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DESERT LOCUST SITUATION SUMMARY AND FORECAST

NO. 88 DECEMBER 1985 - EARLY JANUARY 1986

SUMMARY

An important seasonal upsurge is in progress in western Saudi Arabia following widespread heavy rains in November and December. Ground control operations are being conducted against hopper bands and swarmlets but the infestations are likely to extend northwards along the Tihama and into the interior. Gregarious populations produced in Mauritania have dispersed but considerable numbers of adults are present and smaller numbers were reported from Mali and Niger.

WEST AFRICA

Meteorology

The Intertropical Front (FIT) continued to move towards the equator and reached the Gulf of Guinea in mid-December. Its intensity was greatly reduced over land but from Meteosat Infra-Red imagery there was thermoconvective activity over the Atlantic and, in particular, over the Gulf of Guinea. Mid-latitude Atlantic disturbances extended as far south as 10° N in the form of weak cold fronts which affected Mauritania and Senegal. ASECNA rainfall records supplied by OCLALAV indicated light to moderate rainfall in Senegal and southern Mauritania from 18 to 22 December. Strong north-easterly winds and sandstorms were frequently observed in the Sahel during December and the first half of January.

Maximum temperatures were generally around $30^{\circ}\mathrm{C}$ in the interior but $25^{\circ}\mathrm{C}$ in coastal areas.

Breeding conditions

In Mauritania during December there were substantial areas of green vegetation in depressions, flow lines and wadi beds in south-western Adrar between parallels 1826N and 1915N and meridians 1352W and 1444W. There was also abundant green vegetation in south-east Adrar, Adafer, Chinguetti, northern Atar, Aouker and north of Aioun.

In Mali most annual vegetation was dry or drying but some species, such as Schouwia, Colocynthis, Heliotropium and Morettia remained green in wadis in northern and southern Timetrine, north-western and south-eastern Adrar des Iforas and Tamesna, where Schouwia and Tribulus were heavily grazed.

In Niger some green patches remained in Air but the vegetation was beginning to dry in all areas. In Tamesna there were extensive areas of green Schouwia and Colocynthis, particularly in inter-dune areas and in areas of run-off.

Locusts

MAURITANIA

As reported in Summary No. 87 the areas infested in November were abandoned in late November and early December. Swarmlets moving west and south-west were seen at Tiguent (1714N/1558W) on 1 December and at Tenadji (1758N/1508W) on 9 December.

In south-west Mauritania, west of a line Boghe (1635N/1416W)-Nouakchott there was an extensive low density population of solitaricolor and pink adults. Around Lake R'Kiz the density varied from 10 to 300 per hectare. There were no hoppers.

In Aouker-Agane-border of western Tagant some breeding and swarmlets were reported. At Boutouerifa (1703N/1359W) a pink swarmlet was reported. At Ledfotar (1743N/1230W) the OCLALAV guide reported the passage of several swarmlets from the east.

In the depressions of south-west Adrar there was an important population of adults in patches of green vegetation. Numerous pink adults were caught at light traps at Dayet Allah (1840N/1403W) and Tin Niafail (1819N/1525W).

MALI

In southern Timetrine there were fledglings at densities of 20 to 100 per hectare and third to fifth instars, green with weak black markings, at densities of 400 to 600 per hectare.

In northern Adrar des Iforas thère were only isolated young adults and hoppers except in wadi Irharhar (1955N/0110E) where the density of immature adults reached 1000 per hectare. Due to overgrazing the areas which were infested in November in Tamesna and the Adrar des Iforas contained only low density immature and mature adults.

NIGER

Fledglings at densities of 50-150 per hectare were observed at Agaliok (1845N/0745E) in Air and at Akaracha (1725N/0553E) in Tamesna. Elsewhere the situation was calm.

NORTH-WEST AFRICA

Meteorology

Early December was marked by high pressure and dry weather over the Maghreb but from 5 December a series of Atlantic depressions traversed the area from west to east giving local important rainfall. The following significant rains fell in the recession area: 17mm at Bechar on 9 December, 31mm at Adrar on 10 December, 35mm at Zuara, 31mm at Misurata and 10mm at Nalut on 12 December, 26mm at Remada on 14 December, 17mm at In Salah and 14mm at Adrar on 15 December,

48mm at Nalut, 15mm at Ghadames and 11mm at In Amenas on 16 December, 26mm at Sirte and 14mm at Misurata on 17 December, 84mm at Giarabub on 18 December and 17mm at Derna on 22 December.

On 30 December an important wave developed in a cold front of Atlantic origin during its passage across the Maghreb giving the following rain: 32mm at Bechar, 20mm at Djelfa, 15mm at Errachidia, 13mm at Beni-Mellal. El Golea received 2mm and Adrar 1mm, which apparently represented the southern limit of the zone affected by the disturbance before it returned towards the Mediterranean.

In early January a ridge of high pressure extended from the Atlantic to Morocco which weakened the effects of disturbances in coastal areas of the Maghreb.

Maximum temperatures were around 25°C in the Sahara while in the north they varied from 12° to 25°C according to whether the air was of polar or tropical origin.

Breeding conditions

Conditions will have been suitable for breeding locally in the Sahara.

Locusts

No locusts were reported from the Region.

EASTERN AFRICA

Meteorology

According to DLCO-EA reports and Meteosat imagery the Red Sea coastal plains of Sudan and Ethiopia, and the coastal plains of northern Somalia were dry during December and the first half of January. However, according to GTS data Port Sudan received 27mm on 1 January, and Djibouti reported 10mm of rain on 4 December.

Breeding conditions

Vegetation was reported to be dry on Red Sea and Gulf of Aden coasts.

Locusts

ETHIOPIA

A report of locusts at Mersa Cuba on 22 November proved to be of African Migratory Locusts. Control measures were undertaken from 2 to 31 December.

There were no other reports from the Region.

NEAR EAST

Metëorology

Much of the Arabian peninsula was affected by Mediterranean disturbances. The most significant was on 18 December when a depression with a trough reached its maximum development with a centre of 1000 millibars, while there were stationary anticyclones of 1025 millibars over Spain and the Himalayas. These resulted in a regeneration of cyclogenesis over Arabia. There were widespread moderate to heavy rains as follows: 29mm at Tebuk, 27mm at Hail, 14mm at Badan, 12mm at Turaif on 18 December and 22mm at Jeddah, 18mm at Taif on 19 December. There were floods in Mecca, and Qunfidah and Jizan received good rains.

From the end of December to mid-January anticyclonic ridges extending from the continental high pressure area centred over the Himalayas formed over the Near East and the weather became dry. The Red Sea Convergence Zone generally lay between 15° and 20° N.

Maximum daily temperatures showed considerable variation according to changes in air masses. They were frequently around 30° C in southern areas but in the north they were generally between 18° and 23° C.

Breeding conditions

As a result of the heavy rains of November, ecological conditions became extremely suitable for breeding, particularly in the southern Tihama of Saudi Arabia.

Locusts

KINGDOM OF SAUDI ARABIA

According to late reports immature adults were found at densities of 300 to 400 per hectare in cultivations in wadi Shuqeiq (1743N/4200E) in October, at a density of 400 per hectare over 6 hectares in millet fields south of Jeddah and individuals were seen in the Mhail area in November.

Following the sighting of Desert Locusts on a fishing trawler 40 kilometres west of Jizan on 10 November ground surveys of the Tihama were intensified.

On 2 December mature solitary adults were found over an area of about .100 square kilometres around Sadiyah (2039N/3953E) at densities of 200 per hectare.

On 7 December a ground survey team found three patches of first to third instar gregarious hoppers at Al Habgah (2007N/4042E). On 16 December a further 15 patches were seen over an area of 600 square kilometres between Wadis Sedra and Ayyar (2018N/4032E). On 18 December similar hopper bands were seen over an area of 600 square kilometres north-east of Mudheilif between Wadis Nawwan and Doga (1930-1945N/4100-4110E). Further infestations were found around Al Habgah on 22 December, when the total infested area was estimated at 1600 square kilometres and fifth instar hoppers and fledglings were present.

By early January the total area infested between Lith and Qunfidah was estimated to be 2500 square kilometres. Ground control operations using Exhaust Nozzle Sprayers commenced on 10 December and by the end of the month 200 hopper bands had been controlled.

On 13 January three swarmlets were completely controlled south-east of Lith and a further 200 hopper bands and fledglings were controlled north and south-east of Hali (1842N/4125E) and east of Lith.

Further north mature solitary adults were found west of Ain El Basha, at Sadiyah and Tuffail on 14 December at densities of 100-200 per hectare, and at 10 localities from north of Jeddah to north-east of Rabigh on 21 December, the maximum density being 700 per hectare over 10 square kilometres at Jehfa (2242N/3902E), where copulation was observed. During January the numbers of adults was reported to be increasing as far north as Madina.

PEOPLE'S DEMOCRATIC REPUBLIC OF YEMEN

Three adults were seen on the western coast during November.

There were no other reports from the Region.

SOUTH-WEST ASIA

Meteorology

In spite of the predominance of continental high pressure some disturbances reached the winter-spring breeding areas. During the second fortnight of December there was light to moderate rainfall in coastal areas of Lasbela and Mekran, and widespread heavy rain in Nushki and Quetta areas during the last week, Quetta recording 22mm on 25 December and 14mm on 28 December.

Breeding conditions

Conditions will became favourable for winter-spring breeding if there is further rain.

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No locusts were reported from PAKISTAN during December or the first half of January, from INDIA during the first half of December or from AFGHANISTAN during November.

FORECAST FOR FEBRUARY-MARCH 1986

An important seasonal upsurge is in progress on the Tihama of Saudi Arabia. Despite control there will almost certainly be escapes which will move north and north-east and result in further extensions of the infested areas. The gregarious populations produced during the upsurge in Mauritania have dispersed. Adults will persist in Mali and Niger. Elsewhere the situation will remain calm.

In <u>West Africa</u> the adults produced during the late summer upsurge have dispersed but considerable numbers will persist in areas of green vegetation. Some may move north towards the Western Sahara during spells of southerly winds and may mature and lay but egg and hopper development will be slow. Moderate numbers of adults will persist in Timetrine, the Adrar des Iforas and Tamesna of Mali and Tamesna and Air of Niger.

In North-West Africa the situation will remain calm.

In <u>Eastern Africa</u> only very limited breeding is likely on the Red Sea coastal plains of Sudan and Ethiopia or the coastal plains of northern Somalia.

In the <u>Near East</u> gregarious breeding will extend northwards along the Tihama of Saudi Arabia. Considerable numbers of adults are likely to move through the Hijaz mountains and reach the interior, where breeding will commence. This could lead to the formation of widely distributed hopper bands. Some adults could reach eastern Saudi Arabia and the United Arab Emirates towards the end of the forecast period.

In <u>South-West Asia</u> small numbers of adults will be present in coastal and interior areas of Baluchistan of Pakistan and small scale breeding is likely to occur.

Rome, 22 January 1986

