



LOCUST BULLETIN No. 17



FAO - Plant Production and Protection Division (AGPM)

14 August 2012

Situation level – Italian Locust (CIT) in the Russian Federation: THREAT

Situation level – Italian Locust (CIT) in Georgia and Moroccan Locust (DMA) in Tajikistan: CAUTION

Situation level – CIT and DMA elsewhere and Migratory Locust (LMI): CALM

General Situation during July 2012 Forecast until mid-September 2012

With progressive fledging of the three locust pests, the 2012 locust campaign was coming to an end in most Caucasian and Central Asian (CCA) countries. However, the current situation continued to be serious in the Russian Federation, where more than 1.6 million ha were treated (an increase of 45% as compared to June). Elsewhere, dense Italian Locust (CIT) hopper bands were still present in Georgia and Moroccan Locust (DMA) adult movements were of concern in Tajikistan.

Caucasus. In **Armenia**, control operations were carried out on 60 ha against last Italian Locust (CIT) hopper bands. In **Georgia**, dense CIT hopper bands were present and 100 ha were treated; by the end of the month, CIT adults only were present and breeding was in progress. In **Azerbaijan**, Moroccan Locust (DMA) mating and egg-laying started from the 2nd decade onwards.

Central Asia. Infestations of CIT only were reported. Hopper development was coming to an end in **Kyrgyzstan** where 9,874 ha were treated against late instar groups. CIT fledging started progressively and groups of adults formed in the **Russian Federation**

where more than 1.6 million ha were treated. A similar situation occurred probably in Kazakhstan but no information was received. In Tajikistan and Uzbekistan, last treatments concerned 876 and 1,682 ha respectively. According to information received, the control campaign was completed in all CA countries except in the Russian Federation. During the forecast period, CIT and LMI adult populations will lay eggs and start progressively disappearing.

Weather and Ecological Conditions in July 2012

Warm weather prevailed throughout all CCA countries and rains fell at times. Natural vegetation was dry except in Armenia.

In **Caucasus**, hot and dry weather prevailed but rains fell at times in Armenia and Georgia.

In Armenia, the weather was still variable. Rains fell, sometimes with hail. Temperatures ranged from 11/15°C to 38/39°C in lowlands, from 6/12°C to 27/31°C at foothills and from 5/7°C to 23/27°C in mountainous areas, which did not represent a significant change as compared to June. The natural vegetation was mostly green in all regions, with a medium to dense cover. The weather conditions were suitable for farm work; winter cereal crops and fruit (in lowlands) harvesting continued.

In Azerbaijan, the prevailing weather was hot and dry. The average daily temperatures were of 32-36°C with peaks up to 38-42°C, which represented an increase of 8°C as compared to June. No rain fell in July. Natural vegetation had a low cover and was dry in all traditional locust habitats. In the areas where locust surveys were carried out, agricultural crops were mainly at the stage of ripeness and harvesting of grain crops was completed by the end of the month.

In Georgia, the weather was hot, with temperatures ranging from 28 to 39°C, which represented an increase of up to 7°C as compared to June. Rains fell at times. Natural vegetation had a medium cover.

In **Central Asia**, warm weather prevailed and rains fell at times.

In Kyrgyzstan, the average temperature was of 18/25°C in the valleys and of 13/18°C in the mountains, almost the same as in June. Temperatures continued to be below the normal from 1 to 3°C in July. The highest day temperatures were reported in Osh and Jalal-Abad in mid July (26/29°C) and in the Chui Valley (26/28°C) during the 3rd decade. The lowest temperature (5°C) was reported in Naryn. The amount of rains received during the month varied from 62 to 109 mm. The humidity ranged from 40 to 62%. The vegetation was dry with a height varying from 2 to 9 cm and its cover was medium.

In the Russian Federation, the weather was hot with rains at times in the southern areas of the Central Federal District (FD); the average daily temperature was of 21°C with maximum temperature of 33°C, which was almost similar to June but difference between day and night temperatures increased. The weather was hot with local showers in the North Caucasus and Southern FDs with average daily temperature of 30-36°C and maximum reaching 43°C. In the Volga FD, the weather was characterized by high temperatures ranging from 25-27°C and heavy rainfalls. In the Siberian FD, the weather was moderately warm (average temperatures of 17-22°C) and it rained frequently.



In Tajikistan, the daily average temperature was of 39-43°C in Khatlon, 39-40°C in Region of Republican Subordination (RRS) and 38-39°C in Sughd. During the last decade, there were thunderstorms and strong winds at speed of 9-15 m/s throughout the country. In the South, there were southerly winds.

In Uzbekistan, the average day temperature was of 40-42°C (an increase of more than 6°C as compared to June) and the night one of 26-28°C.

Area Treated in July 2012

(as per information received from countries)

Armenia	60 ha
Georgia	100 ha
Kyrgyzstan	9,874 ha
Russia	1,615,720 ha
Tajikistan	876 ha
Uzbekistan	1,682 ha

Locust Situation and Forecast

(see also the summary on page 1 and maps on last page)

CAUCASUS

Armenia

• SITUATION

During surveys carried out by the Plant Protection staff over a total area of 25,000 ha, CIT was observed everywhere in solitary phase, at low density and mainly still at hopper stage, except in the lowlands where adults were already present. However, in six provinces (Aragatsotn, Ararat, Kotayk, Shirak, Syunik and Vayots Dzor) the density ranged from 6 to 30 hoppers/m² and exceeded the harmfulness threshold over 2,000 ha. Control operations were undertaken on 60 ha on foothills in Kotayk Province. Effectiveness of treatments varied from 78 to 85%.

• **FORECAST**

CIT mating and egg-laying will occur during the first half of August in the lowlands and start from the end of the same month in the foothills and the mountainous areas. No significant development is expected.

Azerbaijan

• **SITUATION**

DMA hopper development came to an end, fledging occurred and mating and egg-laying were observed from the 2nd decade of July in the north-west (Djeiranchel, Eldar steppes); mating and egg-laying started also in the east (Garas, Padar plain) and in the south (Haramin plain). Weather conditions contributed to intense mating and egg-laying of DMA. Ground control operations continued during July in the north-west and in the east against late instar hoppers and adults using pyrethroids sprayed by hand-held and tractor-mounted sprayers. Treatments resulted in the elimination of up to 90% of the infestations.

• **FORECAST**

It is expected that DMA will complete its life cycle by first half of September, after mating and egg-laying. Autumn surveys will be carried out to assess number of egg-pods per unit area and their distribution and to plan 2013 activities.

Georgia

• **SITUATION**

During surveys carried out on 1,000 ha in Kvemo Kartli region, 5th instar CIT hoppers, including bands at a density ranging from 300 to 700 hoppers/m², were observed. At the end of July, only mature CIT adults were present, which started laying eggs. Control operations undertaken by the National Food Agency (NFA) focused on hopper infestations. An area of 100 ha was treated using chlorpyrifos sprayed by vehicle mounted sprayers. Updated figures indicated that 11,672 ha were treated during the campaign.

• **FORECAST**

CIT life cycle will come to an end and adults will lay eggs and start disappearing during the forecast period.



NFA specialists will carry out surveys to identify egg-laying sites.

CENTRAL ASIA

Afghanistan

• **SITUATION**

No report was received for July.

• **FORECAST**

With the completion of locust life cycle, no further development is expected this year.

Kazakhstan

• **SITUATION**

No report was received for July.

• **FORECAST**

DMA will probably disappear by mid-August. CIT mating and egg-laying will continue at the beginning of the forecast period and adults should start disappearing by the end of August. LM mating and egg-laying will continue during the forecast period.

Kyrgyzstan

• **SITUATION**

In July, surveys were carried out in Naryn and Chui provinces to monitor the CIT infestations and identify areas to be treated. As a result, spraying operations were undertaken on 9,874 ha in Naryn against late instar hoppers and adults.

Chemical control activities came to an end in July. Over the campaign, 41,969 ha surveyed and 27,963 ha have been treated by ground, of which 8,870 ha against DMA in Batken, Jalal-Abad and Talas and 19,093 ha against CIT in Chui and Naryn. Naryn was the most infested (by CIT only) province (more than 61% of the whole treated area).

• **FORECAST**

CIT will complete its life cycle (mating, egg-laying) during the forecast period and progressively disappear.

Russian Federation

• SITUATION

The results of hopper surveys carried out in June in 5 Federal Districts (FD) were the following: average of 7,28 hopper/m² on 46% of the surveyed area and of 6,4 adults/m² on 2,7% in the Central FD; average of 23,3 hoppers/m² on 43,6% of the surveyed area and of 15 adults/m² on 25,5% in the Southern FD; average of 10,6 hoppers/m² on 78.3% of the surveyed area and of 43,8 adults/m² on 55% in the North Caucasian FD; average of 13 hoppers /m² on 48,3% of the surveyed area and of 12,8 adults/m² on 41,4% in the Volga FD; and average of 8,5 hoppers/m² on 46,6% of the surveyed area and of 7,5 adults/m² on 55.5% of the surveyed area in the Siberian FD. Hatching and hopper development continued and fledging started in all FDs in July. In Southern and Northern FDs, emergence of adults was accompanied by formation of dense groups and swarms.

A total area of 1,615,720 ha was treated, which represents an increase of more than 45% as compared to the previous month, using 1,583 ground sprayers and 87 aircraft. The situation continued to be considered as very serious.

• FORECAST

During the forecast period, adult populations only will be present and mating and egg-laying will occur.

Tajikistan

• SITUATION

In July, the last 876 ha were treated against CIT in Sughd and control operations came to an end. The total area treated by ground during the 2012 campaign was of 66,738 ha, less than half as compared to 2011. Because of southerly winds in southern Tajikistan, which may have contributed to movements of adult locust populations from Afghanistan, surveys were conducted in this area.

• FORECAST

No further development is expected this year. National experts will complete analysis of movements



and settlements of winged adult populations and further document it during autumn egg-bed surveys.

Turkmenistan

• SITUATION

No bulletin was received for July.

• FORECAST

DMA should have completed its life cycle. No further development is expected this year. Egg-bed surveys will probably be carried out to identify the most infested areas in view of the 2013 campaign.

Uzbekistan

• SITUATION

Control operations came to an end on 18 July in Tashkent Province, where 1,682 ha were treated. During the 2012 locust campaign, a total of 282,523 ha was treated mainly by ground (87%), which represented a decrease of 30% as compared to the previous campaign.

• FORECAST

All locust populations will progressively disappear during the forecast period and no further development is expected this year.

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 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.

July events and activities. The following activities were ongoing or occurred:

- From December 2011, preparation of the monographs on the three CCA locust pests.
- Cross-border survey between **Turkmenistan** (Lebap Province) and **Uzbekistan** (Surxondaryo and Qashqadaryo Provinces) on 25-30 July.
- Study on remote sensing and geographic information systems (GIS) applications used for locust management in CCA: duty trips of Ms N. Muratova, GIS Expert, to Moscow, Russia and Astana, Kazakhstan on 22-31 July.
- E-committee on background documentation on locusts in CCA continued its work.
- E-committee on pesticides registration for locust control in CCA started its work.

Note: the above activities were implemented thanks to funding from FAO Regular Programme, FAO Technical Cooperation Programme and USAID.



August events and activities. The following activities are scheduled:

- Study on remote sensing and geographic information systems (GIS) applications used for locust management in CCA: duty trips of Ms N. Muratova, GIS Expert, to UK and Italy (FAO) scheduled on 26 August - 2nd September 2012.
- E-committee on background documentation on locusts in CCA to continue its work.
- E-committee on pesticides registration for locust control in CCA to continue its work.
- Reports on cross-border or joint surveys carried out with FAO assistance during spring/summer 2012 to be received by FAO from all concerned countries.
- Invitation letters for the next Technical Workshop on locusts in CCA, Bishkek, Kyrgyzstan, 12-16 November, to be officially sent to all countries.

