6 15/30cwt. Lorries
	1 Mechanic	2 3/5ton Lorries
	10 Drivers	
	80 Labourers	
	250 tons Bait	5 tons 6.5% gamma BHC
	4 Power dusters	4,400 gallons Petrol
SOUTH TIHAMA (Jizan, Hali, Qunfidah, Lith)	7 Field officers	8 Landrovers
	2 Mechanics	8 15/30cwt. Lorries
	17 Drivers	5 3/5ton Lorries
	120 Labourers	
	7 Guides	
	250 tons Bait	10 tons 6.5% gamma BHC
	6 Power dusters	5,720 gallons Petrol 500 gallons Diesel

NORTH TIHAMA (Rabigh, Yenbo, Wejh, Medina, Ummlejh, Haql, Dhubba)	6 Field officers 2 Mechanics 17 Drivers 120 Labourers 6 Guides	8 Landrovers 8 15/30cwt. Lorries 6 3/5ton Lorries
	250 tons Bait 6 Power dusters	10 tons 6.5% gamma BHC 5,720 gallons Petrol
EAST HEJAZ/ASIR (Taif, Bisha, Abha, Najran, Ranya, Dawasir)	3 Field officers 11 Drivers 1 Mechanic 60 Labourers 3 Guides	4 Landrovers 4 15/30cwt. Lorries 5 3/5ton Lorries
	200 tons Bait 4 Power dusters	8 tons 6.5% gamma BHC 5,720 gallons Petrol 500 gallons Diesel
HAIL (Hail, Ghazzala, Hanakiya, Baqa'a)	7 Field officers 3 Mechanics 16 Drivers 200 Labourers 7 Guides	7 Landrovers 7 15/30cwt. Lorries 7 5ton Lorries
	400 tons Bait 6 Power dusters	10 tons 6.5% gamma BHC 5,720 gallons Petrol 1,000 gallons Diesel
QASIM (Boreida, Rass, Marrat, Aneiza, Shaqra)	5 Field officers 1 Mechanic 10 Drivers 100 Labourers 5 Guides	5 Landrovers 5 15/30 cwt. Lorries 3 3/5ton Lorries
	250 tons Bait 5 Power dusters	10 tons 6.5% gamma BHC 3,000 gallons Petrol
RIYADH (Riyadh, Al Kharj, Ma'aqala)	4 Field officers 1 Mechanic 8 Drivers 100 Labourers 4 Guides	4 Landrovers 4 15/30cwt. Lorries 3 3/5ton Lorries
	250 tons Bait 4 Power dusters	10 tons 6.5% gamma BHC 2,000 gallons Petrol

EASTERN ARABIA (Kuwait, Hasa, Tapline East)	6 Field officers	8 Landrovers
	2 Mechanics	8 15/30cwt. Lorries
	16 Drivers	8 3/5ton Lorries
	200 Labourers	
	6 Guides	
	400 tons Bait	10 tons 6.5% gamma BHC
	6 Power dusters	4,640 gallons Petrol
	NORTHWESTERN ARABIA	
	6 Field officers	7 Landrovers
	3 Mechanics	7 15/30cwt. Lorries
13 Drivers	4 3/5ton Lorries	
200 Labourers		
6 Guides		
MUSCAT/OMAN		
3 Field officers	4 Landrovers	
2 Locust control assts.	4 15/30cwt. Lorries	
1 Mechanic	1 3/5ton Lorry	
10 Drivers		
100 Labourers		
3 Guides		
150 tons Bait	5 tons 6.5% gamma BHC	
3 Power dusters	2,500 gallons Petrol	
LINES OF COMMUNICATION		
1 Convoy officer	1 Landrover	
2 Mechanics	2 15/30cwt. Lorries	
22 Drivers	12 3/5ton Lorries	
15 Labourers	2 10ton Lorries	
2 Guides		
2,000 gallons Petrol	5,000 gallons Diesel	
FAO HEADQUARTERS JEDDAH		
1 Senior locust officer	10 Landrovers	
10 Dodge Power Wagons		
2 Locust officers	2 Scammells	
1 Admin. officer	9 Thornycrofts	
1 Mechanic	2 Fiats	
2 Power sprayers		
5 Power dusters		
15 Knapsack low-volume sprayers		

27. The Committee fully appreciated that the above estimate of requirements was part only of a full operational plan and that additional information would be required by contributing governments with respect to (a) the allocation of teams to areas, and (b) a detailed estimate of the cost of operating the plan for a full year. The information necessary

for composing these documents was not yet available, and the Committee recommended that they should be prepared by FAO and circulated to governments represented on the Committee as quickly as possible after the issue of the present report so that they may be considered in detail at the next session of the Committee.

28. In view of the important rôle which aircraft could play in anti-locust operations in the Arabian Peninsula, the Committee recommended that FAO should explore possibilities and costs of obtaining aircraft, either by purchase or contract or through appropriate agencies, and estimates of operational costs. The Committee requested that FAO should assess possibilities and report to the Committee as soon as possible.

Terms of Reference of the Executive Committee for
Desert Locust Control in the Arabian Peninsula

29. The Committee agreed that as much responsibility as possible should be delegated to those directly responsible for administering and coordinating the campaign in the Arabian Peninsula. It therefore approved the terms of reference, set out in paragraph (v) below, for the Executive Committee for Desert Locust Control in the Arabian Peninsula.

(i) The Executive Committee for Desert Locust Control in the Arabian Peninsula is a committee established under the provisions of Article VI of the FAO Constitution.

(ii) For the purposes of these terms of reference, the Arabian Peninsula is defined as the whole of the peninsula south of the southern frontiers of Jordan and Iraq, but excluding the Aden Protectorates.

(iii) The Executive Committee shall be convened, as circumstances demand or upon the request of at least two Member Governments represented on the Executive Committee, by the Director-General of FAO who may also invite observers. Meetings of the Executive Committee shall be called not less frequently than once every three months.

(iv) The Director-General of FAO shall issue reports on all sessions of the Executive Committee to the governments concerned.

(v) The Executive Committee shall be a sub-committee of the FAO Desert Locust Control Committee and its functions shall be:

(a) to ensure that the anti-locust campaign in the Arabian Peninsula is carried out effectively and in accordance with the general policy laid down by the FAO Desert Locust Control Committee;

- (b) to prepare draft plans and estimates for the control of locusts in the Arabian Peninsula, as required, for submission to the Director-General of FAO and to the FAO Desert Locust Control Committee;
- (c) to submit to the Director-General of FAO details required by him for the preparation of reports on such measures as have been undertaken and for the preparation of estimates regarding future requirements;
- (d) to coordinate, either by themselves or through the Senior Locust Officer, the work of all teams, and to assist them in the performance of their operations;
- (e) to ensure effective control of expenditure of the central fund and to review regularly its financial position;
- (f) to determine the relative positions of the various teams with a view to achieving the maximum operational advantages and to obtain the prior concurrence of concerned governments for moving the teams to areas outside the limits of their original allotment, should this become necessary at any time.

(vi) Observers may attend sessions of the Executive Committee on the invitation of the Director-General of FAO. The Arab League shall have the status of permanent observer.

(vii) Observers may participate in the discussions without the right to vote. They may circulate to the Executive Committee memoranda expressing the views of the governments or organizations they represent.

(viii) Observers shall receive copies of the provisional agenda and all documentation issued in connection with the session of the Executive Committee, including the final report.

30. The Saudi Arabian and United Kingdom delegations felt strongly that the Executive Committee should have the power to move teams without prior consultation with the governments contributing the teams, and reserved the position of their Governments on this particular recommendation (v)(f).

International Cooperation in Desert Locust Control
in the Western Region

31. In introducing this item, the chairman called attention to the Report of the Franco/Spanish Desert Locust Control Meeting held in Madrid, 18-20 January 1955, (Meeting Report No. 1955/1) which was being distributed to governments.

32. The Committee expressed its satisfaction at the agreement reached between the Governments of France and Spain which resulted from the Madrid meeting and which is quoted below. The Committee considered that the contraction of similar agreements in the eastern region should be given every encouragement.

An Agreement between the Governments of France and Spain, adopting the following recommendations, came into force as from 17 February 1955 by an exchange of letters.

I. Intensification of Spanish/French cooperation and action for the control of the Desert Locust in the territories of western Africa by:

- (a) giving instructions to the local authorities of the frontier regions between territories under the sovereignty or protectorate of either of these two countries that, on the appearance of locusts in the area under their jurisdiction, they shall communicate with the utmost speed both to their higher authorities and the neighbouring local authorities of the other country, using whenever possible radio, telegram or telephone, the particulars regarding locusts detailed in the form shown in Annex 1 to this letter;
- (b) giving instructions to the higher authorities of the territories under the sovereignty or protectorate of the two countries that before the tenth day of each month they shall forward by airmail to all the addressees referred to in Annex 3 a report in accordance with the form shown in Annex 2, containing the data received from subordinate authorities. Even if reports do not indicate the presence of locusts in the territory under the jurisdiction of the higher authorities, the said authorities shall nevertheless submit nil reports to those addressees;
- (c) giving instructions to the higher authorities of the territories under the sovereignty or protectorate of the two countries to charge their technical staff with the task of undertaking special surveys in the areas where there are, or may be, locust invasions in the territory under their jurisdiction;
- (d) holding annual meetings and special meetings, whenever circumstances render them advisable, of the experts of both countries, to study overall problems and to make any suitable recommendation for joint action to be undertaken in the fields of investigation, survey and control of the Desert Locust;

(e) intensifying efforts to subjugate the locust plague, especially by preventative measures against the formation of swarms throughout tropical Africa during the summer breeding season, as the chief means of preventing the spread of these swarms to the north-west sector of the western region of Africa.

II. Improved collaboration and joint action for Desert Locust control in all the territories of the western region of Africa, by:

- (a) submission of questions of international cooperation in the western region of Africa which may concern territories other than those under the sovereignty or protectorate of Spain and France to the meeting of the FAO Desert Locust Control Committee to be convened in Rome next April by the Food and Agriculture Organization of the United Nations;
- (b) requesting the said international Organization to send observers to the Spanish/French meetings mentioned in paragraph (d) of the first recommendation;
- (c) informing the Director-General of the aforesaid international Organization of the entry into force of the measures taken by the Spanish and French Governments to implement the recommendations contained in this Exchange of Letters, so that it may proceed to circulate the relevant information among the countries and organizations that may be interested.

Note: Annex 1 referred to above corresponds with the proforma given on page 7, paragraph 9, of the Report of the Madrid meeting. Annexes 2 and 3 correspond with Appendices II and III of the same Report.

International Action in Support of Desert Locust Control Operations in Ethiopia

33. The Committee noted that the Government of Ethiopia was taking an increasing part in locust control operations in that country and was building up an anti-locust organization in cooperation with the locust control organisations of the United Kingdom and the Sudan, and with the United States.

34. Locust breeding in Ethiopia was of great strategic importance, affecting many countries, and the Committee appreciated the need to support the efforts of Ethiopia. Although Ethiopia was lacking in basic equipment, especially transport, the Committee recognized that for the present the resources of FAO were best utilized for the emergency operations in the Arabian Peninsula.

Control Techniques and Research

35. The Committee recommended that a meeting of the FAO Technical Advisory Committee on Desert Locust Control should be convened at an early date, immediately preceding the next meeting of the FAO Desert Locust Control Committee, particularly to review control methods and application techniques, including the further development of the use of aircraft in relation to their utilization in locust control operations. It was also recommended that, in accordance with the recommendation of the Working Party on Desert Locust Control, September 1954, (reference Report, page 25, paragraph 22), the Technical Advisory Committee on Desert Locust Control should take steps to formulate an international program of investigation on the breeding areas and migrations of the Desert Locust, particularly during the periods between plagues, and explore the long-term needs of research, with special reference to Desert Locust plague prevention.

Date of Next Session

36. In view of the fact that with the information available to it the Committee had been unable to prepare a full operational plan, it was recommended that a further session of the Committee should be convened by the Director-General of FAO during the second half of July or the first half of August 1955. The Committee also recommended that the next session should be held in Rome and that it should be immediately preceded by a session of the Executive Committee for Desert Locust Control in the Arabian Peninsula.

37. The Committee recommended that a full agenda for each of the forthcoming meetings should be circulated to governments well in advance.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of the Committee are incorporated in the body of the report and the following is a summary of the more important items.

Present Desert Locust Situation and Forecast

1. From August 1954, the Arabian Peninsula received swarms of the Desert Locust resulting from the summer breeding areas. These bred heavily in the southwestern coastal plains and the infestation gradually spread to the inland areas of Saudi Arabia where widespread breeding was occurring.
2. Swarms produced during the summer in western Africa resulted in a severe invasion of Morocco, Algeria and Tunisia causing crop losses on a scale unprecedented during the present plague.
3. In the eastern region some winter/spring breeding was in progress.
4. Although a large section of the central region was, as usual at this season, either free or only lightly infested, the Committee concluded that there were no signs that the present plague was beginning to decline.

Progress of the 1954/55 Campaign in the Arabian Peninsula

5. The Committee paid tribute to the action taken by many governments and by FAO in contributing to the 1954/55 campaign. The Governments of Egypt, India, Iraq, Jordan, Pakistan, Saudi Arabia, Syria, the United Kingdom and the Yemen, and also FAO, had operational teams in the field and had contributed supplies and/or funds. Material or cash contributions had also been received from, or offered by, the Governments of Bahrein, France, Iran, Kuwait, Sudan and Turkey and from the Arab League.
6. The Committee noted with particular satisfaction the increasing participation of the Saudi Arabian Government which, during 1955, was incurring an expenditure of about US\$266,666 in the prosecution of the campaign.
7. The Committee noted that, whilst some excellent progress was being made in the control of hopper infestations, it was too early to assess the full results of the present campaign. It was, however, concluded that the organization and effectiveness of the campaign showed marked improvements on the previous season.

8. The Committee accepted the comments of the Executive Committee for Desert Locust Control in the Arabian Peninsula that the operations in central Saudi Arabia were handicapped by shortage of bait and operating expenses and that the existing critical situation had arisen because some of the governmental contributions anticipated by the Working Party in September 1954 had not been provided whilst others had been long delayed.

9. Of the recommendations of the Executive Committee for improvements in the conduct of the present and future campaigns, the Committee approved the following:

- (i) that governments which had not fulfilled their obligations should be requested to contribute in cash;
- (ii) that the shortage of bait should be partly made up by borrowing stocks from Desert Locust Control, Jeddah;
- (iii) that owing to the bait shortage existing stocks of insecticidal dusts and sprays should be taken into immediate use;
- (iv) that whenever possible participating governments should provide self-contained teams;
- (v) that for future campaigns, governments should provide their contributions not later than September each year. The Committee hoped that governments which had contributed cash in 1954 and not yet in 1955 would contribute annually.

10. The Committee gave recognition to the competence and facilities for locust control that countries of the Near East and southwestern Asia had built up. Emphasis was placed on the need for continued development and maintenance of strong, competent control organizations in each of the countries in order that they may increasingly assume their basic responsibilities for the control of locusts within their own borders and in cooperation with other countries and agencies affected by, or interested in, the Desert Locust. The Committee noted that this was in accord with FAO policy, but that in such cases as the control of the Desert Locust, there was a clear need for coordination of national efforts and that in this respect FAO was prepared to assume its constitutional responsibilities.

International Financial Resources

11. During 1954 FAO had incurred a total expenditure of US\$234,448 from its Regular Program and Expanded Technical Assistance Program budgets on Desert Locust control.

12. The 1955 ETAP appropriation for Desert Locust control stood at US\$149,671. No Regular Program funds for this purpose were available in 1955.

13. Cash contributions received by FAO for Desert Locust control in the Arabian Peninsula from the Governments of Bahrein, France, Jordan, Kuwait, Sudan and the United Kingdom totalled US\$66,022. Syria had also placed at the disposal of FAO the equivalent of US\$5,602, and contributions of US\$2,000 from Iran and US\$5,600 from the Arab League had been offered.

14. Whilst exact figures of the expenditure on the campaign up to mid-April were not available, it appeared that expenditure and outstanding commitments totalled about US\$129,312, leaving a balance of about US\$86,381. The Committee considered that the balance should be sufficient to meet normal operating expenses up to 30 June 1955 but would leave little or no surplus to cover preparations for the next campaign and operating expenses during the second half of 1955.

15. The Committee requested FAO to provide governments as soon as possible after 1 June 1955 with an up-to-date statement of expenditure incurred during the 1954/55 campaign.

Plans for the 1955/56 Campaign in the Arabian Peninsula

16. In view of the current locust situation, the Committee considered it necessary to plan for a campaign in the Arabian Peninsula in 1955/56 of at least similar proportions to that of 1954/55.

17. The Committee approved a time schedule for the various phases of the operation and a detailed estimate of requirements of personnel, transport, bait, insecticides, application equipment, petrol, stores, reporting, communications and accounting, prepared by the Executive Committee.

18. To overcome some of the difficulties experienced during the current campaign, it was recommended that:

(i) all contributions of bait should be delivered by the end of September and such contributions should if possible include transportation charges;

(ii) all cash contributions should be paid by September and the International Centre at Jeddah should be provided with adequate funds to cover initial expenditure;

(iii) FAO should provide locust compounds in Jeddah, Hail and Riyadh;

(iv) the International Centre should be maintained in Saudi Arabia for the duration of the cooperative work in the Arabian Peninsula;

(v) strategic reserves of bait, insecticides and equipment should be maintained at Jeddah, Hofuf/Dammam and Mafraq/Ma'an;

(vi) all bait should be distributed to field stores by the end of November;

(vii) all contributed vehicles should be in a fit mechanical state.

19. As the approved estimate of requirements was only a part of a full operational plan, FAO was requested to prepare and circulate to governments proposals for the allocation of teams to areas and detailed estimates of the cost of operating the plan so that these may be considered in detail at the next session of the Committee.

20. The Committee recommended that FAO should report to the Committee on possibilities and costs of obtaining aircraft for operating in the Arabian Peninsula.

Terms of Reference of the Executive Committee for
Desert Locust Control in the Arabian Peninsula

21. In agreeing that as much responsibility as possible should be delegated to those directly responsible for administering and coordinating the campaign in the Arabian Peninsula, the Committee approved terms of reference of the above Executive Committee.

International Cooperation in Desert Locust Control
in the Western Region

22. The Committee expressed its satisfaction at the agreement recently reached between the Governments of France and Spain for intensification of cooperation for the control of the Desert Locust in western Africa.

International Action in Support of Desert Locust
Control Operations in Ethiopia

23. The Committee noted the increasing part which the Government of Ethiopia was taking in locust control. Although locust breeding in Ethiopia was of great strategic importance and although Ethiopia was lacking in basic equipment, the Committee recognized that for the present the resources of FAO were best utilized in the Arabian Peninsula.

Control Techniques and Research

24. The Committee recommended that the FAO Technical Advisory Committee on Desert Locust Control should at an early date review control methods, including the use of aircraft, and that it should also take steps to formulate an international plan of research, particularly in regard to Desert Locust plague prevention.

Date of Next Session

25. The Committee recommended that the next session should be held in Rome during the second half of July or the first half of August 1955, that it should be preceded by a session of the Executive Committee for Desert Locust Control in the Arabian Peninsula and that a full agenda should be circulated well in advance.

REPORT OF THE SAUDI ARABIAN GOVERNMENT ON LOCUST CONTROL IN 1955

Locust swarms started to reach Saudi Arabia from south and southeast in August 1954. This indicated that the swarms arrived from Yemen and the Red Sea coasts of East Africa (Somaliland and its surroundings).

Egg-laying started in many wadis of the southern tihama at the end of the month and some swarms moved towards the north and northeast. Apparently there was a widespread infestation in Yemen, where hoppers developed into flying locusts, swarms of which moved towards Saudi Arabia in the middle of September 1954. Some of these swarms continued their flight towards the north and northeast of Saudi Arabia while egg-laying continued in the tihama until early February 1955 and in Asir until late February 1955.

On 10 November 1954, hoppers were located in the tihama and since then control teams have conducted control operations which are still being carried out, but are considered to be at the final stage.

In Asir and adjacent areas, hatching was delayed until early February 1955, and control operations are still going ahead in that area.

Swarms which had been reported to be flying towards the north and northeast reached Riyadh, Qasim, Al Hasa and Hail areas up to the Kuwait frontiers and the Persian Gulf coast, covering the Nefud and Dahana areas.

The northwest areas of Saudi Arabia, including the Syrian and Jordanian frontier areas as far as Aqaba had not been infested. Those areas had been reported to be free from locust infestations after the scouting which was carried out by Syrian, Jordanian and Egyptian teams.

The heavy rainfall in central Saudi Arabia in early January 1955 made conditions suitable for locust breeding. This had helped most of the swarms to settle down and lay eggs on a considerable scale.

By the middle of February 1955 hatchings had started. These were first located in Qasim area where the Saudi Arabian teams were ready to carry out campaign operations, which commenced against hoppers as soon as they were located.

It is apparent that this year's infestation is similar to that of last year, if not on an even greater scale, as hoppers have so far been

located in many areas.

As regards control teams, the Saudi Arabian Government, prompted by a sense of giving more support to the international locust campaign, had raised the number of its present control teams to ten, although it had been decided at the Working Party in Rome last year that the contribution of the Saudi Arabian Government would be seven self-contained teams, fully equipped with transport and personnel. The serious hopper infestations in different parts of central Saudi Arabia had made the formation of the other three teams necessary in order to deal with the situation.

It had also been decided in Rome that the Saudi Arabian Government would be asked to contribute one hundred tons of bait and that FAO should be asked to make available the required balance. Nevertheless, the Saudi Arabian Government had been forced by circumstances to buy another one hundred tons.

It appears from this statement that the heavy hopper infestations had forced the Saudi Arabian Government to contribute more funds, at a time when the budget of the Ministry of Agriculture could not meet the financial obligations arising therefrom. All this was in conformity with the international cooperative policy of locust control, in an endeavour to destroy the common enemy which threatens the agricultural production of Saudi Arabia and the neighbouring countries.

With regard to control operations, the Saudi Arabian Ministry of Agriculture has established a special office for the locust campaign, separate from the Plant Protection section of the Ministry, in order to guarantee quick reporting of locust movements and to be in close contact with the developments of the outbreak. In accordance with the Rome decision, the Ministry of Agriculture had carried out the formation of seven control teams, headed by Saudi Arabian locust officers who are assisted by Egyptian officials appointed by the Ministry of Agriculture on contract basis for this particular work.

The seven teams are equipped with the following:

- 8 Jeeps/Landrovers
- 7 Dodge Power Wagons
- 7 3-ton Fords
- 21 Hand sprayers
- 21 Hand dusters
- 2 Motor sprayers
- 500 tons Bait
- 3 tons BHC

These teams have been furnished with all necessary requirements such as tents, household requisites, petrol and spare parts for motor cars. Each team is composed of one locust officer, one guide, three drivers and ten labourers.

In view of the grave situation in the eastern and central areas, the Ministry of Agriculture has already taken the necessary steps for the formation of three other self-contained teams, in addition to the seven main control teams, to give the necessary effective support.

Saudi Arabian teams are at present working in Riyadh and Qasim, both of which are vast areas where many agricultural villages are situated and where many hopper infestations have been found.

The Saudi Arabian teams had taken part in control operations outside their own areas, especially in Hasa, until the arrival of Indian teams which had been delayed. I would also like to point out that all the natives and Government representatives in different parts of Saudi Arabia have taken part in control measures by sending reports on the movements of swarms, hatching locations, and by offering effective support to other international teams.

The international missions of other countries, the duties of which had been assigned by the Working Party in Rome in 1954, had arrived in Saudi Arabia and had already started work, although the late arrival of some missions, for example those from India and Pakistan, had delayed control operations.

The most active mission which has undertaken control measures against the perpetual invasion of swarms and early egg-laying was the British mission which is operating actively in the southern area of the Red Sea coast. The northern area of the Red Sea coast, which is scouted by the Egyptian mission, has been reported to be free from locust infestations and three teams of this mission are at present taking part in control measures in the Hail area.

The transfer of teams from one area to another to give the necessary support will be discussed later, in view of the fact that past experience has proved the necessity of such action.

The Jordanian, Syrian and Iraqi missions are working in northern areas near the frontier; reports have so far confirmed that there are very little locust activities in this area. The teams of the Indian mission are working in the eastern area towards the Persian Gulf coast. One Saudi Arabian team had found it necessary to carry out control measures in the Hasa area, after the discovery of hoppers; they had, however, withdrawn to another area on the arrival of Indian teams from Kuwait.

This area had been infested by locust swarms early in December and once again in late March.

The Pakistani teams are at present working in Oman on the Persian Gulf and arrangements have been made for their entry into Saudi Arabia when desirable. I would also like to mention the strenuous efforts of the Senior Locust Officer of the International Centre, who is also a representative of FAO, in distributing bait to different areas of Saudi Arabia and assigning teams of different missions to work according to coordinated plans. All these efforts have received the high admiration of the Saudi Arabian Government who would sincerely ask the member countries to sanction the continuation of the International Centre at Jeddah on a permanent basis, during and after the locust season.

The present representative is required to stay permanently in Jeddah so that my Government can make use of his long experience in locust control. The request of the Saudi Arabian Government for keeping this particular person in Jeddah indicates its high appreciation of FAO for their success in recruiting such qualified personnel.

I would also like to thank all governments contributing to this campaign for the effective support given by their missions in Saudi Arabia.

Concerning the locust control budget, the Saudi Arabian contribution for Desert Locust control for 1955 is nearly 802,000 rials, which is equivalent to US\$220,000, expendable as follows:

Cost of 7 Landrovers, 7 Power Wagons, 7 3-ton Lorries	367,000 Rs.
Cost of 200 tons Bait and 3 tons BHC and transport	102,000
Salaries of senior locust officer, locust officers, clerks and messengers for one year	140,000
Wages of 70 labourers for 5 months	15,000
Salaries of 30 drivers and assistants for 5 months	31,000
Estimated cost of fuel for 5 months	40,000
Cost of camp equipment for teams	100,000
Cost of control equipment, sprayers and dusters	7,000
	<u>802,000</u> Rs.

This is in addition to 35 tents contributed by the Ministry of Agriculture for the office.

The Saudi Arabian Government, having realized that the formation of three control teams was of utmost importance, has contributed a further amount of about 200,000 rials for this purpose. This brings the total amount contributed by my Government this year to nearly 1,000,000 rials,

which is equivalent to US\$266,666, while it was decided that the Saudi Arabian Government should contribute 400,000 rials only.

The funds already appropriated and those which it is hoped will be contributed by the Saudi Arabian Government during the 1956 control operations for the formation of fifteen teams might come to a total of nearly one million rials, equivalent to US\$266,666. As you see, the Saudi Arabian Government is sincerely endeavouring to contribute more than it can afford towards serving humanity and neighbouring nations.

I have tried in my statement to present to you a summary of the locust situation in Saudi Arabia and would invite your attention to the grave danger resulting from the negligence of control measures. Not only the Middle East would be threatened by such danger, but distant countries would also be affected. I would therefore call upon you to convince your governments to contribute more for locust control, especially because of the heavy infestations which we felt this year. It is apparent that hoppers which have been located this year will be the future locust swarms which will destroy the agricultural production next year. There is no doubt that the International Centre of FAO has fully realized the grave situation based on the experience gained this year. We cannot pretend that we have been in a position to destroy the entire hopper population, but we can say that we have done our best and hope that with the closing of the season we shall be able to feel that Saudi Arabia has offered a valuable service to humanity.

STATEMENT BY THE DELEGATE OF THE UNITED STATES OF AMERICA

Mr. Chairman, it seems unnecessary to say that the U.S. Government is very much interested in the developments that have been made in the control of the Desert Locust. The U.S. is pleased to have been able to assist in these developments through cooperation with the countries that are affected by this pest, through our participation in FAO and through participation in the work of this Committee and its predecessor.

During the period over the last four years in which the U.S. has had an opportunity to participate in and observe locust control activities in countries of the Middle East and South Asia, we have noted very substantial progress on the part of the countries of the region.

The U.S. has noted with special gratification the development within countries of the Middle East and South Asia of effective control operations, utilization of new techniques and insecticides, and a fine spirit of international cooperation. The FAO has performed valuable services contributing to the effectiveness of these control activities, by providing facilities, such as this Committee, for coordinating the operations of the countries of the region, by assisting the countries in the development of their own control organizations and by providing technical assistance to the control operations in the region.

Through this international cooperation (country to country, assistance by FAO and other interested agencies) the infestation, and the losses from locusts, have been materially reduced. Economic control has been effected in the Middle East.

While we can take some measure of satisfaction in the progress that has been achieved, we cannot, of course, allow our satisfaction to be translated into complacency or into a diminution of the competence and facilities that the countries of the region have built up.

We need rather to examine what we have done, what the present situation is, what the future is likely to hold, and establish a sound technical basis for the long-time continuing job of controlling this ancient and dangerous pest.

As we of the U.S. delegation see the present situation, economic control of the Desert Locust in countries of the Middle East and South Asia has been achieved through the joint efforts of all countries concerned. On the basis of a purely technical analysis it is evident that there is little likelihood of a major infestation that would be beyond the capabilities of the countries affected this year.

Nevertheless we must keep in mind the destructive potentials of this ancient enemy; therefore, our common problem is how to organize our cooperative activities so as to maintain economic control of the Desert Locust and assure that there will not be major infestation problems in future years.

As we of the U.S. delegation see it, the key to the achievement of our objective is the continued development and maintenance of strong competent control organizations in each of the countries of the region. We believe that the responsibility for control operations is best placed where the problem of infestation is most keenly felt, on the countries themselves. We know that the countries feel this responsibility and want to assume it. This they have amply demonstrated. Furthermore, financial assistance by the FAO was only initiated on an emergency basis in order to carry a part of this burden while countries were preparing to assume their normal responsibilities.

We believe, therefore, that the major efforts of FAO, FOA and other interested agencies should be directed toward aiding and encouraging the countries of the region in their efforts to assume responsibilities to cope with the infestation problem within their borders and in cooperation with neighbouring countries as situations warrant.

ALLOCATION OF FAO STAFF, VEHICLES AND EQUIPMENT IN SAUDI ARABIA
AS AT 31 MARCH 1955

Staff

	Total	H.Q. Jeddah	Hanakiya	Hail	Riyadh
Senior Locust Officer	1	1			
Locust Officers	3	1	1	1	
Admin. Officer	1	1			
Clerks	3	3			
Mechanics	2			2	
Drivers	28	3	3	18	4
Guides	4		1	3	

	Total No.	FAO			Egypt Teams	Saudi Teams	Convoy duty	Work- shops	Reserve
		Jeddah	Hanakiya	Hail					
<u>Vehicles</u>									
Landrover	10	2	1	1	3	2		1	
Dodge	10		2	2	3	2			1
Nubian	9				2		7		
Scammel	2							2	
Fiat	2					1			1
Breakdown	1							1	
<u>Equipment</u>									
Power									
Duster	5		1	1		2			1
ower									
Sprayers	2							2	
Knapsack									
Sprayers	15								15
Radio Sets	15								15
Camp									
Equipment	6		1	1					4

GEOGRAPHICAL DISTRIBUTION OF FAC ANTI-LOCUST
VEHICLES AND EQUIPMENT APRIL 1955

	Aden (Reserve)	Aden (D.L.C.)	Afghanistan	Ethiopia .	Iran	Iraq	Jordan	Kuwait	Pakistan	Saudi Arabia	Syria	Yemen	Total
<u>Vehicles</u>													
Jeep					7								7
Landrover					13		10*	2+	5	10	5*	2	47
Dodge				2					5	10		6	23
Nubian										9			9
Fiat										2			2
Scammel										2			2
Breakdown										1			1
<u>Equipment</u>													
Power Dusters						5	10		5	5		5	30
Power Sprayers					3	9	1			2			15
Knapsack Dusters	19	6	75				175		75			50	400
Knapsack Sprayers	50								20	15		15	100
Radio Sets										15			15

* Some operating in Saudi Arabia

+ Delivery awaited

APPENDIX V

1954 CAMPAIGN IN THE ARABIAN PENINSULA - ASSESSMENT OF GOVERNMENTAL CONTRIBUTIONS PROVIDED DURING 1954 FOR MATCHING WITH FAO FUNDS

No.	Date Initiated	Date Budgeted	Contributing Country	Nature of Contributions	Value \$	Total \$
1.	28.12.53	22. 1.54	United Kingdom	Bait	11,200	11,200
2.	28.12.53	22. 1.54	Egypt	Bran and BHC	7,532*	18,732
3.	14. 1.54	22. 1.54	United Kingdom	Bait	20,026	38,758
4.	14. 2.54	24. 2.54	United Kingdom	Bait	2,268	41,026
5.	16. 3.54	19. 3.54	Egypt	Vehicles and camp equipment	1,464	42,490
	(Egypt - Cancellation of No.2 for substitution by No.6)					34,958
6.	16. 3.54	19. 3.54	Egypt	Bran and BHC	8,309	43,287
7.	16. 3.54	19. 3.54	Jordan	Bait	2,942	46,229
8.	22. 3.54	30. 3.54	United Kingdom	BHC	9,550	55,779
9.	14. 4.54	23. 4.54	Saudi Arabia	Vehicles and camp equipment	1,950	57,729
10.	14. 4.54	23. 4.54	Egypt	Personnel	10,859	68,588
11.	14. 4.54	23. 4.54	Saudi Arabia	Personnel	1,273	69,861
12.	14. 4.54	23. 4.54	Saudi Arabia	Running expenses	6,366*	76,227
13.	15. 4.54	23. 4.54	Turkey	Vehicles	1,313	77,540
14.	29. 4.54	5. 5.54	Turkey	Bran and BHC	30,535	108,075
15.	11. 5.54	14. 5.54	Syria	Bran	5,046	113,121
16.	11. 5.54	14. 5.54	Syria	Bait	2,92*	115,413
17.	25. 5.54	16. 6.54	Iraq	Bait	5,320	120,733
18.	1. 6.54	16. 6.54	Syria	Bait	1,952*	122,685
19.	1. 6.54	16. 6.54	Syria	Personnel	1,782*	124,467
20.	1. 6.54	16. 6.54	Syria	Personnel	714*	125,181
21.	1. 6.54	16. 6.54	Kuwait	Transport	2,646	127,827
22.	11. 6.54	16. 6.54	Egypt	Personnel	3,620	131,447
23.	11. 6.54	16. 6.54	Egypt	Vehicles	1,556	133,003
24.	12. 6.54	16. 6.54	Syria	Personnel	1,991*	134,994
25.	12. 6.54	16. 6.54	Iran	BHC	5,769	140,763
26.	15. 6.54	7. 7.54	U.S.A.	Aerial operations	5,347	146,110
	(Saudi Arabia - Cancellation of No.12 for inclusion in No.27)					139,744
27.	15. 6.54	7. 7.54	Saudi Arabia	Operations	45,093	184,837
28.	17. 6.54	7. 7.54	Syria	Bran and BHC	2,465	187,302

(* Assessment adjusted subsequently)

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<u>No.</u>	<u>Date Initiated</u>	<u>Date Budgeted</u>	<u>Contributing Country</u>	<u>Nature of Contributions</u>	<u>Value \$</u>	<u>Total \$</u>
29.	28. 7.54	18. 8.54	Syria	Supplement to No.28	83	187,385
			(Syria - Cancellation of Nos.16 and 18 for substitution by No.30)			183,141
30.	28. 7.54	18. 8.54	Syria	Bait	3,893	187,034
			(Syria - Cancellation of Nos.19, 20 and 24 for substitution by No.31)			182,547
31.	28. 7.54	18. 8.54	Syria	Personnel	5,090	187,637
<hr/>						
32.	9. 9.54	6.10.54	Sudan	Cash	14,266	201,903
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33.	26.10.54	8.11.54	France	Cash	5,714	207,617

SUMMARY OF COUNTRY CONTRIBUTIONS 1954

	\$
Egypt	25,828
France	5,714
Iran	5,769
Iraq	5,320
Jordan	2,942
Kuwait	2,646
Saudi Arabia	48,316
Sudan	14,266
Syria	16,577
Turkey	31,848
United Kingdom	43,044
United States of America	5,347
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	207,617
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