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DESERT LOCUST SITUATION SUMMARY AND FORECAST

No. 99 NOVEMBER - EARLY DECEMBER 1986

SUMMARY

Widespread greagarious breeding in Sudan resulted in the formation of numerous swarms, one of which reached Egypt and others western and central Saudi Arabia. Gregarious breeding has started in Red Sea coastal areas and will become more widespread. In West Africa control operations terminated in Niger, Mali and Mauritania but considerable numbers of adults survive. Elsewhere a small swarm was reported in PDR Yemen and small populations were reported in Morocco, Tunisia, Somalia, Kuwait, Pakistan and India.

WEST AFRICA

Meteorology

The intertropical Front (FIT) continued to move south and by the end of November it was at about 10 N at the surface. Meteosat imagery indicated further northwards pulls of the FIT during the first decade of November, Tidjikja recording 9 mm of rain on 6 November. During the second and third decades the weather was dry in the interior but Atlantic disturbances produced pulls of the FIT, one on 5 December extended from the coast of Mauritania to temperate latitudes.

Maximum temperatures ranged from $35^{\rm O}{\rm C}$ in interior areas to $25^{\rm O}{\rm C}$ in coastal regions.

Breeding conditions

As a result of rains in September and October conditions were favourable for breeding in Tagant, eastern Trarza and Adrar in Mauritania. In Mali, conditions had become unfavourable for breeding in Tamesna and south-eastern Adrar des Iforas by early December. In Niger, also, conditions were no longer favourable for breeding by early December.

Locusts

MAURITANIA

As reported in Summary No. 98, joint Ministry of Rural Development, OCLALAV and Moroccan ground survey teams found infestations of hoppers and adults within the area 1800-1910N and 1130-1430W in early November, with gregarious populations in three blocks in the Khat el Moinane area (1820-1904N/1215-1220W) totalling some 800 square kilometres. These were reported by nomads to have resulted from the passage of a swarm in early October. Initially it was judged that all 800 square kilometres needed to be controlled but by 10 December control was completed having treated 38,550 hectares, of which 18,100 hectares by air and 20,450 hectares by ground. Total insecticides used: 8,900 litres of Fenitrothion 50%, 5,200 litres of Malathion 95% and 2,000 litres of Dieldrin 5%.

MALI

As reported in Summary No. 98 hopper bands and swarms were found by joint OCLALAV-Algerian ground teams in areas of green vegetation in Tamesna and south-eastern Adrar des Iforas ranging from hundreds to thousands of hectares.

Aerial and ground control measures were applied and by 26 November 33,099 hectares had been treated, of which 18,824 hectares by air and 14,275 hectares by ground teams, when control finished. 7,414 litres of Fenitrothion 1000, 1,570 litres of 5% Dieldrin and 800 litres of 20% Dieldrin were applied.

NIGER

In Air and Tamesna ground control operations were completed by the and of November. The total 39,270 hectares were treated using 8,415 litres of Fenitrothion 1000 and 16,800 litres of 20% Dieldrin. By early December the situation was reported to be calm.

NORTH-WEST AFRICA

Meteorology

During the first decade of November the eastern Maghreb was under the influence of Mediterranean depressions which gave moderate rains along the northern coast of Libya. By contrast, during the second decade, and in particular on 12 November, a cold front with waves moved from the Atlantic across Morocco giving torrential rains from Tangier to Laayoune. By 16 November the front had reached Algeria, giving 35 mm at Ghardaia. On 19 November disturbances affected the eastern Maghreb and on 25 November a new Atlantic depression resulted in further moderate-heavy rains in coastal areas.

Maximum daily temperatures were in the range $23^{\circ}-28^{\circ}$ C in interior areas and $18^{\circ}-22^{\circ}$ C in coastal areas.

Breeding conditions

Following widespread rainfall over much of the Algerian Sahara in October and again in the first two decades of November soil conditions were almost certainly suitable for breeding in many localities in the Sahara and NOAA/AVHRR imagery shows some vegetation development in the Tademait area and to the north of Tassili-n-Ajjer, and good vegetation development in the Oued Imited area of southern Morocco.

Locusts

MOROCCO

Three adults were seen at Oum Drayga (2348N/1311W) on 17-19 October_Scattered adults were seen at two localities in Errachidia and Ouazazate Provinces in 19-24 October. On 30 October solitarious adults were seen at densities of 10-50 per hectare over 200 hectares in green vegetation between Touzounine (2925N/0802W) and Akka (2923N/0814W) and were controlled on 31 October and 1 November.

TUNISIA

A total of 11 scattered adults was reported from Southern Tunisia in late November.

There were no reports from ALGERIA or LIBYA.

EASTERN AFRICA

Meteorology

Light rains were reported from Port Sudan but no rain was reported from the Red Sea coast of Ethiopia. No rains were reported from the northern coastal plains of Somalia but Djibouti reported 18 mm on 21 November.

Breeding conditions

By the end of November most coastal areas in Sudan were favourable for breeding.

Locusts

SUDAN

Widespread second generation summer breeding continued in a wide belt extending from Northern Darfur to Red Sea Provinces.

NORTHERN DARFUR PROVINCE

In early November there was further hatching west of Tawila (1330W/2454E). High density second to fifth instar hoppers and fledglings at a density of 1000 per hectare were reported over an area of 250 hectares. By mid-November some 37,000 hectares had been treated by aircraft using 24,000 litres of ULV pesticide and 4,200 hectares treated by ground units using 120,000 kg of poisoned bait.

NORTHERN KORDOFAN PROVINCE

Aerial and ground control operations were completed against hopper and adults infestations in the Um Dam, Sharshar, Mughanus, Gabrat Um Gamal, Dameira, Sodari Um Sayala and Hamrat el Wiz areas in mid-November.

NORTHERN PROVINCE

Aerial and ground control operations continued against hight density hoppers and adults over an area of some 600 square kilometres in the Baiyuda area (1733N/3207E). 420 hectares of high density hoppers and adults were also sprayed from the air south of Ed Debba. Egg laying adults and first instar hoppers were found in late November in the Merowe area. In early December a further 3,137 hectares were treated using 1,600 litres of Fenitrothion and 607 litres of diazinon EC.

NILE PROVINCE

In the Hassaniya aerial and ground control operations continued against high density hopper and adult infestations in the Abu Halfa, El Garas, Abu Usher and Abu Salam $(17^{\circ}N, 32-33^{\circ}E)$ areas and in Wadi Kurmut (1750N/3348E). Over 156,000 litres of liquid pesticide were used.

East of the Nile aircraft treated 1,600 hectares of adult infestations in the Umm Hawiya (1611N/3428E), Wadi Usheir (1604N/3429E) and Wadi El Basiyai (1604N/3437E) areas. Mature adults and hoppers of all instars were also found over 175 square kilometres east of the river Atbara. Ground control operations 60 square kilometres using 186 litres of Diazinon, 100 kg of HCH dust and 150 sacks of HCH bait. In the Shendi area control operations terminated against dense hopper and adult infestations in late November.

KHARTOUM PROVINCE

High density hopper and adults were found over an area of 190 square kilometres in Abu Teleik (1650N/330E) area in late November. A total of 24,000 litres of ULV insecticide and 3,246 sacks of HCH bait were applied. Scattered adults were also seen between the Niles and east of the Blue Nile.

WHITE NILE PROVINCE

In the Ed Dueim district aerial and ground control operations continued against hoppers and adults in the Helba (1415N/3137E), Arashkul (1409N/3206E), Baja and Abu Hamra (1429N/3154E) areas. In total 33,244 hectares were aerially sprayed and 4,691 hectares treated by ground teams, using 43,034 litres of ULV insecticides and over 121,000 kg of poisoned bait. Three swarms were seen in early December north-west of Ed Dueim and two swarms were seen in Kosti district.

GEZIRA PROVINCE

On 5 December a mature swarm measuring 6 sq km settled at Wad Habouba and later part settled on El Geneid Scheme (1448N/3319E).

KASSALA PROVINCE

In the Gash delta aerial and ground control operations terminated against hoppers and adults in the Metatib (1603N/3612E) and Tambai (1553N/3607E) areas in late November. 840 hectares were aerially sprayed in Wadi Odi using 1,000 litres of Fenitrothion. In early December two swarms covering 2,760 hectares were controlled in Eriba (1640N/3604E) and Wadi Omli and swarms were reported at Wadi Saloob (1704N/3635E), and Tshelel and Airabag (1640N/3604E). Groups of adults were also reported from Jehel Asoteriba (1704N/3525E).

RED SEA PROVINCE

The heaviest infestations were in the Derudeb (1730N/3610E) area. In mid-November dense groups of late instar hoppers fledglings and immature adults were found for some 40 kilomtres along the Kassala-Port Sudan road. Aerial and ground control operations were mounted but at least 12 swarms formed. One, measuring 1 sq. km flew over Derudeb on 20 November was controlled by aircraft; another settled over 30 sq.km at Dirbab (1747N/3601E) on 22 November and was controlled the next day. A third swarm was reported at Telguharai (1817N/3554E) on 23 November. A further nine swarms were controlled in the Derudeb area by early December. In all some 18,400 hectares were treated using some 6,000 litres of ULV pesticide.

In the Tokar delta mature copulating adults were found in many blocks in late November. In early December mature swarms invaded the Tokan delta. On 9 December one swarm of 30 sq. km settled at Tokar. Aerial spraying was in progress.

Scattered adults were also found in the northern section of the Red Sea up to the Egyptian border.

ETHIOPIA

A few scattered adults were reported from Mekele in early December. .

SOMALIA

Scattered adults were seen in the northern coastal plains in late November.

There were no other reports from the Region.

NEAR EAST

Meteorology

The meteorological situation was complex during November. The north of the Arabian peninsula was affected by Mediterranean depressions so that there were periods of warm southerly winds ahead of fronts interrupted by periods of cool northerly winds behind them. Widespread rain was reported in northern and western Arabia in late November; El Wejh recorded 26 mm and Turaif 42 mm on 29 November, and flooding occurred in Rabigh, Mastura, Wadi Fatima and Mecca.

Breeding conditions

Due to the good rains in late November conditions were becoming favourable for breeding along the Tihama of Saudi Arabia.

Locusts

KINGDOM OF SAUDI ARABIA

On 21 November pink adults at high densities were seen along the shore between Jeddah and Badr, 250 kilometres to the north. These adults moved inland reaching Mecca, Wadi Fatima. On 25 November a swarm was reported from Yanbu and another was reported from Jeddah on 26 November. By 29 November a swarm was reported from Buraida in the Qassim. On 30 November an immature swarm was reported from Adham (2015N/4110E) and on 1 December a swarm of mixed maturity was observed copulating in the Gumaiga area (2020N/4027E) north-east of Lith. Adults also reached Tabuk in early December. Control was in progress in all areas.

Earlier, scattered adults had been reported form several localities in the Jizan area.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

From 20-27 November 45 small hopper bands and 15 groups of fledglings were controlled in the Hush Bilad area. On 15 November a small swarm was seen at Al Khaber and Mahfid (1403N/4653E). Control operations continued in the Argah area.

KUWAIT

At the end of October scattered adults were controlled using malathion and dimethoate.

EGYPT

As reported in summary No. 98, an immature swarm reached the Gharb El Mawhoub area (2540N/2840E) and scattered over 50 sq. km. It was controlled by HCH bait.

IRAQ was reported clear. There were no other reports from the .Region.

SOUTH-WEST ASIA

Meteorology

Several eastward-moving disturbances crossed'the region, particularly during the third decade, and some light to moderate rainfall was reported from Uthal, Khuzdar and Panjgur in the winter-spring breeding areas.

Breeding conditions

Drought prevailed in the summer breeding areas.

Locusts

PAKISTAN

In the second half of October scattered adults were found in 62 localities in Uthal, Mirpur Khas, Sukkur and Bahawalpur districts, the maximum density being 8,500 per square kilometre at Chhao (2625N/6915E) on 29 October. In the first fortnight of November scattered adults were found at 62 localities in Uthal, Mirpur Khas, Sukkur, Bahawalpur and Rahimyar Khan districts, the maximum density being 4,750 per square kilometre at Chhao on 8 Novemebr.

INDIA

In the second half of October 500 kg of HCH 10% dust were used to control 20 hectares of second to fifth instar hoppers in Jaisalmer district. A few first to fifth instar hoppers were found at three localities in Bikaner district. Scattered adults were found at 36 localities in Bikaner, Jodhpur, Jaisalmer and Banaskantha districts; the lightest density being 1,200 per square kilometre at Nokha (2818N/7223E) on 22 October.

In the first half of November scattered adults were found at four localities in Bikaner, Jaisalmer and Banaskantha districts the maximum density being 300 per square kilometre at Nokha on 8 November.

There were no reports from AFGHANISTAN or IRAN.

FORECAST FOR JANUARY-FEBRUARY 1987

Gregarious breeding will become more widespread on both sides of the Red Sea and breeding will commence in the interior of Saudi Arabia. Breeding could also commence in Southern Western Sahara and adjacent areas of Mauritania.

In West Africa adults which survived control operations in November may start to breed in western and north-western Mauritania in areas which receive winter rains. Adults in Mali and Niger will remain in areas of green vegetation but will not breed.

In North-West Africa, breeding may commence in Southern Western Sahara in areas which receive winter rains. Small scale breeding could start towards the end of the forecast period in South-East Morocco and in areas in the Algerian Sahara which receive rainfall or rain-off.

In <u>Eastern Africa</u> gregarious breeding will be widespread on the Red Sea coastal plains of Sudan and is likely to extend to the northern Red Sea coastal plains of Ethiopia. Small scall breeding will occur on the northern coastal plains of somalia.

In the Near East gregarious breeding will be widespread on the southern Tihama of Saudi Arabia and will extend northwards, possibly reaching Sinai, Israel and Jordan towards the end of the forecast period. Gregarious breeding is also likely to occur in the South-Eastern Desert of Egypt. In the interior gregarious breeding will start towards the end of the forecast period and may be widespread in central northern Saudi Arabia and may extend into southern Jordan, southern Iraq and Kuwait. Small scale breeding may occur in the Yemen Tihama and may continue in coastal areas of Yemen PDR.

In <u>South-West Asia</u> small scale breeding may start in coastal areas of Baluchistan of Pakistan and adjacent area of Iran towards the end of the forecast period.

Rome 16 December 1986

