

warning level: **CAUTION**

DESERT LOCUST BULLETIN

FAO Emergency Centre for Locust Operations



No. 401



**General Situation during February 2012
Forecast until mid-April 2012**

(2 Mar 2012)

A Desert Locust outbreak developed in early February in southwest Libya. Some adults moved into adjacent areas of southeast Algeria where local infestations were already present. Survey and control operations were limited due to insecurity in both areas. Good rains that fell in both countries will allow a second generation of breeding to occur during March and April. This is expected to cause locust numbers to increase dramatically and hopper bands to form. Scattered adults arriving from northern Niger may augment local populations. All efforts are required to monitor the situation carefully and undertake the necessary control operations to avoid a further escalation in the situation. Elsewhere, there was very little locust activity in the winter breeding areas along both sides of the Red Sea due to poor rainfall and dry conditions. In South-West Asia, small-scale breeding is expected to occur during the forecast period in western Pakistan and southeastern Iran but locust numbers will remain below threatening levels.

Western Region. An outbreak developed in early February in southwest Libya near the Algerian border as a result of good rains in October 2011 and undetected breeding at the end of the year. Hoppers and adults concentrated, gregarized and formed small groups and a few small bands and swarms. Some of the adults moved into adjacent areas of southeastern Algeria where local breeding was already underway

near Djanet. National ground teams treated 2,365 ha in Libya and 230 ha in Algeria during February. Good rains fell over a large area at mid-month and high-density adult groups were seen copulating. Consequently, a second generation of breeding will occur with hatching and hopper band formation during March and April. This is expected to cause locust numbers to increase dramatically in Libya and, to a lesser extent, in Algeria. The situation is not entirely clear because of insecurity and access difficulties on both sides of the border that hamper survey and control operations. In northern Niger, scattered adults that are likely to be present in the Air Mountains may move into southern Algeria during March. No locusts were reported elsewhere in the region.

Central Region. Vegetation continued to dry out in the winter breeding areas along both sides of the Red Sea due to a lack of rain during February. Nevertheless, breeding conditions were favourable on the southern coast in Sudan where scattered adults were present and laying eggs, and on the central Red Sea coast in Yemen. Isolated adults were present in northern Oman. No locusts were seen during surveys in Egypt and Saudi Arabia. During the forecast period, limited hatching will occur in Sudan but no significant developments are expected as vegetation continued to dry out.

Eastern Region. Breeding conditions slowly improved in parts of the spring breeding areas in western Pakistan due to light to moderate rains during February. Only isolated mature adults were present at a few places on the coast. During the forecast period, locusts are expected to appear in coastal and interior areas of western Pakistan and southeastern Iran. Small-scale breeding will occur in areas that receive rainfall, causing locust numbers to increase slightly but remain below threatening levels. No locusts were seen during routine surveys in Rajasthan, India.

The FAO Desert Locust Bulletin is issued every month by the Desert Locust Information Service, AGP Division (Rome, Italy). It is supplemented by Alerts and Updates during periods of increased Desert Locust activity. All products are distributed by e-mail and are available on the Internet.

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Weather & Ecological Conditions in February 2012

Good rains in mid-February will allow ecological conditions to remain favourable for breeding along both sides of the Algerian-Libyan border. Vegetation was becoming green in a few localized areas of the northern Sahel in West Africa and in parts of the spring breeding areas in South-West Asia. Mainly dry conditions prevailed in the winter breeding areas along both sides of the Red Sea.

In the **Western Region**, breeding conditions were favourable during February in southwest Libya and southeast Algeria where good rains fell in early October 2011 and again on 18-19 February. Consequently, vegetation remained green northwest of Ghat, Libya and east of Illizi, Algeria. Vegetation was becoming green in several wadis on the southern side of the Hoggar Mountains northwest of Djanet, and south of the Atlas Mountains west of Beni Abbes. In the northern Sahel, light rain may have fallen at times over western and central Mauritania and on the western edge of the Ténéré Desert in Niger near Adrar Madet. In northwest Mauritania, vegetation was becoming green on the northern side of Guelb Richât, and in the main wadis to the south and west of Oujeff. In northern Mali, vegetation was becoming green in the interdunal areas some 200 km northwest of Taoudenni and in a few places of the Adrar des Iforas near Kidal, Aguelhoc and Tessalit. In Niger, vegetation was becoming green in the eastern Tamesna between Tegguidda and Agadez, and in the main wadis of the Air Mountains.

In the **Central Region**, no significant rain fell during February. Consequently, mainly dry conditions persisted in the winter breeding areas along both sides of the Red Sea except for the central Tihama coast of Yemen where vegetation remained green. In central Oman, green vegetation was present between Hayma and the Arabian Sea at Duqm.

In the **Eastern Region**, light to moderate rain fell at times during the first half of February in parts of the spring breeding areas in western Pakistan near Turbat and Pasni. Vegetation was becoming green along the coast between Gwadar and Ormara, in Turbat Valley,



Area Treated

Algeria	230 ha (February)
Libya	2,365 ha (February)



Desert Locust Situation and Forecast

(see also the summary on page 1)

WESTERN REGION

Mauritania

• SITUATION

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

• FORECAST

Isolated adults may be present in parts of northern Trarza, Inchiri and southwest Adrar where breeding is unlikely unless good rains occur during the forecast period.

Mali

• SITUATION

No surveys were carried out and no locusts were reported in February.

• FORECAST

Low numbers of adults may be present and could persist in the few areas that remain green in the north. No significant developments are likely.

Niger

• SITUATION

No surveys were carried out and no locusts were reported in February.

• FORECAST

Low numbers of adults are likely to be present and will persist in the Air Mountains and the western edge of the Ténéré. Small-scale breeding may occur in areas of recent rainfall and cause locust numbers to increase. There is a moderate risk that some adults could move north to southern Algeria.

Chad

• SITUATION

No surveys were carried out and no locusts were reported in February.

• FORECAST

No significant developments are likely.

Senegal

• SITUATION

No reports were received during February.

• FORECAST

No significant developments are likely.

Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Nigeria, Sierra Leone and Togo

• FORECAST

No significant developments are likely.

Algeria

• SITUATION

On 8-9 February, an increasing number of immature solitary adults appeared on the Libyan border in W. Tarat (2610N/0923E) and to the northwest near Illizi (2630N/0825E) at densities of 5,000-7,000 adults/ha. Mature solitary adults were seen in the southern Sahara southeast of Tamanrasset (2250N/0528E). During the last decade of the month, mature *transiens* adults were seen copulating on the southern side of the Hoggar Mountains in the Bordj El Haoues area west of Djanet (2434N/0930E) where local breeding occurred in January. During February, control teams treated 200 ha near Illizi and 30 ha near Bordj El Haoues. No locusts were seen near Adrar (2753N/0017W) and Tindouf (2741N/0811W).

• FORECAST

Small-scale breeding will cause locust numbers to increase near Illizi, Djanet and Tamanrasset. Hatching is expected to commence before the end of March and hoppers are likely to form small groups and perhaps bands. This may be augmented by low numbers of adults arriving from northern Niger. Scattered adults may also appear near Adrar, Tindouf and Beni Abbes and breed on a limited scale if rainfall occurs.

Morocco

• SITUATION

No surveys were carried out and no locusts were reported in February.

• FORECAST

Low numbers of adults may appear south of the Atlas Mountains in the Draa and adjacent valleys during March and breed on a small scale if rainfall occurs. No significant developments are likely.

Libya

• SITUATION

An outbreak developed in early February in the southwest as solitary and gregarious hoppers and adults concentrated and formed small groups, causing locust densities and infestations to increase along the Algerian border northwest of Ghat (2459N/1011E). During the first week, mainly late instar hopper

groups and a few small bands as well as immature and maturing adult groups were present at densities up to 4,500 adults/ha. Infested areas varied from 10 m² to 1,000 ha. A small 1 km² maturing medium-density swarm was seen flying from east to west on 4 February and a small swarm crossed the Algerian border on the 6th. By mid-month, most of the hoppers had fledged and an increasing number of *transiens* and gregarious adult groups were seen copulating at densities up to 7,000 adults/ha. Ground teams treated 2,365 ha during February.

• FORECAST

Locust numbers are likely to increase dramatically as a second generation of hatching commences during March in the Ghat area. Hatchlings will probably form numerous small groups and bands. Additional infestations may be present in other parts of the west between Sabha and Ghadames.

Tunisia

• SITUATION

No surveys were carried out and no locusts were reported in February.

• FORECAST

No significant developments are likely.

CENTRAL REGION

Sudan

• SITUATION

During the first week of February, no locusts were seen during surveys carried out on the central and northern parts of the Red Sea coast from Port Sudan (1938N/3713E) to the Egyptian border and in Wadi Diib near Sufiya (2119N/3613E). During the second week, solitary mature adults were seen at a few places in Tokar Delta and along the southern coastal plains between Aqiq (1813N/3811E) and the Eritrean border at Karora (1745N/3820E). By the end of the month, some adults were seen copulating at densities up to 150 adults/ha.

• FORECAST

Limited hatching is expected to occur on the southern coastal plains in March that will cause locust numbers to increase slightly but remain below threatening levels.



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Eritrea

- SITUATION

No reports were received during February.

- FORECAST

No significant developments are likely.

Ethiopia

- SITUATION

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

- FORECAST

No significant developments are likely.

Djibouti

- SITUATION

No reports were received during February.

- FORECAST

No significant developments are likely.

Somalia

- SITUATION

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

- FORECAST

No significant developments are likely.

Egypt

- SITUATION

During February, no locusts were seen on the Red Sea coast between Shalatyn (2308N/3535E) and Halaib (2213N/3638E), in the Red Sea Hills west of Berenice (2359N/3524E), along the Lake Nasser shoreline near Abu Simbel (2219N/3138E) and Tushka (2247N/3126E), and in the northwest on the Mediterranean coast near Salum (3131N/2509E).

- FORECAST

No significant developments are likely.

Saudi Arabia

- SITUATION

During February, no locusts were seen during surveys on the central Red Sea coast near Thuwal (2215N/3906E), in the Asir Mountains near Khamis Mushait (1819N/4245E) and in the interior.

- FORECAST

No significant developments are likely.

Yemen

- SITUATION

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

- FORECAST

Low numbers of adults are likely to be present in a few places along the central Tihama. Unless further rains fall, breeding is not expected to occur.

Oman

- SITUATION

During February, isolated immature solitary adults were present in the northern interior of Dhahera region near Ibri (2314N/5630E) at Tan'am (2307N/5629E). No locusts were seen in Musandam and Sharqiya regions.

- FORECAST

Low numbers of adults may be present along parts of the eastern coast between Jazeer and Sur and along the eastern edge of the Wahiba Sands. Small-scale breeding could occur in areas of previous rainfall or if more rains fall during the forecast period.

Bahrain, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Palestine, Qatar, Syria, Tanzania, Turkey, Uganda and UAE

- FORECAST

No significant developments are likely.

EASTERN REGION

Iran

- SITUATION

During February, no locusts were seen on the southeastern coast between Jask (2540N/5746E) and Chabahar (2517N/6036E).

- FORECAST

Low numbers of locusts may appear on the southeastern coastal plains between Jask and Chabahar, and breed on a small scale in areas that receive rainfall.

Pakistan

- SITUATION

No surveys were carried out and no locusts were reported during the second half of January.

During February, isolated mature solitary adults were seen at two places on the coast of Baluchistan near Uthal (2548N/6637E). No locusts were seen elsewhere on the coast between Gwadar (2508N/6219E) and Ormara (2512N/6438E) or in the interior near Turbat (2600N/6303E), Panjgur (2658N/6406E), Kharan (2832N/6526E) and Nushki (2933N/6601E).

- Forecast

Low numbers of locusts will persist near Uthal and

are expected to appear in other coastal and interior areas, and breed on a small scale if rainfall occurs.

India

• SITUATION

No locusts were seen during surveys carried out in Rajasthan and Gujarat in February.

• FORECAST

No significant developments are likely.

Afghanistan

• SITUATION

No reports received.

• FORECAST

No significant developments are likely.



Announcements

Desert Locust warning levels. A colour-coded scheme indicates the seriousness of the current Desert Locust situation: green for *calm*, yellow for *caution*, orange for *threat* and red for *danger*. The scheme is applied to the Locust Watch web page and to the monthly bulletin's header. The levels indicate the perceived risk or threat of current Desert Locust infestations to crops and appropriate actions are suggested for each level.

Locust reporting. During calm (green) periods, countries should report at least once/month and send RAMSES data with a brief interpretation. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks, upsurges and plagues, RAMSES output files with a brief interpretation should be sent at least twice/week within 48 hours of the latest survey. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to the FAO/ECLO Desert Locust Information Service (eclo@fao.org). Information received by the end of the month will be included in the FAO Desert Locust 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.

Locust tools and resources. FAO has developed a number of tools that National locust information officers and other interested individuals can use for Desert Locust early warning and management:

- **MODIS.** Vegetation imagery every 16 days (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/Locusts/.Regional/.MODIS/index.html)

- **MODIS.** Daily rainfall imagery in real time (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/Locusts/index.html)
- **RFE.** Rainfall estimates every day, decade and month (http://iridl.Ideo.columbia.edu/maproom/.Food_Security/Locusts/index.html)
- **Greenness maps.** Dynamic maps of green vegetation evolution every decade (<http://www.devcoast.eu/user/images/dl/Form.do>)
- **FAODLIS Google site.** A platform for sharing problems, solutions, tips and files for eLocust2, eLocust2Mapper, RAMSES and remote sensing (<https://sites.google.com/site/faodlis>)
- **FAOLOCUST Twitter.** The very latest updates are posted on Twitter (<http://twitter.com/faolocust>)
- **FAOLocust Facebook.** A social means of information exchange using Facebook (<http://www.facebook.com/pages/FAOLocust/314165595289302>)
- **Slideshare.** Locust presentations and photos available for viewing and download (<http://www.slideshare.net/faolocust>)
- **eLERT.** A dynamic and interactive online database of resources for locust emergencies (<http://sites.google.com/site/elertsite>)

SWAC website. A new website for the FAO Commission for Controlling the Desert Locust in South-West Asia (SWAC) is now available at <http://www.fao.org/ag/locusts/SWAC>. Comments are welcome.

New information on Locust Watch. Recent additions to the web site (www.fao.org/ag/locusts) are:

- **Desert Locust situation updates.** Archives Section – Briefs
- **Libya outbreak.** Information Section
- **Contacts.** Information Section – Contacts
- **FAO Locust Group.** Activities Section

2012 events. The following activities are scheduled or planned:

- **CLCPRO.** 6th Session and 7th Executive Committee meeting, Tunis, Tunisia (26-31 March)
- **SWAC/CRC.** Inter-regional national locust information officer workshop, Cairo, Egypt (18-19 April)



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- **CRC.** 7th Sub-regional training course, Amman, Jordan (6-15 May)
- **DLCC.** 40th Session, Rome (18-22 June)
- **SWAC.** 28th Session, New Delhi, India (December, tbc)

Abdel Moneim Khidir. It is with deep regret that we announce the death of Abdel Moneim Khidir in January 2012. He had worked in the Locust Section of the Plant Protection Department in Sudan for some three decades as survey and control officer and, most recently, as head of the Locust Control Centre. We would like to express our sincere condolences to his family and government.



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 km² • band: 1 - 25 m²

SMALL

- swarm: 1 - 10 km² • band: 25 - 2,500 m²

MEDIUM

- swarm: 10 - 100 km² • band: 2,500 m² - 10 ha

LARGE

- swarm: 100 - 500 km² • band: 10 - 50 ha

VERY LARGE

- swarm: 500+ km² • 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.

WARNING LEVELS

GREEN

- Calm. No threat to crops. Maintain regular surveys and monitoring.

YELLOW

- Caution. Potential threat to crops. Increased vigilance is required; control operations may be needed.

ORANGE

- Threat. Threat to crops. Survey and control operations must be undertaken.

RED

- Danger. Significant threat to crops. Intensive survey and control operations must be undertaken.

REGIONS

WESTERN

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

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.



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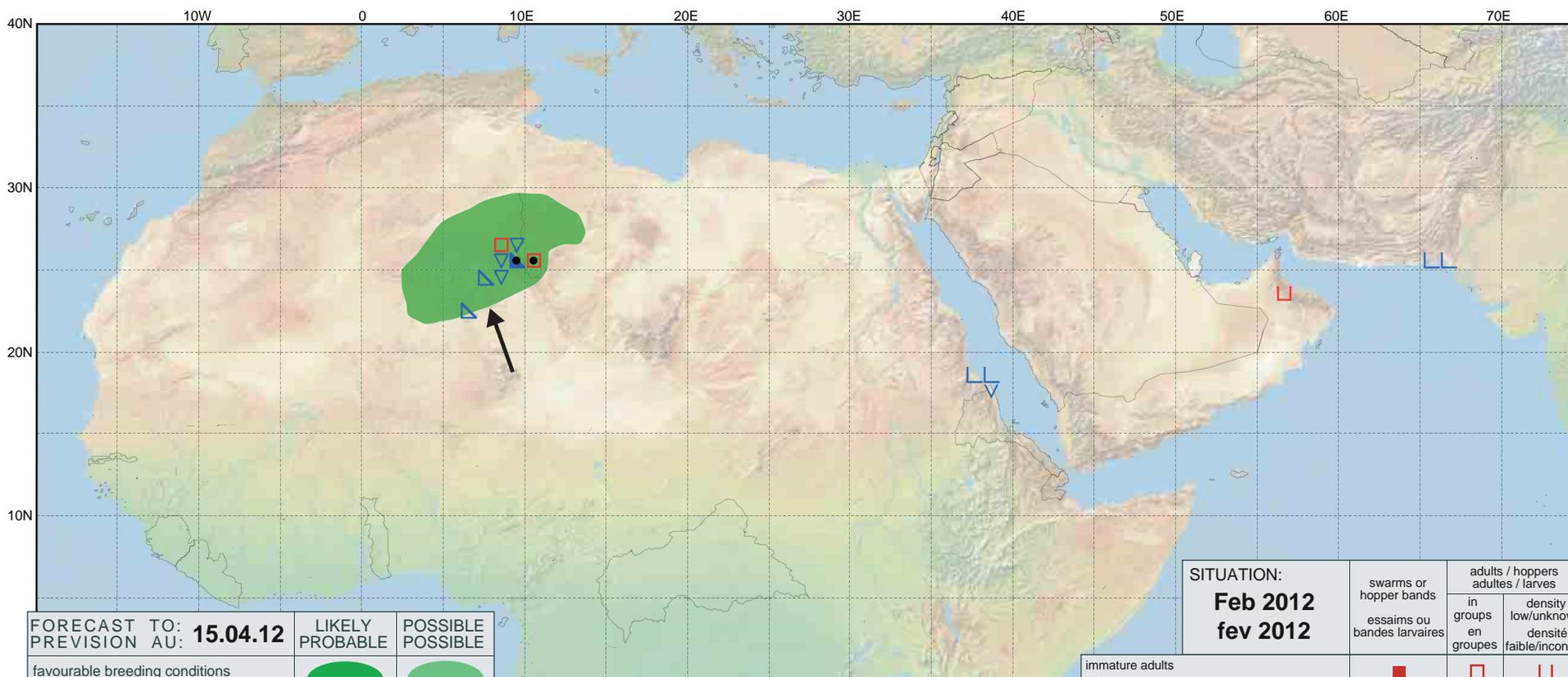
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Desert Locust Summary

Criquet pèlerin - Situation résumée



FORECAST TO: PREVISION AU:	LIKELY PROBABLE	POSSIBLE POSSIBLE
15.04.12		
favourable breeding conditions conditions favorables à la reproduction		
major swarm(s) essaim(s) important(s)		
minor swarm(s) essaim(s) limité(s)		
non swarming adults adultes non essaimant		

SITUATION: Feb 2012 fev 2012	swarms or hopper bands essaims ou bandes larvaires	adults / hoppers adultes / larves	
		in groups en groupes	density low/unknown densité faible/inconnue
immature adults adultes immatures			
mature or partly mature adults adultes matures ou partiellement matures			
adults, maturity unknown adultes, maturité inconnue			
egg laying or eggs pontes ou œufs			
hoppers larves			
hoppers & adults (combined symbol example) larves et adultes (exemple symboles combinés)			