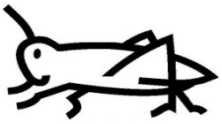
Locust Watch
Locusts in Caucasus and Central Asia

LOCUST BULLETIN No. 15



FAO - Plant Production and Protection Division (AGPM) *18 June 2012*

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

Situation level – Moroccan Locust (DMA) in Afghanistan and Georgia: CAUTION

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

General Situation during May 2012 Forecast until mid-July 2012

As anticipated, the locust situation deteriorated in May in Caucasus and Central Asia (CCA), where more than 716,000 ha were treated (6 times more as compared to April). Hopper development was on progress or completed in all countries. Moroccan Locust (DMA) adults formed mobile groups and swarms in at least two Central Asian (CA) countries. The situation was generally considered as calm by the countries but the Italian Locust (CIT) is a threat in the Russian Federation and in Georgia; caution is requested concerning DMA in Afghanistan and Georgia. During the forecast period, more swarms will probably form, mainly in central and northern CA.

Caucasus. In **Armenia**, Italian Locust (CIT) hatching started during the 3rd week of May and control operations were scheduled during the 1st half of June. Moroccan Locust (DMA) hopper development continued in **Azerbaijan** and **Georgia**, where 40,000 ha and 2,900 ha were treated respectively. In Georgia, CIT hatching started the last week of May and 3,000 ha were infested. All untreated DMA populations will progressively fledge, mature and lay eggs during the forecast period. Hopper development of the CIT populations will continue and fledging occur.

Central Asia. DMA hopper development was still in progress in **Kyrgyzstan** while fledging occurred in **Afghanistan**, **Tajikistan** and **Uzbekistan** and probably in southern **Kazakhstan** and **Turkmenistan**. Adults formed mobile groups and swarms at least in Tajikistan and Uzbekistan, where mating started. CIT hopper development was in progress in Kyrgyzstan, Tajikistan, the **Russian Federation** and probably also in Kazakhstan. More than 670,000 ha were treated in May, mainly in the Russian Federation (63% of the treated area as per information received so far). During the forecast period, DMA will lay eggs and progressively disappear while CIT and LMI will complete their hopper development and fledge.

Weather and Ecological Conditions in May 2012

Temperatures increased in all CCA countries but remained below normal in Armenia and Kyrgyzstan. Rains were reported in most of Caucasian countries and in some Central Asian ones. Vegetation was drying out in CA.

In **Caucasus**, warm weather prevailed except in Armenia.

In Armenia, the weather remained variable and was mostly rainy. There were also thunderstorms with hail. The average temperature was above normal by 2-4°C. Temperatures ranged from 7/10°C to 28/31°C in lowlands, from 2/7°C to 23/28°C at foothills and from 1/4°C to 20/25°C in mountainous areas. The wet weather contributed to the massive development of fungal crop diseases and fruits were particularly affected. The natural vegetation was mostly green in all regions, with a dense cover.

In Azerbaijan, the prevailing warm weather was suitable for hopper development, which was also boosted by some light and scattered rainfalls during the 2nd decade of the month. The average daily temperatures were of 24-26°C, which represents an increase of 10°C as compared to April. The wind speed was of 3-6 m/s. Natural vegetation had still a sparse cover and was drying out in all traditional locust habitats; winter cereals were at flowering stage at the end of the month.

In Georgia, the weather was relatively warm, with temperatures ranging from 23 to 26°C, which represented an increase of 5°C as compared to the previous month. The weather conditions were suitable for hatching. Pastures, crops and vegetable were developing; natural vegetation had a medium to dense cover.

In **Central Asia**, weather conditions continued to be very different from a country to another and no general trend can be highlighted.

In Afghanistan, during April, there were good rainfalls in most parts of the country. Light to moderate rains fell in plains and snow occurred in higher elevations, sometimes together with scattered rains and locally heavy rainfall. The amount of rainfall was more important than in April 2011. Temperatures increased gradually but remained over the normal. No weather information was available for May.

In Kyrgyzstan, the temperatures continued to be below the normal from 1 to 7°C during the whole month of May. Warm weather was nevertheless reported everywhere during the 2nd and 3rd decades with the highest temperatures recorded in Jalal-Abad and Batken oblasts (25 and 28°C respectively) and the lowest night one in Naryn, in early May (3°C). Heavy rains, amounting 500 to 560 mm, fell in the southern parts of the country, resulting in mudslides, while light to moderate rains fell in the North (30-120 mm). The humidity ranged from 60 to 80%. The vegetation was green with a height varying from 9 to 15 cm and its cover was dense.

In the Russian Federation, the weather was dry and warm in the southern areas of the Central Federal District (FD) with daily temperature ranging from 19 to 25°C (double as compared to April). The weather was dry and hot with local rainfall in the North Caucasus and Southern FDs with average daily temperature of 12-25°C. In the Volga FD, it rained at times and the temperatures ranged from 11-17°C, reaching up to 22-32°C. In the Siberian FD, the weather was unstable with highly variable temperatures as well as irregular and badly distributed rainfall.

In Tajikistan, the heavy thunderstorms which fell in May throughout the country favored the growth and the development of all plant species, which were hampered by drought in April. Average night temperatures varied from 16 to 18°C and day ones from 28 to 32°C, which represented an increase of 6°C as compared to April.

In Uzbekistan, the average day temperatures ranged from 27 to 32°C (increase of more than 10°C as compared to April). No rains were reported. The vegetation continued to develop well and its height varied from 35 to 65 cm. However, it started drying out in the traditional locust (DMA) habitats while it was green and lush in the altitude pastures (between 1,200 and 2,800 m).

Area Treated in May 2012

Afghanistan	60,120 ha (1st May-3rd June)
Azerbaijan	40,000 ha (up to 1st June)
Georgia	2,912 ha
Kyrgyzstan	9,220 ha (8-25 May)
Russia	428,400 ha
Tajikistan	39,404 ha (28 April to 25 May)
Uzbekistan	136,000 ha

Locust Situation and Forecast

(see also the summary on page 1)

Armenia

• **SITUATION**

CIT hatching was observed during surveys carried out the third week of May in low-lying areas. In the Ararat Province, close to Azerbaijan, an area of 500-600 ha was infested by 1st instar hoppers, of which 400 ha with a density above the harmful threshold (20-30 hoppers/m²). No hatching was detected elsewhere at the foothills or in the mountainous areas. The weather conditions continued delaying locust hatching and slowed down the hopper development.

• **FORECAST**

CIT hatching was further delayed by rainy and cool weather and should commence during the first half of June at the foothills or in the mountainous areas. Control operations will be undertaken in early June against 2nd instar hopper infestations in Ararat Province and local treatments will probably be required in at least two other ones.

Azerbaijan

• **SITUATION**

DMA hopper development continued in the north-west (Djeiranchel, Eldar steppes), in the east (Garas, Padar plain) and in the south (Haramin plain), where infestations by 3-4 instar hoppers were observed. Ground control operations had started during the 3rd decade of April in the north-west and in the east . A total of 40,000 ha was treated up to the 1st June, using pyrethroids sprayed by hand-held, back-packed and tractor-mounted sprayers. This represents almost 20 times the area treated in May 2011. Public awareness was done on locust control operations (directly or through local TV spots).

• **FORECAST**

DMA hopper development will continue in early June and fledging should start by mid-month. Control operations will continue during the forecast period.

Georgia

• **SITUATION**

DMA hopper development took place in May and fledging occurred by the end of the month. The main infested areas were located in Kakheti, Kvemo Kartli and Shida Kartli regions, where a total of 2,912 ha was treated by the National Food Agency (NFA) specialists, using different active ingredients including pyrethroids and IGRs. CIT hatching as well as young hoppers (1st and 2nd instars) were observed during surveys carried out by NFA the last week of May in Kvemo Kartli and Kakheti respectively. The situation is considered as serious for both locust species. Infestations were indentified on more than 3,000 ha and surveys were still on progress.

• **FORECAST**

CIT hatching will probably be completed soon while hopper development should continue under suitable conditions in June; fledging is expected by the end of the forecast period. Control operations will begin as soon as further detailed information is received from the field, using small aircraft and vehicle-mounted sprayers, starting in Kakheti.

CENTRAL ASIA

Afghanistan

• **SITUATION**

DMA hopper development was completed in May; fledging as well as egg-laying were reported by Plant Protection and Quarantine Directorate (PPQD) staff by the end of the month in northern and north-eastern parts of the country. A total of 60,120 ha was treated against DMA hopper bands from 1st May to 3rd June in the eight northern and north-eastern provinces: Baghlan, Balkh, Faryab, Jowzjan, Kunduz, Samangan, Sar-i-Pul and Takhar. More than one third of the control operations were carried out in Samangan.

• **FORECAST**

More DMA fledging and egg-laying will occur during the forecast period. Control operations should stop during the second week of June in most parts of the country. However, two teams should stay in the field, in Kunduz and Takhar provinces, in case of arrival of swarms from the neighboring countries.

Kazakhstan

• **SITUATION**

No report was received in May.

• **FORECAST**

Under weather conditions similar to 2011, DMA fledging should have started by mid-May in the southern provinces and hopper development should be in progress in central and northern parts of the DMA distribution area. Egg-laying should commence everywhere during the forecast period. CIT hopper development should be almost completed in South-Kazakhstan and fledglings should appear during the second half of June in northern areas. LMI hopper development should be in progress. Control operations, which should have started from early May, should continue during the forecast period.

Kyrgyzstan

• **SITUATION**

In May, spring surveys were carried out to identify hopper infestations on a total area of 17,476 ha in Batken, Jalal-Abad, Talas and Chui provinces, of which 9,220 ha were infested. In the southern part of the country, DMA hatching started on 24 April and ended on 12 May. A total of 10,036 ha were surveyed of which 5,120 ha were infested by 1st and 2nd instar hoppers forming patches of 10-20 m² at a density ranging from 30 to 25 nymphs/m². In Talas, DMA hatching occurred on 15-23 May. Within a surveyed area of 5,680 ha, 2,750 ha were infested by 1st and 2nd instar hoppers forming patches of up to 4 m² at a density of 1-10 nymphs/m². In Chui, CIT hatching occurred during the 2nd half of May. Within a surveyed area of 1,760 ha, 1,350 ha were infested by 1st and 2nd instar hoppers forming patches of up to 5 m² at a density of 4-15 nymphs/m². All infestations were treated by ground from 8 May to 2 June using pyrethroids, control operations being considered as completed in these 4 provinces. The treated area represents less than one third of what was treated in May 2011.

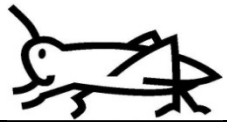
• **FORECAST**

CIT massive hatching is expected in Naryn province during the 1st decade of June and should continue during the 2nd one. An area of 6,000 to 10,000 ha will probably need to be treated.

Russian Federation

• **SITUATION**

The results of hopper surveys carried out in June in 5 Federal Districts (FD) were the following: average of 1.5 hopper/m² on 47% of the surveyed area in the Central FD; average of 22.15 hoppers/m² on 38.5% of the surveyed area in the Southern FD; average of



15.9 hoppers/m² on 82.8% of the surveyed area in the North Caucasian FD; average of 4.25 hoppers /m² on 47.5% of the surveyed area in the Volga FD, and average of 2.8 hoppers/m² on 47.7% of the surveyed area in the Siberian FD.

A total area of 428,400 ha was treated against early instar hoppers using 518 ground sprayers and 38 aircraft. This represents more than 12 times the area treated in May 2011. The situation is considered as very serious.

• **FORECAST**

The hopper development of the three locust species will continue at least during the 1st half of the forecast period and fledging should start by the end of June.

Tajikistan

• **SITUATION**

On 25 May, the total treated area against the two locust pests was of 50,441 ha. The operations involved almost 1,900 workers, 34 tractors and more than 1,400 hand-held sprayers in May. Ground control operations against DMA infestations started on 15 April and continued throughout the month of May in all districts of the Khatlon province, in the south (more than 68% of the whole treated area). Worrying situations were encountered in different locations of Khatlon: in the Danghara district (central part of Khatlon), where two specific teams were mobilized and carried out chemical treatments on 7,800 ha (22,5% of the area treated in Khatlon) out of a 60,000-ha area infested by dense DMA populations; in the Panj and Farkhor districts (extreme south-east of Khatlon), which were invaded by DMA adult groups and swarms (up to 50 ha in size), arriving from the Karatau Mountains, where a serious situation persisted, in particular in the Hissar Valley. Mating started by the end of May. Control operations were also carried out on a daily basis in the northern part of the Sughd province against CIT hopper populations (21% of the whole treated area). Despite serious local situations, the area treated so far represents 44% only of the area treated by late May 2011.

• **FORECAST**

Movements of DMA adult populations as well as egg-laying will continue during the forecast period. CIT fledging will occur, followed by maturation, mating and egg-laying. Control operations will soon come to an end in Khatlon but continue in Sughd.

Turkmenistan

• **SITUATION**

No bulletin was received for May.

• **FORECAST**

DMA adults, which could have formed groups, are expected to move to suitable areas and eventually lay eggs during the forecast period.

Uzbekistan

• **SITUATION**

DMA adults formed groups and swarms, which were observed at altitudes up to 2,800 m, which is highly unusual. In particular, on 25 May, a huge DMA swarm covering an area of 2,300 ha was seen in the Gissar Range, in the extreme south of the country, at altitudes ranging from 1,800 to 2,600 m. A total of 136,000 ha was treated in May against DMA (84%), CIT (13%) and LMI (3%). So far, 172,000 ha have been treated, which represents half of the area treated last year for the same period.

• **FORECAST**

All three locust species will complete their hopper development, fledge, lay eggs and progressively disappear during the forecast period.

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.

May 2012 events and activities. The following activities were ongoing or occurred:

- From December 2011, preparation of the monographs on the three CCA locust pests.
- Regional Project under the FAO-Turkey Partnership Programme (FTPP) approved and sent to countries (Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) for signature.
- National FAO Technical Cooperation Project (TCP) for Tajikistan still under approval.
- Recruitment of National Consultants for the preparation of the national monthly bulletins and of National Consultants for the remote sensing study under finalization.
- Delivery of equipment for locust survey and control operations and demonstration purpose (sprayers, PPE, GPS, survey kits and satellite phone) still on progress for some countries.
- Technical assistance and training workshop on locust monitoring provided to **Afghanistan** and **Tajikistan** on 30 May-3 June(S. Ghaout).
- No technical assistance to **Turkmenistan** on ULV spraying techniques was delivered in May in the absence of feed-back from the country.

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

June 2012 events and activities. The following activities are scheduled:

- Joint survey between **Afghanistan** and **Tajikistan** scheduled in Tajikistan (Khatlon Region) on 5-9 June.
- Joint cross-border survey between **Uzbekistan** and **Turkmenistan** may be organized in June subject to feed-back from the latter country.
- Reports/Studies on remote sensing and Geographic Information Systems (GIS) applications used for locust monitoring and management under finalization at the national level.
- A GIS specialist will start preparing a study, at the regional level, on remote sensing and Geographic Information Systems (GIS) applications used for locust monitoring and management in CCA countries.

- Internship for a Plant Protection Specialist from **Kazakhstan** will be organized in the National Locust Control Center (CNLAA), Morocco, on 10-30 June (due to ongoing control operations and unavailability of any locust expert, the internship to the benefit of Tajikistan was postponed).
- Video tutorial on ULV spraying against Moroccan Locust will start to be prepared in Morocco.
- E-Committee on background documentation on locusts in CCA should start its work.
- E-Committee on pesticides registration for locust control in CCA should start also its work.