



### LOCUST BULLETIN No. 8



FAO - Plant Production and Protection Division (AGPM)

12 May 2011

**Situation level for DMA, CIT and LMI: CALM**

#### General Situation during March 2011 Forecast until mid-November 2011

The locust situation was calm in March in almost all CCA countries where the weather conditions were not yet suitable for hatching. In Tajikistan, Uzbekistan and probably Turkmenistan, Moroccan Locust (DMA) hoppers appeared from mid-March onwards. No control operations were carried out during the month. Natural vegetation is growing slowly, probably as a response to the drought in southern Central Asian countries.

**Caucasus.** No hatching was reported in March. Temperatures were still cool and snow fell at times in Armenia. DMA hatching will start in April in Azerbaijan and Georgia, and Italian Locust (CIT) hatching is expected from late April or early May in Armenia and Georgia.

**Central Asia.** DMA hatching began by mid-March in Tajikistan and during the third decade of the month in Uzbekistan; hoppers appeared probably also in Afghanistan and Turkmenistan. No control operations were carried out so far. DMA and CIT hatching is likely to start in April in Kazakhstan and Kyrgyzstan.

#### Weather and Ecological Conditions in March 2011

Cool temperatures prevailed in most of CCA countries. In southern Central Asian countries, weather conditions were already suitable for hatching.

In **Caucasus**, cool weather prevailed.

In Armenia, the weather was variable in lowlands and snow fell in the mountains and foothills. Day temperatures ranged from -8°C to 21-24°C in lowlands, from -11°C to 14-18°C at foothills and from -18°C to 8-13°C in mountainous areas. From the second half of March onwards, snow cover disappeared in the valleys and some foothills but persisted until the end of the month in mountainous areas. In lowlands, spring field work concerned pruning of fruit trees. In mountainous areas and foothills, the crops were still dormant.

In Azerbaijan, the weather was cool, with average daily temperatures of 5-7°C, not suitable for locust egg development and hatching. Natural vegetation started its development but the cover was still sparse; crops were at germination and tillering stages.

In Georgia, rainy conditions prevailed and the average temperature was of 10-17°C.

In **Central Asia**, the weather was still cool and characterized by drought in the South.

In Kazakhstan, variable and relatively cool weather prevailed in all regions. In the southern part, clear and sunny conditions prevailed with variable cloudiness, gusty winds and some rains and snowfalls.

Temperatures ranged from -12°C to 17°C with a minimum of -22°C and a maximum of 26°C. Relative humidity varied from 16 to 100%. South- and north-westerly winds prevailed at a speed of 1-18 m/s. In the East, weather was variable with rapid change of temperatures and snowfalls. Average day temperature was of -7.3°C with a minimum of -27.4°C and maximum of 10.9°C. Relative humidity varied from 70.3 to 100%. Prevailing northerly and north-westerly winds had a speed of 1-18 m/s with gusts reaching up to 34 m/s. In the West, temperatures increased as compared to the previous month with day temperatures ranging from -21.2 to +6°C (minimum of -26.3°C and maximum of 13.5°C). There were some rains and snowfalls. The relative humidity varied from 36 to 93%. North-east and north-westerly winds prevailed at a speed of 1-14 m/s. In the North, weather was unstable with a gradual increase of temperatures, ranging from -22 to +4°C with minimum dropping to -36°C and maximum of 7.4°C. There were rain- and snowfalls; snow cover was of 5-30 cm in some places. The depth of frozen soil was of 165 to 201 cm. The relative humidity ranged from 61 to 98%. Southeast, southwest and north winds prevailed at a speed ranging from 1 to 22 m/s and occasionally up to 4 3.4 m/s. Cereal crops were in sowing, germination or tillering stages, perennial herbs at the beginning of vegetative growth and fruits trees in bud or bloom depending on the areas.

In Tajikistan, prevailing weather conditions during the first quarter were highly suitable for egg development; it should result in hatching periods in advance of 15-20 days as compared to usual situation. According to forecast established by national meteorological and plant protection services, the years 2011-2013 should be very dry.



In Uzbekistan, the average temperatures varied from -8 to +10°C during the night and from 12 to 18°C during the day. Due to the drought, the natural vegetation was of 10-15 spring ephemerals of 5-7 cm high per square meter, i.e. 5 times less as compared to March 2010, when the vegetation was already considered as less abundant and developed with respect to previous years.

## Area Treated in March 2011

No control operations were carried out in March.

## Locust Situation and Forecast

*(see also the summary on page 1)*

### CAUCASUS

#### Armenia

##### • SITUATION

No hatching was observed In March.

##### • FORECAST

*Hatching of Italian Locust (CIT) will probably start in April in lowland areas. Peak of hatching is expected in May with further hopper development in three provinces, Aragatsohn, Gegharkunik and Shirak, and an area of 5,000 ha should need control operations. No development of the two other locust pests, the Moroccan and the Migratory locusts, is expected except in case of migration from neighboring countries.*

#### Azerbaijan

##### • SITUATION

An end-of-winter survey of Moroccan Locust (DMA) egg-beds was carried out to assess egg survival and determine the hatching period. No hatching was reported so far.

• FORECAST

*DMA* mass hatching followed by hopper development will occur in April in traditional locust areas of central and southern parts of the country, boosted by warming and suitable weather conditions.

### Georgia

• SITUATION

No surveys were carried out and no hatching or locusts were reported in March.

• FORECAST

*DMA* hatching is expected to start in early April in the Dali, Mori and Samukhi areas of the Kakheti region, in the south-eastern part of the country, along the Azeri border. *CIT* hatching should start in May in the northern and north-western parts of the above mentioned areas as well as in the eastern part of the Kvemo Kartli region. It is anticipated that 40,000 ha will need to be treated during the 2011 locust campaign.

### **CENTRAL ASIA**

#### Afghanistan

• SITUATION

No survey was carried out in March. During the second fortnight, the locust campaign was put in place in most of the affected areas but it is hampered by fund shortage and insecurity.

• FORECAST

*DMA* hatching will start in early April in 9 provinces of the northern part of the country. As per forecast, an area of more than 130,000 ha should need control operations in 2011.

#### Kazakhstan

• SITUATION

The results of the egg-bed spring surveys carried out on 24-31 March, are the following: for *CIT*, 0.4-5.5 egg-pods/m<sup>2</sup> with 18-32 eggs per pod and 0.1% of egg-pods infected by fungal disease in the contaminated area, which represented 10% of the



surveyed one; for *DMA*, 0.4-8 egg-pods/m<sup>2</sup> with 18-22 eggs per pod and 0.1-4 % of egg-pods infected by fungal disease in the contaminated area (25.5% of the surveyed one).

• FORECAST

Under suitable weather conditions, *CIT* hatching is expected to begin from the 3<sup>rd</sup> decade of April (in the South) until the 3<sup>rd</sup> decade of May (in the East). The peak should occur from mid-May to early June, depending on the location. For *DMA*, hatching should start during the 3<sup>rd</sup> decade of April with the peak the 1<sup>st</sup> decade of May.

#### Kyrgyzstan

• SITUATION

Three-week spring surveys started during the 2<sup>nd</sup> decade of March in Jalal-Abad, Osh and Batken provinces and the 3<sup>rd</sup> decade of March in Chui, Talas and Issyk-Kul provinces. A similar survey will start during the 2<sup>nd</sup> decade of April in Naryn province. Results will be provided in the next bulletin.

• FORECAST

*DMA* hatching is likely to start in early April and *CIT* hatching by the end of the same month.

#### Tajikistan

• SITUATION

The results of egg-bed surveys carried out in February/March indicated that locust egg density varied from 400 to 1,000 units/m<sup>2</sup> over 61% of the surveyed area (196,800 ha). *DMA* hatching started during the 1<sup>st</sup> half of March in all districts of Khatlon province, where infestations were reported in more than 20 districts, as well as in the Isan-Bay area of the RRS. Further details are awaited.

Concerning sub-regional cooperation, phone calls took place with Kyrgyz and Afghan staff to discuss the

locust situation along the common borders. A bilateral meeting is scheduled with Uzbek technical staff on 15-20 April.

• **FORECAST**

*DMA* hopper development will continue during the forecast period and hoppers are expected to form numerous, large and dense bands especially if dry conditions prevail as per weather forecast.

*CIT* hatching is likely to start from mid-May onwards.

### **Turkmenistan**

• **SITUATION**

No bulletin was received for March.

• **FORECAST**

*DMA* hatching should have started by mid-March and hopper development will continue during the forecast period.

### **Uzbekistan**

• **SITUATION**

From 20 March onwards, *DMA* hatching was observed. The density reached locally 2,000 to 3,000 hoppers/m<sup>2</sup>. No *CIT* or *LMI* hatching was observed.

• **FORECAST**

Control operations should start in April on an area estimated at 40,000 ha. It is also planned to carry out field trials using the bio-pesticide formulated with *Metarhizium conidia*.

## **Announcements**

**Locust warning levels.** A colour-coded scheme indicates the seriousness of the current situation for each of the three main locust pests: green for *calm*, yellow for *caution*, orange for *threat* and red for *danger*. The scheme is applied to the Locust Watch web page dedicated to the current locust situation ("Locust situation now!") and to the regional monthly



bulletin header. The levels indicate the perceived risk or threat of current 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 standardized information using the national monthly bulletin template. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks and upsurges, updates should be sent at least once/week. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to Annie.Monard@fao.org. Monthly information received by the 5<sup>th</sup> of each month will be included in the CCA Locust Bulletin to be issued by mid-month; otherwise, it will not appear until the next bulletin. Reports should be sent even if no locusts were found or if no surveys were conducted.

### **New information on Locust Watch in Caucasus and Central Asia.**

Recent additions to the website (<http://www.fao.org/ag/locusts-CCA/en/index.html>) are:

- Report of the Technical Workshop on Locust Control held in Dushanbe, Tajikistan, on 18-22 October 2010.
- Russian version of the Report of the 9th meeting of the Pesticide Referee Group (PRG), 2004).

**2011 events.** The following activities occurred or are scheduled:

- Fund-raising activities are ongoing for the "Five-year Programme to improve national and regional locust management in Caucasus and Central Asia (CCA)"; official reply from some donors is expected soon.