



LOCUST BULLETIN No. 40



FAO - Plant Production and Protection Division (AGP)

15 October 2015

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

General Situation during September 2015 Forecast until early 2016

In September, the locust situation was calm in all Caucasian and Central Asian countries as the life cycle of the three pests was coming to an end or already completed. Italian Locust (CIT) mating and egg-laying were still observed in Armenia and ended in Kazakhstan. No control operations were carried out and no further locust development is expected this year. Egg-pod surveys will continue at least in October to assess the importance and current damage of overwintering eggs.

Caucasus. CIT mating and egg-laying continued in mountainous areas of **Armenia** while their natural disappearance started in lowlands. Last adult DMA populations were disappearing in **Azerbaijan**. No control operations were carried out in September. Egg-bed surveys will be conducted in October.

Central Asia. Last remaining CIT and LMI adult locust populations were laying eggs and disappearing and no control operations were required in September. Mating and egg-laying surveys came to an end; egg-bed surveys were in progress and will continue during the forthcoming months.

Weather and Ecological Conditions in September 2015

In Caucasus and Central Asia, the weather was generally warm to hot and dry except in Kazakhstan and Russia where some rains fell locally.

In **Caucasus**, the weather was generally warm and dry.

In Armenia, the weather was mostly warm with rains. The average temperature was within the norm, ranging from 10°C to 37°C in the lowlands, from 7°C to 34°C at foothills and from 3°C to 30°C in mountainous areas, showing a maximum decrease of 6°C as compared to the previous month. In surveyed areas, the natural vegetation was mostly dry and had a medium cover. Grain, fruit and vegetable harvesting continued under suitable conditions and preparatory work for winter crops started.

In Azerbaijan, the weather was mainly warm and dry, with only two rainy days. Day temperatures were of 32/34°C with peaks up to 36°C, decreasing by 10°C as compared to August. Natural vegetation was dry.

In Georgia, the temperature ranged from 10°C to 35°C; no rain fell. The natural vegetation had a medium to dense cover but was dry.

In **Central Asia**, the weather was generally warm, except in some parts of Kazakhstan and Russia, where frosts started.

In Afghanistan, the weather was suitable for locusts, vegetation and crops as sufficient rains fell in 2015. Good yields were reported.

In Kazakhstan, the weather was very contrasted in the various regions with average temperatures above the norm and early frosts. In the South, the weather was warm with some rains (29 mm). Average temperature was of 20.5°C with night minimum of 5°C and maximum up to 29°C during the day. North- and south-westerly winds prevailed at a speed of 2-19 m/s. In the East, the weather was variable. During the two first decades, some rain fell. Maximum temperature reached 30°C. From 16 September, the first frost started, with temperatures as low as -5.1°C. During the 3rd decade, heavy rains fell, turning into sleet and hail and night temperatures dropped up to -10°C. Snow fell in the mountainous areas. As a whole for the month, the average temperature was of 10.5°C with minimum of -10°C and maximum of 30°C; amount of rain was of 25.3 mm and relative humidity of 63.2%. Winds had a variable direction with prevailing south-westerly and south-easterly winds at a speed of 1-7 m/s, with some gusty days. In the West, the weather was characterized by an important day/night temperature range with average temperature was of 18.2°C (i.e. 4.5°C over the norm) with minimum of 3.4°C and maximum of 35.6°C. The relative humidity was of 48%. The wind direction was erratic. In the North, unstable temperatures prevailed throughout the month. Early frosts started on 2 September. The average day temperature was of 11°C, 0.8°C over the norm, with minimum of -5°C on 23 Sept. and maximum of 33.1°C on 10 Sept. The relative humidity varied from 46 to 94%. The winds, whose direction was erratic, had a speed ranging from 0.1 to 14.1 m/s.

In Kyrgyzstan, the weather was relatively warm and rainy. Temperatures were within the norm, from 10-13°C at night to 20-22°C during the day. The relative



humidity ranged from 35 to 40% and rains fell during 14 days. Wind speed was of 6 m/s. The natural vegetation was dry and sparse with a height ranging from 1 to 3 cm.

In the Russian Federation, weather differed greatly between the concerned Federal Districts (FDs), from still warm to frosts. In the southern regions of the Central FD, the weather was mostly warm and dry with some local rains. Daily average temperatures ranged from 1°C to 18°C. In North Caucasian and Southern FDs, the weather was hot and dry with some local rains. Daily average temperatures ranged from 4°C to 25°C and were from 3 to 3.7°C above historical averages. In the Volga FD, the weather was dry in most areas; the average temperature was of 17.1°C, close to the norm. In the Siberian and Ural FDs, the first frosts occurred and important daily temperature ranges were reported (18°C to 27°C); some rains fell, which were unevenly distributed.

In Tajikistan, the weather was warm and above the norm by 1-2°C, with average day temperatures ranging from 23°C to 48°C and average night temperatures from 15°C to 21°C. This warm weather contributed to the normal development of all crops and the timely maturation of fruits.

In Uzbekistan, the weather was warm and dry with temperatures ranging from 13/16°C at night to 26/32°C during the day, thus a decrease by up to 12°C as compared to August. Natural vegetation was dry and the ground was bare.

Area treated in September 2015

No control operations carried out.

Locust Situation and Forecast

(see also summary on page 1)

CAUCASUS

Armenia

• SITUATION

Italian Locust (CIT) development continued in September: egg-laying came to an end in lowlands and foothills and natural disappearance started while mating and egg-laying were still in progress in mountainous areas. No control operations were required.

• FORECAST

CIT will disappear from all areas in October.

Azerbaijan

• SITUATION

Remaining Moroccan Locust (DMA) populations disappeared both in the West (Djeranchel and Eldar steppes) and in the South-east (Garasu and Padar plains).

• FORECAST

Autumn egg-bed surveys should concern an area of 12 000 ha during the forecast period.

Georgia

• SITUATION

Last CIT adult populations should have disappeared in September. No control or survey operations were conducted.

• FORECAST

Autumn egg-bed/pod surveys will probably be carried out during the forecast period.

CENTRAL ASIA

Afghanistan

• SITUATION

In September, control teams completed the mapping of CIT and DMA infested areas in the northern (Balkh, Faryab, Jowzjan, Samangan and Sar-i-Pul) and north-eastern (Badakhshan, Baghlan, Kunduz and Takhar) provinces, which amounted 154 500 ha; however, the



whole infested area in 2015 was probably more important as field operations were hampered by insecurity in remote areas. It is anticipated that 169 500 ha will be infested in 2016 and is planned to treat 120 000 ha.

• FORECAST

No further locust development is expected this year. Procurement of pesticide will continue in view of the forthcoming locust campaign.

Kazakhstan

• SITUATION

In Zhambyl oblast, DMA egg-bed surveys were carried out on 3 100 ha. Egg-pods were found on 790 ha, including at a density of more than 5 egg-pods/m² on 360 ha; from 1 to 2% of the egg-pods were damaged. In South-Kazakhstan, egg-bed surveys were conducted on 17 550 ha and are still in progress. Egg-pods were found on 2 1750 ha; damages concerned 5 to 21% of the egg-pods. As a whole, 20 650 ha were surveyed so far and egg-pods were found on 2 965 ha. The number of eggs per pod ranged from 23 to 37 and the percentage of damaged egg-pods from 1 to 21.

Egg-laying and natural death of the remaining CIT populations occurred in September. In parallel, summer mating and egg-laying surveys were completed and concerned almost 15 million ha. CIT populations were observed on more than 3 million ha, including at density exceeding 10 adults/m² on 419 100 ha. CIT females continued to lay eggs in September. As a whole, egg-bed surveys were conducted on 285 900 ha and egg-pods were found on more than 70 000 ha, including at a density of up to 5 egg-pods/m² on 61 000 ha and of more than 5 egg-pods/m² on 9 000 ha. The number of eggs per pod ranged from 15 to 46 and up to half of the egg-pods were damaged.

Migratory Locust (LMI) mating and egg-laying surveys were carried out on more than 3.8 million ha and LMI populations were observed on more than 732 100 ha. Egg-bed surveys were also conducted on 104 800 ha; egg-pods were found on 16 200 ha, including at density exceeding 2 adults/m² on almost 11 000 ha. The number of eggs per pod ranged from 30 to 98 and the percentage of damaged egg-pods from 0.1 to 33.

• **FORECAST**

No further locust development is expected. LMI egg-bed survey will continue in October.

Kyrgyzstan

• **SITUATION**

No DMA or CIT grouped populations were observed in September and no control operations were carried out; egg-bed/pod surveys were in progress.

• **FORECAST**

Autumn egg-bed/pod surveys will continue in October.

Russian Federation

• **SITUATION**

In September, egg-laying process by groups of CIT and LMI mature adults ended.

The staff of the Russian Agricultural Center started the egg-bed surveys, which were carried out so far on 180 510 ha; egg-pods were found on almost 30% of that area. As per preliminary results for the Federal Districts (FD) where the locust pests are particularly harmful, 5 740 ha were surveyed in the Central FD and egg-pods found on 50 ha at an average density of 0.25/m². In the Southern FD, 560 ha were surveyed and egg-pods found on 290 ha at a density of 2/m². In North Caucasian FD, 600 ha were surveyed and egg-pods found on 20 ha at a density of 3/m². In the Volga FD, 16 390 ha were surveyed and egg-pods found on 2 830 ha at a density of 0.6/m². In the Ural FD, 7 300 ha were surveyed and egg-pods found on 2 210 ha at a density of 0.5/m². In the Siberian FD, 93 700 ha were surveyed and egg-pods found on



15 850 ha at a density of 0.9/m².

To be noted that, during the 2015 campaign, joint border surveys were carried out with Kazakhstan in 11 Russian regions, covering a total area of more than 250 000 ha.

• **FORECAST**

No further locust development is expected.

Tajikistan

• **SITUATION**

Summer surveys were carried out on 124 000 ha, of which 66 100 ha in Khatlon, 45 000 ha in Sughd, 12 000 ha in RRS and 900 ha in GBAO. They were completed by 1st October and showed that the locust habitats were very dry with almost no vegetation due to hot weather conditions during the summer period; as a consequence, eggs were often laid directly at the surface of the ground instead of inside.

• **FORECAST**

Egg-bed surveys will be carried out during the forecast period.

Turkmenistan

• **SITUATION**

No bulletin was received for the 7th consecutive month.

• **FORECAST**

No further development is expected in 2015.

Uzbekistan

• **SITUATION**

No locusts were reported and no activities were carried out in September.

• **FORECAST**

Egg-bed surveys will be carried out in November and December.

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.

Events and activities in September 2015

- **Forthcoming workshops:** Workshop on Locust Contingency Plans (21-23 October 2015) and Annual Technical Workshop on Locusts (26-30 October 2015), Pushkin, Russian Federation: arrangements in progress, including visa issues.
- **Fellowships on locust management:** Arrangements underway with the hosting institution in Kyrgyzstan; Due to last-minute renouncement of selected fellows, two fellowships postponed to academic year 2016/17.



- **Locust Geographical Information System (GIS) in CCA:** Letter of Agreement/contract with relevant institute for GIS development under finalization.
- **Pesticides and spraying:**
 - Stakeholder Workshop on the procurement of pesticides for locust control held on 2-3 September, at FAO Headquarters, Rome, Italy, with the participation of two locust experts, one from Tajikistan and one from Uzbekistan.
 - Shootings for the video on Ultra-low Volume spraying made in Morocco during the second decade of September.
- **Human Health and Environmental aspects:** Arrangements taken concerning the E-Committee on the management of empty pesticide containers used for locust control.
- **Resource mobilization:** Arrangements underway for the signature ceremony of the three-year project to the benefit of Afghanistan, Kyrgyzstan and Tajikistan, possibly in October. Preparatory activities in progress regarding its implementation, in particular procurement of equipment and recruitment of project staff.

Forthcoming events and activities in October 2015

- **Forthcoming workshops:** Workshop on Locust Contingency Planning and Annual Technical Workshop on Locusts respectively scheduled on 21-23 October and 26-30 October 2015 in Pushkin, Russian Federation.
- **Fellowships on locust management:** Arrangements underway with the hosting institution in Kyrgyzstan.
- **Locust Geographical Information System (GIS) in CCA:** Letter of Agreement/contract with

relevant institute for GIS development finalized and under signature process.

- **Pesticides and spraying:** Video on Ultra-Low Volume (ULV) spraying technique to be finalized.
- **Human Health and Environmental aspects:** Final Report of the Human Health and Environmental Monitoring Team in Tajikistan received in FAO.
- **Resource mobilization:** Arrangements underway for the signature ceremony of the three-year project to the benefit of Afghanistan, Kyrgyzstan and Tajikistan, scheduled the third decade of October. Preparatory activities in progress regarding its implementation, in particular procurement of equipment and recruitment of project staff.

