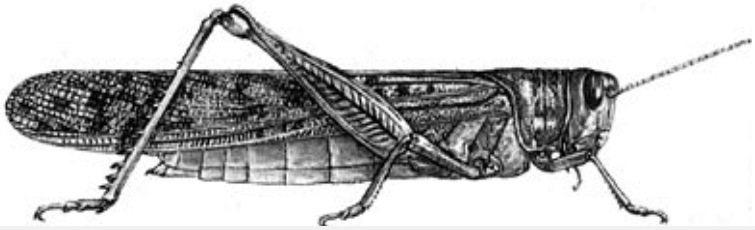

# DESERT LOCUST BULLETIN

**FAO Emergency Centre for Locust Operations** **No. 299**

*(4 September 2003)*

## General Situation during August 2003 Forecast until mid-October 2003

**The Desert Locust situation continued to remain calm during August. Even though there were good rains and ecological conditions were unusually favourable over a large portion of the summer breeding areas, only scattered locusts were reported in West Africa, Sudan and along the Indo-Pakistan border. Nevertheless, small-scale breeding is in progress and locust numbers are gradually increasing in most areas. This situation is expected to continue during the forecast period and, if rains continue, populations could eventually become more significant. Consequently, it is important that all affected countries carry out regular surveys and report their results in a timely manner.**

**Western Region**. Small-scale breeding was reported to be in progress in southern **Mauritania**, northern **Mali** and **Niger** where low numbers of solitarious hoppers and adults were seen during surveys in August. A similar situation is likely to exist in northeastern **Chad** and southern **Algeria**. Consequently, locust numbers were gradually increasing in all of the traditional summer breeding areas. Due to the unusually good conditions this year, breeding is likely to continue during the forecast period, causing locust numbers to increase further.

**Central Region.** Small-scale breeding was detected in Northern Darfur, **Sudan** and is likely to be in progress in Northern Kordofan where only scattered adults have been found so far. As vegetation is very green further north this year than in most years, breeding will continue during the forecast period, causing locust numbers gradually to increase. Additional locusts may appear and breed along the Gash River in eastern Sudan near the Eritrean border where severe flooding occurred for the second consecutive month. No locusts were reported elsewhere in the region except for a few Desert Locust mixed with African Migratory Locust that persisted in an agricultural scheme in southern **Egypt**. Conditions continued to improve in parts of the summer breeding area in the interior of **Yemen**.

**Eastern Region.** Isolated adults persisted in the summer breeding areas in **Pakistan** and are almost certainly present in adjacent areas in Rajasthan, **India**. Small-scale breeding is likely to be in progress in both countries, but difficult to detect. As a result, locust numbers will increase slightly but remain below threatening levels.

The FAO Desert Bulletin is issued monthly, supplemented by Updates during periods of increased Desert Locust activity, and is distributed by fax, e-mail, FAO pouch and airmail by the Locusts and Other Migratory Pests Group, AGP Division, FAO, 00100 Rome, Italy. It is also available on the Internet.
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## Weather & Ecological Conditions in August 2003

**Conditions continued to be unusually favourable for breeding over a widespread area extending from Mauritania to western Eritrea as well as along the Indo-Pakistan border. Good rains fell throughout these areas during August.**

In the **Western Region**, the Inter-Tropical Convergence Zone (ITCZ) oscillated around 20N during August with periodic surges to 25N over northern Mauritania, northern Mali and southern Algeria. Consequently, good rains fell in most of the traditional Desert Locust breeding areas between Mauritania and Chad. In Mauritania, widespread rains occurred in the two Hodhs during the first decade and, thereafter, low to moderate rains fell throughout the south. In Mali, light to heavy rain fell in the Adrar des Iforas and Timetrine. In Niger, good rains were reported in Tamesna and in the Air Mountains. In Chad, light rain fell in the east near the Sudanese border. Breeding conditions are favourable in all of the above-mentioned areas for the second consecutive month. During the second decade of August, rainfall occurred unusually far north in the Sahel due to the northerly surges of the ITCZ. For example, light to moderate rainfall was reported in northern Mauritania at Zouerate and Bir Moghrein. In Algeria, widespread light showers fell throughout the south and heavier rain occurred near the Hoggar Mountains. In Morocco, heavy rain fell along the Atlantic coast near Tan-Tan. Consequently, ecological conditions are improving in these areas.

In the **Central Region**, good rains fell in August for the second month in a row throughout the summer breeding areas in Sudan and in the interior of Yemen. Conditions are unusually favourable for breeding in Northern Darfur and in Northern Kordofan, where green vegetation extends quite far north to about 17N. Heavy floods occurred along the Gash River on the western side of the Red Sea Hills north of Kassala and in adjacent areas of western Eritrea during July and August. Conditions will improve in these areas when the floodwaters recede. In Yemen, moderate to heavy rains fell in the interior desert of Shabwah between Marib and Wadi Hadhramaut where flooding was reported. Green vegetation was present near Marib and Ataq. Good rains also fell on the Red Sea coastal plains where, again, local flooding is said to have occurred. Heavy showers were reported along the northern coast of Djibouti between Obock and the Eritrean border, and rain fell in northern Somalia on the escarpment and the plateau in the northwest between Boroma and Hargeisa. As a result, breeding conditions are likely to be improving in almost all of these areas. Light to moderate rains continued to fall in eastern Ethiopia near Dire Dawa.

In the **Eastern Region**, good rains associated with the monsoon continued to fall during August for the second consecutive month along the Indo-Pakistan border. Most of the rainfall occurred in Rajasthan where light to moderate showers were reported from Jodhpur (76 mm during the first half of August) and Barmer (31 mm) while very little rain fell at Bikaner and Jaisalmer. Nevertheless, conditions continued to be favourable for breeding over a large portion of Rajasthan. In Pakistan, light rainfall is thought to have occurred in parts of Tharparkar and Cholistan deserts. Light rain also fell in some places in Baluchistan, western Pakistan but this is unlikely to have a significant impact on the Desert Locust.

## Area Treated

No control operations were reported during August.

## Desert Locust Situation and Forecast

*( see also the summary on page 1 )*

**WESTERN REGION**

**Mauritania**

• **SITUATION**

A late report indicated that no locusts were seen during a survey carried out in the south on 17-25 July.

During August, isolated immature adults were seen during the first decade at two places in Hodh Gharbi east of Aioun El Atrous (1702N/0941W) and at one place in southwestern Adrar between Tidjikja (1829N/1131W) and Akjoujt (1945N/1421W). During the second decade, more adults were found throughout the south between Boutilimit (1740N/1446E) and Nouakchott (1809N/1558W), southwest

of Tidjikja, north of Kiffa (1638N/1124W) and near Nema (1632N/0712W). Isolated hoppers of all instars (from undetected laying that occurred from early July onwards) were reported at three places north of Kiffa. During the third decade, breeding extended to the remaining places mentioned above where isolated hoppers of all stages were present and low numbers of adults persisted.

• **Forecast**

*Locust numbers will gradually increase throughout the south as small-scale breeding continues during the forecast period. New adults will appear in currently infested areas where a second generation of breeding is likely to occur. Some adults may move further north into southern Adrar and Inchiri while others may move westwards to Trarza. Small-scale breeding is likely to occur in these areas as well.*

**Mali**

• **Situation**

During August, scattered solitarious hoppers of all instars, fledglings and immature and mature adults were present in the Adrar des Iforas between Kidal (1827N/0125E) and the Algerian border. Isolated adults were seen further west in the Tilemsi Valley and, to a lesser extent, in the Timetrine. No information has been received from Tamesna or from the area south of Kidal.

• **Forecast**

*Locust numbers will gradually increase as small-scale breeding continues in the Adrar des Iforas. Breeding is likely to extend into adjacent areas of the Tilemsi Valley, the Timetrine and to parts of Tamesna. New adults will appear throughout the forecast period and a second generation of breeding could occur in those areas where conditions remain favourable. Surveys are recommended in all these areas.*

**Niger**

• **Situation**

During August, scattered immature and mature adults, at densities of 100-200 per ha, and low numbers of hoppers were present at several locations near Agadez (1700N/0756E).

• **Forecast**

*Small-scale breeding will continue in areas of recent rainfall in the Air and Tamesna and may extend to the Tillaberi region. Consequently, locust numbers will gradually increase during the forecast period. Surveys are recommended in all these areas.*

**Chad**

• **Situation**

No reports received.

• **Forecast**

*Scattered adults are likely to be present and breeding in the northeast between Biltine and Ennedi. Locust numbers are likely to increase slightly due to small-scale breeding during the forecast period. Surveys are recommended in all these areas.*

**Senegal**

• **Situation**

No locusts were reported during August.

• **Forecast**

*No significant developments are likely.*

**Algeria**

• **Situation**

No surveys were carried out and no locusts were reported during August.

• **Forecast**

*Low numbers of adults may be present in the extreme south adjacent to the Malian border and the Adrar des Iforas as well as in other areas of recent rainfall. There is a possibility of small-scale breeding in some of these areas during the forecast period. Regular surveys of these areas are strongly recommended.*

**Morocco**

• **Situation**

No locusts were reported during August.

• **Forecast**

*No significant developments are likely.*

**Libyan Arab Jamahiriya**

• **Situation**

No reports received.

• **Forecast**

*No significant developments are likely.*

**Tunisia**

• **Situation**

No reports received.

• **Forecast**

*No significant developments are likely.*

**Burkina Faso, Cape Verde, Gambia, Guinea Bissau and Guinea Conakry**

• **Forecast**

*No significant developments are likely.*

## CENTRAL REGION

### Sudan

• **Situation**

During August, scattered immature and mature solitarious adults at densities of 3-200 per ha were present in Northern Kordofan along or near Wadi Milk for about 200 km from Umm Badr (1413N/2758E) to about 1610N. Isolated mature adults were reported on the western side of the Red Sea Hills between Derudeb (1731N/3607E) and Sinkat (1855N/3648E), near Khartoum, in the Baiyuda Desert west of Atbara (1742N/3400E) and in Northern Darfur near El Fasher (1337N/2522E). A few fourth instar hoppers were also seen near El Fasher. No locusts were seen in the Northern Region at Merowe (1830N/3149E).

• **Forecast**

*Small-scale breeding will continue in Northern Darfur and is likely to be already in progress in Northern Kordofan, but difficult to detect. Consequently, locust numbers will gradually increase but remain below threatening levels. By the end of the forecast period, new adults are likely to appear and a second generation of breeding could occur in some places, especially along the Gash River on the western side of the Red Sea Hills north of Kassala as the recent flooding begins to recede.*

### Eritrea

• **Situation**

No locusts were seen during surveys carried out on the central Red Sea coastal plains and in the western lowlands on 11-14 August.

• **Forecast**

*Scattered adults may be present and breeding on a small scale in the western lowlands. Consequently, locust numbers are likely to increase during the forecast period. Surveys are recommended in these areas.*

### Somalia

• **Situation**

No locusts were seen during surveys carried out on the plateau between Hargeisa (0931N/4402E) and Boroma (0956N/4313E) and on the coastal plains between Berbera (1028N/4502E) and the Djibouti border on 18-22 August.

• **Forecast**

*No significant developments are likely.*

### Ethiopia

• **Situation**

No surveys were carried out and no locusts were reported during August.

• **Forecast**

*No significant developments are likely.*

### Djibouti

• **Situation**

No surveys were carried out and no locusts were reported during August.

• **Forecast**

*No significant developments are likely.*

### Egypt

• **Situation**

During August, a few individual mature Desert Locust adults and second to third instar hoppers mixed with African Migratory Locusts and grasshoppers, at densities of up to 110 per ha, persisted at one farm near the Sudan border at Sh. Oweinat (2219N/2845E). No locusts were reported elsewhere in the Western Desert.

• **Forecast**

*Low numbers of locusts are likely to persist in agricultural areas near Sh. Oweinat and may increase slightly if additional breeding occurs. Nevertheless, this does not pose a threat to neighbouring areas and no significant developments are likely.*

### Saudi Arabia

• **Situation**

No locusts were seen during surveys carried out on the central Red Sea coastal plains and in the northern portion of the interior on 6-20 August.

• **Forecast**

*Isolated adults may be present on the Red Sea coastal plains near Jizan and could breed in areas of recent rainfall. No significant developments are likely.*

### Yemen

• **Situation**

No locusts were seen during surveys carried out in the summer breeding areas of the interior between Marib and Sayun on 23-27 August.

• **Forecast**

*There is slight possibility of isolated adults in areas of recent rainfall on the Red Sea coast and in the interior near Marib where small-scale breeding could occur. Regular surveys should be carried out to monitor the situation.*

### Oman

• **Situation**

No locusts were reported during July. In August, no locusts were seen during surveys carried out in the

northern interior and on the Musandam Peninsula.

• **Forecast**

*No significant developments are likely.*

**Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria Arab Republic, Tanzania, Turkey, UAE and Uganda**

• **Forecast**

*No significant developments are likely.*

**EASTERN REGION**

**Iran**

• **Situation**

No reports received.

• **Forecast**

*No significant developments are likely.*

**Pakistan**

• **Situation**

During the first half of August, isolated immature and mature adults continued to persist in a few places near the Indian border in the Cholistan Desert and, to a lesser extent, in the Tharparkar Desert as well as west of Karachi in Lasbela Valley

• **Forecast**

*Small-scale breeding is almost certainly in progress in Lasbela, Tharparkar and Cholistan. Consequently, locust numbers will increase but should remain below threatening levels during the forecast period.*

**India**

• **Situation**

No locusts were reported in Rajasthan during the second half of July and the first half of August.

• **Forecast**

*Low numbers of locusts are likely to be present and breeding on a small-scale in Rajasthan west of Jodhpur between Barmer, Jaisalmer and Bikaner. Consequently, locust numbers will increase but should remain below threatening levels during the forecast period. Surveys should be carried out near Jaisalmer and the Pakistani border.*

**Afghanistan**

• **Situation**

No reports received.

• **Forecast**

*No significant developments are likely.*

## Announcements

**Locust reporting.** Affected countries are kindly reminded to make sure that all locust situation reports are sent to FAO HQ by the 28th day of the month so the information can be included in the FAO bulletin for the current month; otherwise, it will not appear until the following month. Reports should be sent even if no locusts were found or if no surveys were conducted.

**Reporting by e-mail.** After each survey or control operation, affected countries should send completed *FAO Desert Locust Survey and Control Forms* with a brief interpretation of the results by e-mail to eclo@fao.org.

**Desert Locust Guidelines.** The revised edition in English was issued in September 2001 and is now available from FAO. French and Arabic versions as well as a sixth guideline on safety and environmental precautions will be released this autumn. Please contact the Locust Group for more information.

**eLocust.** Updated details of a new system for recording and transmitting locust survey and control data collected in the field can be found on the Internet at www.fao.org/news/global/locusts/elocust.htm.

**Publications on the Internet.** More reports of FAO locust-related meetings are available for downloading at www.fao.org/news/global/locusts/reports1.htm:

- CLCPANO: 24th (and final) session report (French)
- CLCPRO: 2nd session report (French)
- EMPRES/CR: Spray Equipment Evaluation (English)
- EMPRES/CR: 2002 Annual Report (English)
- EMPRES/CR and Central Region Commission: 2nd Joint Survey on the Egypt/Sudan border, January 2003 (English)
- SW Asia Commission: 9th Iran/Pakistan Joint Desert Locust Survey, 1-30 April 2003 (English)
- SPOT-VGT: form to be used in the field for validation of satellite vegetation imagery (English, Arabic)

**Desert Locust research award.** The FAO Commission for Controlling the Desert Locust in the Central Region (CRC) is pleased to announce a cash award for outstanding research on Desert Locust. For more details, please contact the CRC Office in Cairo (munir.butrous@fao.org).

No. 299

DESERT LOCUST BULLETIN

**Desert Locust Control Committee.** A commemorative medal will be handed out at the upcoming 37th session of the FAO Desert Locust Control Committee (DLCC) to Dr. Lukas Brader in recognition of his contribution to Desert Locust management during the 1986-89 plague, and to member countries (locust affected countries and donors) and regional organizations.

**2003 events.** The following are provisionally scheduled:

- **DLCC.** 37th Session, FAO Rome, 22-26 September
- **EMPRES/CR.** 11th Liaison Officers meeting, Djibouti, 19-23 October
- **EMPRES/WR.** 2nd Liaison Officers meeting, Agadir (Morocco), 8-13 December
- **Pesticide Referee Group.** 8th meeting, Rome, December (tba)

## Glossary of terms

The following special terms are used in the Desert Locust Bulletin when reporting locusts:

### NON-GREGARIOUS ADULTS AND HOPPERS

ISOLATED (FEW)

- very few present and no mutual reaction occurring;
- 0 - 1 adult/400 m foot transect (or less than 25/ha).

SCATTERED (SOME, LOW NUMBERS)

- enough present for mutual reaction to be possible but no ground or basking groups seen;
- 1 - 20 adults/400 m foot transect (or 25 - 500/ha).

GROUP

- forming ground or basking groups;
- 20+ adults/400 m foot transect (or 500+/ha).

### ADULT SWARM AND HOPPER BAND SIZES

VERY SMALL

- swarm: less than 1 km$^2$ • band: 1 - 25 m$^2$

SMALL

- swarm: 1 - 10 km$^2$ • band: 25 - 2,500 m$^2$

MEDIUM

- swarm: 10 - 100 km$^2$ • band: 2,500 m$^2$ - 10 ha

LARGE

- swarm: 100 - 500 km$^2$ • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km$^2$ • band: 50+ ha

### RAINFALL

LIGHT

- 1 - 20 mm of rainfall.

MODERATE

- 21 - 50 mm of rainfall.

HEAVY

- more than 50 mm of rainfall.

### OTHER REPORTING TERMS

BREEDING

- the process of reproduction from copulation to fledging.

SUMMER RAINS AND BREEDING

- July - September/October

WINTER RAINS AND BREEDING

- October - January/February

SPRING RAINS AND BREEDING

- February - June/July

DECLINE

- a period characterised by breeding failure and/or successful control leading to the dissociation of swarming populations and the onset of recessions; can be regional or major.

OUTBREAK

- a marked increase in locust numbers due to concentration, multiplication and gregarisation which, unless checked, can lead to the formation of hopper bands and swarms.

UPSURGE

- a period following a recession marked initially by a very large increase in locust numbers and contemporaneous outbreaks followed by the production of two or more successive seasons of transient-to- gregarious breeding in complimentary seasonal breeding areas in the same or neighbouring Desert Locust regions.

PLAGUE

- a period of one or more years of widespread and heavy infestations, the majority of which occur as bands or swarms. A major plague exists when two or more regions are affected simultaneously.

RECESSION

- period without widespread and heavy infestations by swarms.

REMISSION

- period of deep recession marked by the complete absence of gregarious populations.

**REGIONS**

**WESTERN**

- locust-affected countries in West and North-West Africa: Algeria, Chad, Libya, Mali, Mauritania, Morocco, Senegal, Tunisia; during plagues only: Burkino Faso, Cape Verde, Gambia, Guidea Bissau and Guinea Conakry.

**CENTRAL**

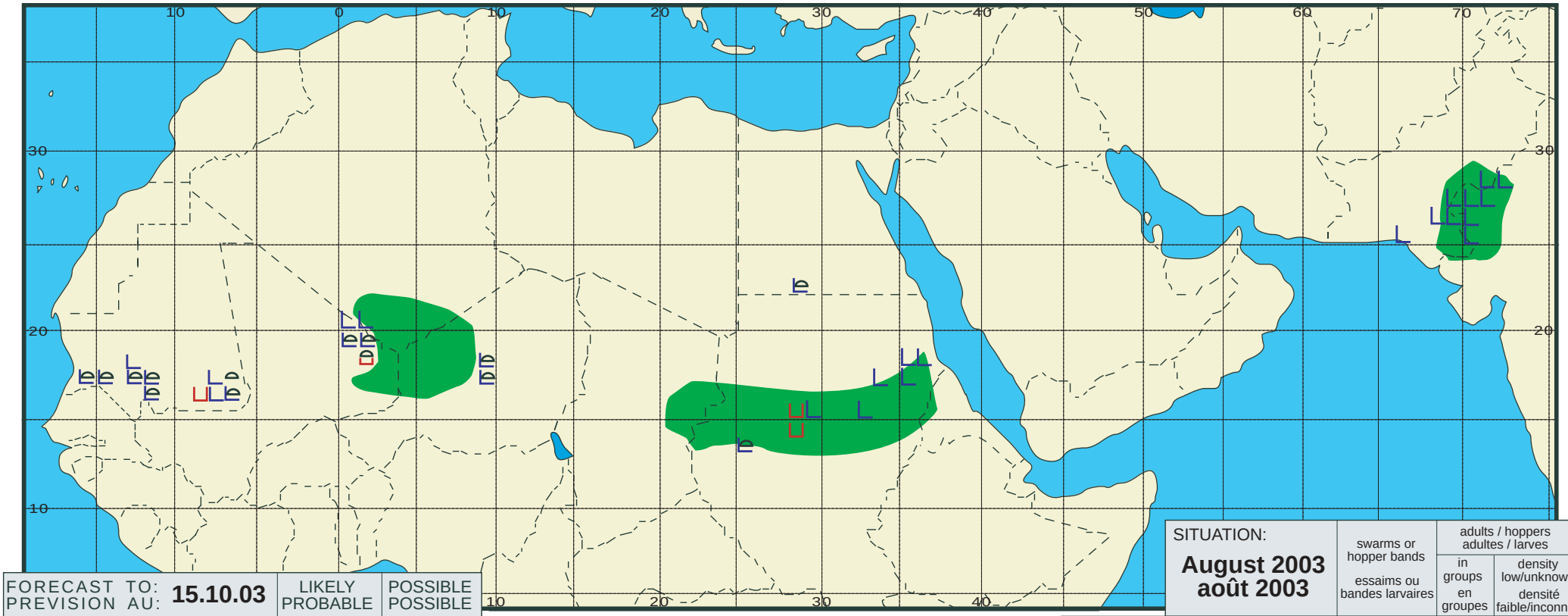
- locust-affected countries along the Red Sea: Djibouti, Egypt, Eritrea, Ethiopia, Oman, Saudi Arabia, Somalia, Sudan, Yemen; during plagues only: Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Qatar, Syria, Tanzania, Turkey, UAE and Uganda.

**EASTERN**

- locust-affected countries in South-West Asia: Afghanistan, India, Iran and Pakistan.

# Desert Locust Summary
# Criquet pèlerin - Situation résumée

**299**




| FORECAST TO: PREVISION AU: **15.10.03** | LIKELY PROBABLE | POSSIBLE POSSIBLE |
|---|---|---|
| favourable breeding conditions<br>conditions favourables à la reproduction | | |
| major swarm(s)<br>essaim(s) important(s) | | |
| minor swarm(s)<br>essaim(s) limité(s) | | |
| non swarming adults<br>adultes non essaimant | | |

| SITUATION: **August 2003 août 2003** | swarms or hopper bands<br>essaims ou bandes larvaires | adults / hoppers adultes / larves<br>in groups en groupes | density low/unknown densité faible/inconnue |
|---|---|---|---|
| immature adults<br>adultes immatures | ■ | □ | ⊔ |
| mature or partly mature adults<br>adultes matures ou partiellement matures | ◣ | ◺ | L |
| adults, maturity unknown<br>adultes, maturité inconnue | ▲ | △ | ∧ |
| egg laying or eggs<br>pontes ou œufs | ▼ | ▽ | ∨ |
| hoppers<br>larves | ● | ○ | ɒ |
| hoppers & adults (combined symbol example)<br>larves et adultes (exemple symboles combinés) | ◘ | ◙ | ⍥ |