

Measures to Prevent Cross-Border Locust-Related Emergencies in Uzbekistan

Allashev Abdumurod Karshievich

Surkhandarya Regional Department of Emergency Situations, a senior lecturer
at the Life Activity Safety Training Center

Imamov Charshami Mamatalievich

Surkhandarya Region Emergency Situations Department, a teacher at the Life Activity Safety
training Center

Eshmurotov Sukhrob Pulatovich

Surkhandarya Region Emergency Situations Department leading Specialist of Information
Analysis Service

ABSTRACT: The article provides information on locust species found in Central Asia, prevention of cross-border locust-related emergencies in the Republic of Uzbekistan, implementation of measures in cooperation with Central Asian countries, international agreements.

KEYWORD: locust “rain”, Moroccan, Asian and oasis locust species, locust eggs, “Living disaster”, chemicals, barrier, tape or mass processing.

INTRODUCTION

At a time when the world is battling the COVID-19 pandemic, countries in Central Asia, the Middle East and Africa are facing another disaster - locust rain. The rapid migration of locust swarms from one state territory to another threatens the livelihoods and food security of millions of people. The closure of locusts during the Coronavirus pandemic is a second blow to the millions of people in these countries.

According to experts, Due to global warming, the short-term increase in the number of locusts in Central Asian countries, ie laying eggs in 20-30 days, has become a serious problem in recent years. Because 30 years ago they didn't multiply at that rate. In the Central Asian region, Moroccan locusts are first above sea level it is found at an altitude of 1, 200 meters, but due to global warming, these pests are also located at an altitude of 2,200 meters above sea level.

Main part: Locusts infect all agricultural crops: barley, wheat, white oats, millet, corn, tobacco, alfalfa, cotton and melons, especially large crops. It also feeds on the leaves of vines and fruit trees during the growing years.

These pests have existed in Uzbekistan since ancient times. According to historical data, they caused many famines in the first half of the last century. Samarkand, Kashkadarya, Surkhandarya, Navoi and Jizzakh regions of Uzbekistan are constantly affected by Moroccan locusts. Locust control measures are taken on 75% of the 51 2,000 hectares of cultivated land in the country.

For information: There are more than 150 species of locusts in the country, including 10 species of agricultural crops, pastures and can cause great damage to other plants. Locusts are divided into 2 groups depending on lifestyle. These are the Moroccan, Asian and oasis locusts that live in swarms, and the (local) locusts that do not form swarms.



Picture 1. View from the object tracking process

One of the most common locust species is the Moroccan locust, which is distributed in the semi-deserts of the foothills, covering about 10 million square kilometers, from the territory of North African countries to the East Turkestan region of China. It can be found in the pastures of seasonal vegetation in the foothills of Afghanistan, Kyrgyzstan, Turkmenistan, Tajikistan, Kazakhstan, in the border areas with Uzbekistan at an altitude of 250-1 600 meters above sea level.

Occurs in all regions of Surkhandarya and Kashkadarya regions of Uzbekistan at an altitude of 250 meters above sea level. Widespread in pastures of Navoi, Samarkand, Jizzakh, Syrdarya, Tashkent regions and Fergana valley. Locust eggs hatch in early spring when the temperature of the top layer of soil reaches +10 degrees, ie in late March, and in the years when spring is cool, in mid-April.

On November 13-15, 2019, experts from 10 countries (Afghanistan, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Kazakhstan, Tajikistan, Russia, Turkmenistan and Uzbekistan) discussed locust control measures at a seminar in Tashkent. The seminar was organized annually by the UN Food and Agriculture Organization on "Improving locust control at the national and regional levels in Central Asia and the Caucasus". This UN program was launched in 2011.

The seminar in Tashkent discussed a number of issues and planned to jointly develop many activities. In particular, Uzbek-Tajik and Uzbek-Kyrgyz specialists and scientists meetings were scheduled for May 2020. Unfortunately, due to the COVID-19 pandemic, this planned work did not take place.

At the seminar in Tashkent, it was planned to train specialists from Kyrgyzstan, Afghanistan and Turkmenistan at the Plant Protection Research Institute in Uzbekistan. Because, as mentioned above, there is only one research institute for locusts in the CIS. The plan was also promised a positive

solution by the Food and Agriculture Organization of the United Nations. However, due to the pandemic, these plans did not materialize. For the past three years, Japan's JICA Foundation has been providing generous assistance to Afghanistan, Tajikistan and Kyrgyzstan in the fight against locusts. A representative of the JICA Foundation confirmed that assistance will be provided to Uzbekistan from 2020. So far, there are no definite answers.

In most countries, chemicals are used as the most effective way to control locusts. The use of chemicals requires the protection of people, animals, plants, honey bees and beneficial microorganisms. Chemical treatment is effective when the number of harmful locusts in a swarm exceeds 10 per 1 m², and the number of solitary locusts exceeds 15. Experts recommend the selection of chemicals, barrier, tape or mass treatment, taking into account the type, age, developmental period and area of distribution of locusts. Failure to follow these recommendations will result in poor quality and inefficient chemical treatment, leading to a high prevalence of locusts relative to the predicted area.

In the fight against adult (winged) locusts have to use high-cost aviation assistance. Currently, due to the lack of chemical control of locusts in the Republics of Tajikistan, Afghanistan and Turkmenistan, the influx of large swarms of locusts from neighboring countries is increasing.

In short, completing pest control measures before the locusts fly out of the wings is costeffective and will make processing more efficient. Lack of timely and quality control of locusts - will cause them to fly long distances in search of sucking, laying eggs and spreading to relatively large areas next year. Based on the above, it is advisable to systematically organize the work on locusts in the territory of Uzbekistan in accordance with the expected area of distribution, the choice of chemical control, timely treatment on the basis of experience and expert advice, and cooperation with neighboring countries.

References:

- [1]. Акимова Т.А., Хаскин В.В. Экология- М.: 1998.
- [2]. Баратов П. Табиатни муҳофаза қилиш. Тошкент, Ўқитувчи, 1991.
- [3]. Бирлашган Миллатлар Ташкилотининг Иқлим ўзгариши бўйича рамкавий конвенцияси бўйича Ўзбекистон Республикасининг Биринчи Миллий ахбороти. Тошкент., 1999.
- [4]. 4 Национальнўй доклад. О состоянии окружающей природной средў и использовании природнўх ресурсов в Республики Узбекистан(2002-2004 год). Т. Chinor ENK,- 2005.
- [5]. Табиатни муҳофаза қилиш тўғрисида Ўзбекистон Республикасининг 1992 йил 9 декабр Қонуни// Ўзбекистоннинг янги қонулари. Тошкент., «Адолат», 1993.
- [6]. Экология. Интерактив қўлланма. Тошкент., ЮНЕСКО
- [7]. Internet resources:
www.nature.uz
www.uznature.uz
www.carec.kz
www.ecoforum.sk.uz