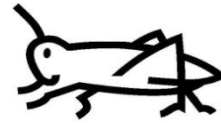




## LOCUST BULLETIN No. 33



FAO - Plant Production and Protection Division (AGPM)

15 October 2014

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

#### General Situation during September 2014

#### Forecast until spring 2015

In September, the locust situation was calm in all Caucasian and Central Asian (CCA) countries as adults were progressively disappearing. Italian Locust (CIT) mating and egg-laying were still observed in Armenia, Kazakhstan and Kyrgyzstan. 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 stock overwintering eggs.

**Caucasus.** No control operations were carried out in September. Autumn egg-bed surveys will take place in October in **Azerbaijan**.

**Central Asia.** No control operations were carried out in September. Autumn egg-bed surveys were in progress in almost all Central Asian countries and will continue in October.

#### Weather and Ecological Conditions in September 2014

**Generally warm weather with locally light rainfalls prevailed throughout CCA.**

In **Caucasus**, the weather was warm with some rainfalls.

In Armenia, the weather was mostly warm with some rainfalls. The average daily air temperature was generally within the norm. Temperatures ranged from 10/15°C to 32/36°C in the lowlands, from 4/7°C to 29/33°C at foothills and from 0/5°C to 26/28°C in mountainous areas, which represented a decrease of 3 to 10°C compared to August. Harvest of grain, grapes, vegetables and melons continued and pre-sowing of winter crops started.

In Azerbaijan, the weather was no more very hot but was still warm, with intermittent rainfalls only occurring for 2 days during the 3<sup>rd</sup> decade of September. Day temperatures were of 33/36°C reaching up to 38/40°C, representing a decrease of 4 to 6°C compared to August. Natural vegetation as well as adjacent crop fields were dry.

In Georgia, the average temperatures were of 18/22°C, representing an increase of more than 15°C compared to August. The wind speed was of 2-4 m/s.

In **Central Asia**, the weather was generally warm with light rainfalls only.

In Kazakhstan, the weather was still warm but average temperatures decreased by 4 to 9°C according to the regions compared to August with minimum below 0°C. In the South, the weather was clear with some rainfalls. Average temperatures varied from 6°C to 32°C with minimum of -1°C and maximum up to 40°C. Relative humidity ranged from 16 to 95%. Prevailing north-easterly and north-westerly winds had a speed of



0.7-20 m/s with gusts up to 27 m/s. In the East, the weather was variable and rainy. The average temperature was of 12.4°C with minimum of -2°C and maximum of 35°C. Relative humidity was of 62.4%. Prevailing north-westerly winds had a speed of 0-9 m/s. In the West, the weather was clear and sunny with light rains. The average temperatures ranged from 6 to 28°C with minimum of -0.4°C and maximum of 38.1°C. The relative humidity varied from 14 to 95%. Variable winds had a speed of 0.1-10 m/s. In the North, the weather was variable and rainy. The average day temperatures ranged from -0.5°C to 20°C, with minimum of -4°C and maximum of 25°C. The relative humidity ranged from 25 to 96%. Variable winds had a speed of 0.2-14 m/s with gusts up to 22.4 m/s.

In Kyrgyzstan, the weather was warm and rainy in September with an average humidity of 45-50%. In the South, the average temperature was within the norm, ranging from 11/17°C at night to 18/22°C during the day in the plains and from 4/9°C at night to 18/21°C during the day at foothills; the amount of precipitation was of 190-220 mm. In the North, the average temperature was also within the norm, ranging from 11/15°C at night to 17/20°C during the day; the amount of precipitation was of 90-120 mm. The vegetation was dry with a sparse cover and a height of 1-3 cm.

In the Russian Federation, warm weather prevailed except in Ural and Siberian Federal Districts (FD). In southern regions of Central FD, weather was mostly hot and dry but some rains fell locally. Temperatures ranged from 18 to 22°C. In North Caucasus and Southern FDs, the weather was hot and dry with strong local rainfalls; temperatures ranged from 16 to 28°C. In the Volga FD, temperatures were within the norm and the weather was mainly dry. The average temperature was of 17.1°C with frost some mornings. In Ural and Siberian FDs, the temperatures were low and frosts frequent; the average temperature ranged from 10.0 to 13.5°C, which was below normal.

In Tajikistan, the temperatures were higher by 3/4°C than in September 2013 throughout the country.

The temperatures ranged from 14 to 19°C at night and from 20 to 34°C during the day, which contributed to the early ripening of fruits, berries, vegetables and melons.

In Uzbekistan, temperatures were of 30/33°C during the day and 18/20°C at night, which represented a decrease of 2/7°C compared to August.

#### **Area treated in September 2014**

No control operations were carried out

#### **Locust Situation and Forecast**

(see also summary on page 1)

### **CAUCASUS**

#### **Armenia**

##### **• SITUATION**

The locust situation was calm in September. The development of the Italian Locust (CIT) continued; mating and egg-laying were observed in the mountainous areas while egg-laying and natural death were noted in lowlands and at foothills. No infestations were reported and no control operations were carried out.

##### **• FORECAST**

*Natural disappearance of CIT adults will continue and come to an end in October. No further development is expected this year. In 2015, it is anticipated that cumulated CIT infested areas could extend and reach at least 3 000 to 5 000 ha. No occurrence of the Moroccan Locust (DMA) is expected unless it arrives from neighboring countries.*

#### **Azerbaijan**

##### **• SITUATION**

Dry and warm weather conditions favored DMA mating and egg-laying in Djeranchel and Eldar steppes as well as in Garasu and Padar plains where adults disappeared. No control operations were carried out in September.

• **FORECAST**

*No further locust development is expected this year. Autumn survey of egg-pods will be carried out on about 45 000 ha in order to plan for the next locust campaign.*

**Georgia**

• **SITUATION**

The 2014 locust campaign was completed on 12 August and no surveys were carried out afterwards.

• **FORECAST**

*No further locust development is expected this year.*

**CENTRAL ASIA**

**Afghanistan**

• **SITUATION**

Neither further locust activity nor anti-locust operation was reported in September.

• **FORECAST**

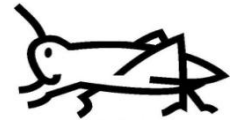
*No further locust development is expected this year.*

**Kazakhstan**

• **SITUATION**

Autumn survey of DMA egg-pods was in progress in South-Kazakhstan and have concerned 18 400 ha, of which 2 112 ha were infested; damage on egg-pods ranged from 3.4 to 7%. In Zhambyl, egg-pods were found on 786 ha out of a total surveyed area of 3 100 ha; their density was of 1 egg-pod/m<sup>2</sup> on 266 ha and up to 2 egg-pod/m<sup>2</sup> on 520 ha. The number of eggs per pod varied from 22 to 37. Egg-pod damage ranged from 0.6 to 2%.

Summer monitoring of CIT mating and egg-laying was carried out on more than 14 million ha of which 4.6 million ha were infested. In September, egg-bed and egg-pod surveys, consisting in soil excavations, were done in natural and perennial grasses, roadsides and fallow lands with sagebrush; they concerned a total area of 369 030 ha of which 118 063 ha were infested. In the South, in Almaty province, egg-pods were found at an average density ranging from 0.5 to 2/m<sup>2</sup> (maximum of 8 egg-pods/m<sup>2</sup>) on 12 541 ha out of the 48 750 ha



surveyed. The number of eggs per pod ranged from 16 to 33 and damage on egg-pods from 0 to 20%. In Zhambyl, the egg-bed survey was completed and egg-pods were found on 2 061 ha at a maximum density of 2/m<sup>2</sup>. The number of eggs per pod ranged from 18 to 48 and damage on egg-pods from 1 to 6%. In the West, the egg-bed survey concerned 33 000 ha in Aktobe, of which 20 930 ha were infested. The number of egg-pods/m<sup>2</sup> varied from 1 to 70 and the number of eggs per pod from 12 to 42. The damage ranged from 3 to 38%.

In West-Kazakhstan, the egg-bed survey was carried out on 20 000 ha, of which 9 940 ha were infested. The average density ranged from 0.8 to 80 egg-pods/m<sup>2</sup>, reaching a maximum of 180. The number of eggs per pod was of 17 to 44; damage, mainly due to entomophagous birds and insects, varied from 5 to 29%. In the North, egg-laying continued and natural disappearance started in Akmolá; egg-pod survey was carried out on 38 000 ha of which 17 325 ha were infested. The number of egg-pods ranged from 0.01 to 5/m<sup>2</sup> and the number of eggs per pod from 28 to 52. Diseases and parasite concerned 1 to 20% of the egg-pods. In North-Kazakhstan, the wintering egg-pod monitoring was completed after the survey of 65 000 ha of which 15 600 ha were infested in two main areas, at a density of 1 egg-pod/m<sup>2</sup>; the number of eggs per pod ranged from 24 to 35 and the damage from 0 to 20%. In Kostanay, egg-pod survey was carried out on 20 600 ha of which 15 900 ha were infested at a maximum density of 1 egg-pod/m<sup>2</sup>; the number of eggs per pod ranged from 25 to 43 and the damage from 3 to 30%.

Summer monitoring of the Asian Migratory Locust (LMI) mating and egg-laying was carried out on almost 4 million ha of which nearly 1 million ha were infested. The autumn egg survey was carried out on 104 010 ha of



which 18 230 ha were infested. In the South, in Almaty province, egg-pod survey concerned 11 800 ha of which 3 240 ha were infested at an average density varying from 0.3 to 1.8 egg-pod/m<sup>2</sup> (maximum of 3 egg-pods/m<sup>2</sup>). The number of eggs per pod ranged from 60 to 80 and the damage from 2 to 20%. In Zhambyl, 6 700 ha were surveyed of which 688 ha were infested at a density of 0.8 to 5 egg-pods/m<sup>2</sup> (in 2013, the density did not exceed 3 egg-pods/m<sup>2</sup>); the number of eggs per pod ranged from 18 to 71 and the damage was of 0.2%. In the West, in Aktobe, 8 400 ha were surveyed of which 500 ha were infested at a maximum density of 5 egg-pods/m<sup>2</sup>; the number of eggs per pod ranged from 40 to 50 and the damage from 7 to 11%. In the North, In Kostanay, 4 100 ha were surveyed of which 3 300 ha were infested at a maximum density ranged from 10 to 28 egg-pods/m<sup>2</sup>; the number of eggs per pod ranged from 65 to 80 and the damage was of 8%.

No control operations were carried out in September.

• **FORECAST**

*Remaining CIT adult populations will disappear at the beginning of the forecast period. Autumn egg-pod surveys will come to an end for all three locust pests. No further locust development is expected this year.*

**Kyrgyzstan**

• **SITUATION**

In September, DMA and CIT summer mating and egg-laying surveys were in progress.

• **FORECAST**

*No further locust development is expected this year. DMA and CIT surveys will continue in October. It is anticipated that 60 000 ha will have to be controlled against DMA and CIT in 2015.*

**Russian Federation**

• **SITUATION**

In September, egg-pod surveys started to assess the stock of overwintering locust eggs. So far, surveys have been carried out on 1 860 ha in the Central Federal District (FD) and egg-pods have been found on 700 ha at

a density of 0.7/m<sup>2</sup>. In the Southern FD, 59 800 ha were surveyed and egg-pods were found on 15 500 ha at a density of 0.7/m<sup>2</sup>. In the North Caucasus FD, 6 000 ha were surveyed and egg-pods were found on 1 000 ha at a density of 0.1/m<sup>2</sup>. In the Volga FD, 190 100 ha were surveyed and egg-pods were found on 67 100 ha at a density of 2.3/m<sup>2</sup>.

• **FORECAST**

*Egg-pod surveys will be completed in October and 2015 forecast made after analysis of all survey results.*

**Tajikistan**

• **SITUATION**

In September, autumn surveys were carried out on 20 000 ha, of which 9 000 ha in Khatlon, 2 000 ha in Sughd, 7 000 ha in Region of Republican Subordination and 2 000 ha in Gorno-Badakhshan. The campaign coordinator reported to the media on the anti-locust activities and their results; meetings were also held at region and district levels.

• **FORECAST**

*In October, egg-bed surveys will continue and analysis of their results be made to draft the 2015 preliminary locust control plan.*

**Turkmenistan**

• **SITUATION**

No bulletin was received.

• **FORECAST**

*No further locust development is expected that year.*

**Uzbekistan**

• **SITUATION**

Upon specific request from the Ministry of Agriculture and Water Management, a locust survey was carried out on 180 000 ha in the Aral Sea area on 16-23 August thanks to a contribution of the "Programme to improve national and regional locust management in CCA".



As a result, 1 000 ha were treated against LMI adults in the Aral Sea area in August, using a hang-glider to spray imidacloprid as indicated in the late national bulletin. Therefore, the total treated area during the 2014 locust campaign increased up to of 346 118 ha, of which 51 000 ha against LMI.

• **FORECAST**

*Egg-pod surveys will be carried out from October to 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](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.

### **September 2014: events and activities.**

- **Technical Workshop on Locusts in CCA, 17-21 November 2014, Tbilisi, Georgia:** under preparation.
- **Post-graduate fellowships on locusts:** calls for interest for candidates and hosting institutions under finalization following comments provided by the E-committee.
- **Locust Geographical Information System (GIS) in CCA:** technical specifications to create a database for the GIS, entitled «Caucasus and Central Asia Locusts Information System» («CCALIS»), under review.
- **Study on long-term mechanisms for sustainable regional cooperation on locusts in CCA:** under preparation.
- **Locust Watch in CCA:** website under review (new layout and updated content).
- **Resource mobilization:** Concept Note under discussion for a three-year sub-regional project.

### **Forthcoming events and activities in October 2014.**

Same activities as above, either ongoing (workshop; website; resource mobilization) or to be finalized (calls for interest for fellowships; technical specifications for regional GIS; legal study on long-term mechanisms for sustainable regional cooperation).