



## LOCUST BULLETIN No. 34



FAO - Plant Production and Protection Division (AGP)

15 April 2015

**Situation level: CALM in all countries for all three locust pests**

### General Situation during March 2015

#### Forecast until mid-May 2015

The locust situation remained calm in March throughout all countries of Caucasus and Central Asia due to cool weather conditions which delayed locust hatching. Therefore, no control operations were carried out so far. Moroccan Locust (DMA) hatching started in late March only in southern Uzbekistan and probably in the neighboring areas of Afghanistan and Turkmenistan; it is expected to start during April in other Central Asian countries and maybe in southern Russian Federation. In Caucasus, DMA hatching will also take place from mid-April in Azerbaijan and Georgia. Italian Locust (CIT) hatching should not start before the end of the forecast period.

**Caucasus.** No hatching was reported so far. DMA hatching is expected to start in early April in Azerbaijan and not before late April in Georgia. CIT hatching should start in late April in lowlands of Armenia and in May in other areas as well as in Georgia.

**Central Asia.** DMA hatching started in late March in southern **Uzbekistan** and should have started in the neighboring areas of **Afghanistan** and **Turkmenistan**; it should occur from early April in **Tajikistan** and from mid to late April in **Kazakhstan**, **Kyrgyzstan** and maybe in the southern parts of **the Russian Federation**. Late

hatching has postponed the hopper treatments. CIT hatching should start by the end of the forecast period.

#### Weather and Ecological Conditions in March 2015

Generally cool weather conditions, sometimes accompanied by local snowfalls, persisted in March, except in some southern parts of the Russian Federation, and were therefore unsuitable for locust egg development and subsequent hatching.

In **Caucasus**, the weather was generally cool in March.

In Armenia, the winter was relatively warm. In March, precipitations occurred as rain throughout the country, from 10-20 mm in the lowlands, 44 mm at foothills and up to 58 mm in the mountainous areas where snow fell also, resulting in a snow cover of 27 mm. In late March, only lowlands were free from snow. Daily temperatures ranged from 0/+3°C to 22/23°C in lowlands, -5/10°C to 15/19°C at foothills and -7 to +9/+14°C in mountainous areas. In lowlands, where weather conditions were suitable for crop development, spring tillage continued and pruning of fruit trees and vines was in progress. Apricot trees started blooming since mid-March in the Ararat Valley. At foothills and in mountainous areas, crops were still under dormancy. The natural vegetation was dry except in lowlands.



In Azerbaijan, the weather was generally mild in February with average temperatures of +3/+5°C and significant precipitations. In March, the weather was cool with average temperatures of +5/8°C; wind speed was of 3-5 m/s. Spring ephemeral plants were greening.

In Georgia, snow cover lasted for 5 days in February in the East, the traditional Moroccan Locust habitat, and temperatures ranged from -3 to +13°C. In March, temperatures varied from -3,5 to 17,4°C and average rainfall was of 19-20 mm.

In **Central Asia**, generally cool and rainy or snowy weather prevailed during March except in some southern parts of the Russian Federation.

In Kazakhstan, the weather was unstable in March with precipitations as rain and snow throughout the country. In the South, the weather was unstable with sunny days alternating with cloudy ones; precipitation fell as rain (from 5 to 55 mm) and snow (thickness up to 25 cm). The average daily temperature varied from -5.0 to +8.0°C with minimum of -10.7°C (at night) and maximum of +21.0°C. Humidity ranged from 44 to 98%. Winds were variable at a speed of 1-15 m/s (up to 25 m/s). In the East, the weather was variable with little precipitation as rain and snow (thickness of 20/40 cm, exceeding 50 cm in some areas); soils were frozen on more than 40 cm depth. The average daily temperature was of -5.6°C (ranging from -22.0°C at night to +12.0°C). The average humidity was of 70/80%. South-easterly and southerly winds prevailed at a speed of 1-12.0 m/s. In the West, the weather was unstable with little precipitation as rain and snow. The average daily temperature ranged from -14.8°C to +8.5°C, with minimum of -20.1°C and maximum of +15.0°C. Humidity was of 40/96%. Wind direction was erratic (prevailing northerly and easterly ones) at a speed of 1-12 m/s. In the North, the weather was unstable with rains and snow blizzards (up to 51 mm snow fell but the cover decreased from 47 to 37 cm as melting began). The average daily temperature ranged from -16.5 to +1.5°C with minimum of -20.0°C and maximum of +4.0°C. Humidity ranged

from 55 to 95%. North-easterly and south-westerly winds prevailed at a speed of 1-25 m/s with gusts of more than 40 m/s. Soils were frozen up to about 140 cm.

In Kyrgyzstan, the weather was cold and rainy in March with rainfall (38-52 mm) above the normal. At the end of the month, temperature was as low as -14°C and snow fell.

In the Russian Federation, the weather was variable in March. In southern regions of the Central Federal District (FD), the months of February and March were characterized by relatively high temperatures (average daily temperature of 1/2°C) and lack of rainfall. In North Caucasus and South FDs, the average temperature was of 4/7°C -well above normal- and rainfalls of 10/15 mm were insufficient. In the Volga FD, the first decade of March was characterized by unstable temperatures (of -8/-3°C) and lack of rainfall. In the Siberian FD, the weather was variable with significant day-to-day temperature fluctuations, little snowfall and thaws in early March and abundant snowfall in mid-March; average temperature was of -8/-13°C.

In Tajikistan, the weather was cool and rainy during March, especially in the last decade. At the beginning of the month, heavy snowfalls occurred throughout the country and snow cover was of 20-25 cm in the lowlands and up to 60 cm in the mountains.

In Uzbekistan, after a warm and dry early spring, there was a sharp fall of temperature from mid-March and snow fell at the end of the month; daily temperatures dropped from +9/+13°C during the first half of the month to 7/9°C at mid-March. Spring ephemeral plants were developing.

#### **Area treated in March 2015**

No control operations were carried out in March.

## Locust Situation and Forecast

(see also summary on page 1)



### CAUCASUS

#### Armenia

##### • SITUATION

No survey or control operations were carried out and no hatching was reported in March.

##### • FORECAST

*Hatching of Italian Locust (CIT) is expected in April in lowlands and in May in other areas. No development of the two other locusts is expected unless they fly in from neighboring countries. According to preliminary forecast anti-locust, locust infestations should be spotty in 2015.*

#### Azerbaijan

##### • SITUATION

An end-of-winter survey of Moroccan Locust (DMA) egg-beds was carried out in March on 25% of the egg-bed sites identified in autumn 2014 to assess overwintering egg survival and determine the hatching period. No DMA hatching was reported.

##### • FORECAST

*Warming and suitable weather conditions will boost the intensity of hatching and hopper development, which will occur in April. Control operations will start in mid-April.*

#### Georgia

##### • SITUATION

National Food Agency has not carried out yet any anti-locust activity in 2015 but has purchased pesticides in Ultra-Low Volume formulation (20 000 litres) for anti-locust treatments.

##### • FORECAST

*DMA hatching should start from late April.*

### CENTRAL ASIA

#### Afghanistan

##### • SITUATION

No bulletin was received but DMA hatching should have started in March.

##### • FORECAST

*DMA hatching and hopper development will continue during the forecast period.*

#### Kazakhstan

##### • SITUATION

DMA and CIT spring egg-pod surveys started in the South. As far as DMA is concerned, almost 13 500 ha have been surveyed as of 3<sup>rd</sup> April in South Kazakhstan, of which 2 471 ha were infested at a density up to 2 egg-pod/m<sup>2</sup> on more than 2 000 ha and up to 10 egg-pods/m<sup>2</sup> on the remaining surface. The number of eggs per pod varied from 20 to 35. No hatching was reported. Regarding CIT, 6 600 ha were surveyed in South Kazakhstan and egg-pods were found on 20 ha at a density of 1 egg-pod/m<sup>2</sup>. The number of eggs per pod varied from 19 to 25. In other regions of Kazakhstan, spring egg-pod surveys will start after 10<sup>th</sup> April.

##### • FORECAST

*It is expected that DMA hatching will start by mid-April in the South.*

#### Kyrgyzstan

##### • SITUATION

Spring egg-pod surveys were delayed of about 10-15 days due to the bad weather conditions and will start in early April.

##### • FORECAST

*DMA and CIT hatching should start by mid-April.*

#### Russian Federation

##### • SITUATION

Spring egg-pod surveys started in the South, in Dagestan, on 70 000 ha, of which 7 600 ha were found infested at a density of 1 egg-pod/m<sup>2</sup>; the average number of eggs per pod was of 43. According to preliminary reports, winter egg mortality was negligible. Spring surveys will start in almost all other regions in April.

On 18<sup>th</sup> February, an international meeting on locusts and other dangerous agricultural pests took place in Astrakhan between the ministries of Agriculture of Kazakhstan and Russia. Experts from 11 Russian regions and four Kazakh ones sharing common borders participated in the meeting. They agreed on joint activities to combat pests in 2015 incl. joint studies and data exchange. A video conference on locust pests was also held between Representatives of the two countries on 5 March 2015, in the framework of the 7<sup>th</sup> Astana Economic Forum.

• **FORECAST**

*Hatching of grasshoppers and locusts will start in April in the southern regions.*

**Tajikistan**

• **SITUATION**

As per the annual work plan anticipating that surveys will concern 460 000 ha in 2015, including 220 500 ha during spring, surveys were carried out in late February and March. No hatching of the locust pests was reported. Preparations for the control campaign started and on 10<sup>th</sup> March, the first meeting took place at the Ministry of Agriculture of Tajikistan, which was advertised on national television and other media.

• **FORECAST**

*DMA hatching is expected during the 1<sup>st</sup> half of April in the South (Khatlon), the 3<sup>rd</sup> decade of April in the North (Sughd) and early May in the central region (Region of Republican Subordination, RRS).*

**Turkmenistan**

• **Situation**

No bulletin was received but DMA hatching may have started in late March in the South.

• **Forecast**

*DMA hatching and hopper development will continue during the forecast period.*



**Uzbekistan**

• **Situation**

DMA hatching was observed in late March in the South, in Surkhandarya Province, in areas close to the Afghan, Tajik and Turkmen borders; it was delayed by 8/10 days as compared to 2014 as a result of a cold weather period in March. Density was up to 2,500 newly-hatched hoppers/m<sup>2</sup>.

During the 2015 campaign, it is planned to control up to 410 000 ha of which 84% by ground (30 000 ha with hand-held sprayers, 130 500 ha with tractors and 184 500 ha with ULV sprayers) and the remaining 26% by air (10 000 ha with aircraft and 55 000 ha with hang-gliders). Locally produced pesticides (lambda-cyhalothrin and imidacloprid) will be used and an Insect Growth Regulator will also be purchased to protect an area of 30 000 ha. Before the start of the control operations, workshops will be held in the different provinces.

• **Forecast**

*DMA hatching and hopper development will continue during the forecast period in the South, where control operations will be launched in early April, depending on weather conditions.*

**Announcements**

**Locust warning levels.** A color-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 [CCA-Bulletins@fao.org](mailto:CCA-Bulletins@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.

#### **December 2014 – March 2015 events and activities.**

- Recruitment of National Consultants in CCA countries for the preparation of the seven national monthly bulletins of the 2015 locust campaign.
- Locust Geographical Information System (GIS) in CCA: review of the technical specifications for the regional GIS.
- Fellowships on locust management: calls for interest for students and for hosting institutions advertised from mid-January up to 3<sup>rd</sup> April 2015.
- Human Health and Environmental Monitoring Team in Tajikistan: Action Plan prepared by the Team with technical and operational support provided by FAO.
- Videos on the use of bio-pesticides: shootings were made in February taking advantage of ground and aerial control operations using bio-pesticides in Madagascar; the final products will be a 4-minute video to promote the use of bio-pesticides (for decision-makers, donors and other partners, locust experts) and a 10-minute video tutorial on the field operational use of bio-pesticides (for locust experts and control operators).
- Resource mobilization: finalization of the project document regarding the contribution of Japan to the benefit of Afghanistan, Kyrgyzstan and Tajikistan



(now under approval process at central level in Japan).

#### **Forthcoming events and activities in April 2015.**

- **Locust Geographical Information System (GIS) in CCA:** finalization of the technical specifications for the regional GIS.
- **Fellowships on locust management:** selection of students and hosting institutions to be carried out by FAO and E-Committee on fellowship.

