



LOCUST BULLETIN No. 35



FAO - Plant Production and Protection Division (AGP)

15 May 2015

Situation level: CAUTION in Tajikistan (Moroccan Locust, DMA)

Situation level: CALM elsewhere

General Situation during April 2015 Forecast until mid-June 2015

Cooler than usual and rainy weather conditions in all Caucasian and Central Asian countries delayed hatching and subsequent hopper development. Therefore Moroccan Locust (DMA) started from late March in Tajikistan -and probably in neighboring areas of Afghanistan and Turkmenistan- and in April in Georgia, Kazakhstan, and Uzbekistan –and probably in Kyrgyzstan. More than 64 000 ha were treated in April in Tajikistan and Uzbekistan. In May, DMA hatching and hopper development will continue in all above-mentioned countries as well as in Azerbaijan, followed by fledging before the end of the forecast period. Italian Locust (CIT) and Migratory Locust (LMI) hatching should occur in May.

Caucasus. Due to cool weather conditions unsuitable for locust hatching and hopper development, DMA hatching was observed in Georgia only in April and is expected in early May in Azerbaijan. CIT hatching should occur in May in Armenia and Georgia. Control operations will start in early May in Georgia and Azerbaijan and in early June in Armenia.

Central Asia. DMA hopper development was in progress in Kazakhstan, Tajikistan and Uzbekistan as

well as probably in Afghanistan, Kyrgyzstan and Turkmenistan but was slowed down by weather conditions cooler than usual. More than 64 000 ha were treated in Tajikistan and Uzbekistan in April. No Italian Locust (CIT) or Asian Migratory Locust (LMI) hatching was reported so far.

Weather and Ecological Conditions in April 2015

Overall, the weather was cooler than usual and rainy, thus resulting in unsuitable conditions for locusts and delaying and slowing down hatching and subsequent hopper development.

In Caucasus, the weather was relatively cool and rainy.

In Armenia, the weather was variable and rainy. The average temperature was mostly normal with little variations of 2/4°C. Temperatures ranged from 1/2°C to 26/29°C in the lowlands, from 0/+4°C to 20/24°C at foothills and from -2/5°C to 13/18°C in mountainous areas. Recorded quantity of rain was of 15-25 mm in the lowlands, 57-59 mm at foothills and 81 mm in mountainous areas where snow cover was still present at the end of the month. During the second half of the month, strong winds were reported at a speed of 20-25 m/s. The natural vegetation was mostly green with a dense cover in lowlands and foothills and a medium one

in mountainous areas. Spring field work continued. In lowlands and foothills, fruit trees were flowering. In mountainous areas, agricultural activities started.

In Azerbaijan, the weather was relatively cool with average temperatures of 8/12°C and significant rains, therefore unsuitable for hatching and hopper development. Wind speed was of 3-5 m/s. Natural vegetation was developing and green; cereal crops were at the tillering stage.

In Georgia, weather was cool and rainy in the East, the traditional Moroccan Locust habitat. Temperatures ranged from 4°C to 25°C and average rainfall was of 70/75 mm. Natural vegetation was greening and had a medium cover.

In **Central Asia**, weather was variable and rainy, with lower temperatures than usual, especially in early April.

In Kazakhstan, the weather was unstable and rainy in all regions and particularly cold in the North. In the South, clear days alternated with cloudy and rainy ones. Average temperature was of 16.5°C with minimum of 8°C and maximum up to 30°C. Wind speed reached 18-26 m/s during the second half of the month. In the East, the weather was variable and rainy. Average temperature was of 6.6°C with minimum of -14°C and maximum of +29°C. Relative humidity varied from 37.8 to 89.8%. South-easterly and north-westerly wind prevailed at a speed of 3-6 m/s, with gusts up to 18 m/s. In the West, the weather was variable and rainy. The average temperature was of 1.6°C with minimum of -16.8°C and maximum of 21.4°C. The relative humidity varied from 53 to 90%. Northerly, easterly and north-easterly winds prevailed a speed of 0.5-16 m/s. In the North, the weather was cold with precipitation as snow and rain resulting in a delayed spring. The average day temperature was of 3°C, with minimum as low as -17.2°C and maximum of +22.7°C. The relative humidity ranged from 52 to 91%. The wind speed was of 0.1-17 m/s with gusts reaching 27.9-43.4 m/s.

In the Russian Federation, weather was variable and cooler than usual in several Federal Districts (FD). In southern regions of Central FD, the weather was cool



with little rainfall; temperatures ranged from -7 to +4°C. In North Caucasus and Southern FD, the first decade of April was characterized by low temperature and rainfalls heavier than usual. Average temperature was of 6.6/7°C. During the rest of the month, the weather improved, but night frost occurred in some areas. In the Volga FD, the weather conditions were in the norm, with temperatures ranging from 1.6 to 5.2°C. In Siberian FD, weather was variable during the 1st half of April, with snow and sleet at the beginning of the month; average temperature was -0.5/5.5°C.

In Tajikistan, average temperatures were of 18/24°C during the day and of 8/12°C at night during the first decade of April. However, on 2nd and 3rd April, temperature dropped to -7°C in the North (Sughd), for the first time in 40 years, affecting fruit trees as well as greenhouse vegetables and plants. During the rest of the month, average temperatures increased to 22/30°C during the day and to 15/18°C at night, except when heavy rains fell on 18, 26 and 27 April. In early April, vegetation was green with a dense cover in the lowlands and hills; at the end of month, vegetation had dried on the southern side of the foothills in Khatlon.

In Uzbekistan, frost occurred in early April, and temperatures were as low as -10°C at night in Jizzah and Syrdarya provinces. Temperatures increased from 5 April onwards, reaching 18/28°C during the day and 10/17°C at night; together with rains, that allowed the rapid development of spring ephemeral plants.

Area treated in April 2015

Tajikistan	19 144 ha (from 27 March up to 1 st May)
Uzbekistan	45 181 ha.

Locust Situation and Forecast

(see also summary on page 1)

CCA LOCUST BULLETIN
N.35 – APRIL 2015



CAUCASUS

Armenia

• SITUATION

The locust situation was calm and no hatching was observed as weather conditions were still unsuitable for locusts.

• FORECAST

Hatching of Italian Locust (CIT) is expected from May onwards. It is anticipated that control operations will start in early June. The development of the two other locusts is not expected unless they arrive from neighboring countries.

Azerbaijan

• SITUATION

During egg-bed surveys carried out in April to assess egg survival and determine likely hatching period on up to 58% of the egg-bed sites identified in autumn 2014, no hatching of Moroccan Locust (DMA) was observed.

• FORECAST

The temperature increase will favor DMA hatching and subsequent hopper development. Control operations should start in early May.

Georgia

• SITUATION

Egg-pod surveys were carried out on 50 000 ha in Kakheti, out of which 10,000 ha were found infested at a density of up to 20 egg-pods/m² in Dedoplistskaro district and up to 30 egg-pods/m² in Signagi district, where approximately 15% of the eggs were damaged by fungal disease. Solitary first instar hoppers of DMA were observed in Dedoplistskaro.

• FORECAST

Because of persisting cool temperatures, mass DMA hatching is expected during the first decade of May and CIT hatching during the third one.

CENTRAL ASIA

Afghanistan

• SITUATION

No bulletin was received for the second consecutive month. DMA hatching and hopper development should have continued in April and control operations should be in progress.

• FORECAST

DMA fledging should occur and control operations continue during the forecast period.

Kazakhstan

• SITUATION

DMA spring egg-pod surveys were completed in the South (South-Kazakhstan and Zhambyl oblasts). Out of 25 200 ha surveyed, egg-pods were present on 5 040 ha. Number of eggs per pod varied from 20 to 38. From 1 to 15% of the egg-pods were damaged. In South-Kazakhstan, hatching started on 11 April. During the month, 409 000 ha were surveyed, out of which 105 400 ha were found infested by 1st to 3rd instar hoppers, including 49 200 ha exceeding the economic threshold. In Zhambyl, hatching was observed on 28 April.

CIT spring egg-pod surveys were carried out on 74 300 ha, of which 19 300 ha were infested at a density ranging from 1 egg-pod/m² up to more than 10/m² (mainly of up to 2.5 egg-pods/m²). The number of eggs per pod varied from 15 to 50 and damaged egg-pods from 1 to 50%, the maximum reported from West Kazakhstan.

LMI spring egg-pod surveys were carried out on 19 200 ha, of which 2 800 ha were infested at a density ranging from 1 egg-pod/m² up to 5-10/m² (mainly of up to 2/m²). The number of eggs per pod varied from 24 to 92 and damaged egg-pods from 1 to 40%, the maximum reported in West Kazakhstan.

• **FORECAST**

DMA hopper development will come to an end in South Kazakhstan, where penultimate moult and fledging are expected in May. In Zhambyl, mass hatching should occur during the 1st decade of May.

CIT hatching should start during the 1st decade of May in the South and be followed by mass hatching during the 2nd decade. In the West, hatching should start during the 2nd decade of May and mass hatching should occur during the 3rd one. In the North and the East, hatching is expected from the end of the 2nd decade of May and during the 3rd one.

LMI hatching is expected during the 2nd and 3rd decades of May in the South and in late May and early June in the North and the West.

Kyrgyzstan

• **SITUATION**

No bulletin was received. DMA hatching should have started in April.

• **FORECAST**

DMA and CIT hatching should continue/occur in May and control operations be carried out.

Russian Federation

• **SITUATION**

Egg-pod surveys were carried out in the south-western Federal Districts (FD) on 239 400 ha, out of which 47 000 ha were found infested at a density of 0.13-1 egg-pod/m² in the Central FD, 0.6-9/m² in the North Caucasus FD, 0.35-5/m² in the Southern FD and 0.8-2/m² in the Volga FD. From 5 to 15 % of the egg-pods were damaged mainly due to entomophagous insects. Due to bad weather conditions, no surveys were carried out in the Siberian and Ural FDs.

• **FORECAST**

Grasshoppers and locusts hatching will occur during the forecast period in the southern regions of the Russian Federation.



Tajikistan

• **SITUATION**

DMA hatching was observed from 21st March onwards in pastures in the South (Khatlon province). In April, medium-age hoppers were present mainly in pastures, in mountainous areas, hills and valleys, but also close to crops in some areas. They had generally a solitary behavior but some formed small bands whose density varied from 120 to 160 hoppers/m². In the North (Sughd province), DMA hatching started during the 3rd decade of April. So far, no CIT or LMI hatching has been reported. Control operations against DMA hoppers started on 27 March in Khatlon and in late April in Sughd and 19 144 ha were treated up to 1st May.

• **FORECAST**

DMA hopper development will continue during the forecast period and related control operations should be completed in May. CIT hatching is expected in May.

Turkmenistan

• **Situation**

No bulletin was received for the second consecutive month.

• **Forecast**

DMA hopper development and fledging should occur in the forecast period.

Uzbekistan

• **Situation**

DMA hopper development continued in April but was slowed down by low temperatures. Hopper bands of 2nd and 3rd instar were observed, in the South-East and of 1st and 2nd instar in the central and eastern parts. CIT hatching was locally observed on 25 April only in Karakalpakstan. LMI hatching has not started yet. A total of 45 181 ha was treated by ground (mainly) and air against DMA hopper infestations in six south-eastern and eastern provinces (Andijan, Fergana, Jizzah, Kashkadarya, Surkhandarya and Tashkent), involving a

total of 395 workers; more than 90% of the treatments were carried out in Kashkadarya and Surkhandarya provinces.

• **Forecast**

DMA fledging should occur by the end of the 1st decade of May in the South-East. Mass CIT hatching is expected before mid-May in Karakalpakstan. LMI hatching is expected to start during the second half of May. Control operations will continue against these locust pests during the forecast period.

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. Monthly information received by the 5th 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.



April 2015 events and activities.

- **Fellowships on locust management:** following advertisement of calls for interest for students and hosting institutions from mid-January to 3rd April 2015, screening of the received applications was ensured in view of the selection of students and hosting institutions.
- **Human Health and Environmental aspects:**
 - Videos on the use of biopesticides: production in progress of the 4-minute video to promote the use of bio-pesticides (for decision-makers, donors and other partners, locust experts) and the 10-minute video tutorial on the field operational use of bio-pesticides (for locust experts and control operators).
 - Final joint Study on the "Fate of insecticides used for locust control on pasture in Kyrgyzstan", aiming at measuring the decline rate of the residues on pasture for various insecticides used in locust control as well as establishing appropriate re-entry periods for livestock, was received from Russian Toxicological and Kyrgyz Locust Experts.
- **Resource mobilization:** project document regarding the contribution of Japan to the benefit of Afghanistan, Kyrgyzstan and Tajikistan under final approval process.

Forthcoming events and activities in May 2015.

- **Fellowships on locust management:** Final selection of students will be made by FAO and E-Committee on fellowships, in liaison with hosting institutions, and results will be announced by 30 May 2015.



- **Joint and cross-border activities:**
 - A joint survey involving 13 plant protection officers/locust specialists from Armenia, Azerbaijan, Georgia and the Russian Federation will be organized on 3-6 May 2015 in Kakheti, Georgia.
 - A cross-border survey between Kyrgyzstan and Tajikistan involving 10 plant protection officers/locust specialists will be carried out in the Fergana Valley (Batken/Sughd oblasts) on 3-8 May 2015.
 - A cross-border survey between Kyrgyzstan and Uzbekistan involving 12 plant protection officers/locust specialists will be carried out in the Fergana Valley (Osh and Jalal-Abad/ Andijan, Namangan and Fergana oblasts) on 8-14 May 2015.
 - A cross-border survey between Tajikistan and Uzbekistan involving 10 plant protection officers/locust specialists will be carried out in the South (Dushanbe and Khatlon/ Surkhandarya oblasts) on 19-24 May 2015, in presence of a FAO International Consultant, Locust Expert.
- **Training on locust monitoring and information management:** a regional training will be delivered to the benefit of Locust Experts from Armenia, Azerbaijan and Georgia from 26 to 30 May 2015 in Kakheti, Georgia, by a FAO International Consultant, Locust Expert.
- **Human Health and Environmental aspects:**
 - Videos on the use of biopesticides: translations of the videos in relevant languages underway.
 - Study on the "Fate of insecticides used for locust control on pasture in Kyrgyzstan": under review/to be finalized.
 - Start of the work of the Human Health and Environmental Monitoring Team in Tajikistan.
- **Resource mobilization:** project document regarding the contribution of Japan to the benefit of Afghanistan, Kyrgyzstan and Tajikistan under final approval process

