

DAMAGE CAUSED BY OSTRINIA NUBILALIS TO THE SWEET CORN PLANT

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Annotation: This article provides information on the damage caused by the specialized pest (*Ostrinia nubilalis*) to sweet corn grown as the main crop under the conditions of Toyloq district, Samarkand region; as well as data on the length of the galleries, its occurrence in the stem, and its presence in the tassel.

Keywords: Specialized species, sweet corn, pest, worm, corn parakeet, roadhead length, Sultan, soot, stem and Megaton F1.

Introduction. Corn is an important food and fodder crop in world agriculture [6]. Although sweet corn is less widespread globally, its cultivated areas are rapidly expanding. Sweet corn is harvested at the milk stage and is used as a processed vegetable; it also serves as an important source of fiber, minerals, and vitamins [10]. Sweet corn is the most popular vegetable crop in Canada and the United States [8]. In Belarus, it is grown to obtain green mass, grain, and seeds [5]. In Poland, sweet corn (*Zea mays*) is considered a relatively new crop [4]

Sweet corn is becoming increasingly popular in Asian countries as well — especially in India, where various soups, jams, and dishes are prepared from it in hotels [8], [10]. Research on expanding the cultivation areas of sweet corn, selecting varieties and hybrids adapted to soil and climatic conditions, as well as developing and improving scientifically grounded agrotechnological practices, is being continued by a number of scientists [1, 2, 3, 5, 7].

Research and Methods. The experiments were conducted at the “Negmatov Shodmon–Sohibkor” farm in the Toyloq district of the Samarkand region, using the hybrid Megaton F1 grown as the main crop. The number of chewing pests in the corn field was determined using the formula of F.M. Uspensky (1973). When studying the biological characteristics of corn pests, the methods of V.O. Khomyakov, V.I. Voynyak, N.B. Bondarenko, and others were used. To study and apply biological agents, the methods of N.V. Bondarenko, Kh.R. Mirzaliyeva, and Sh.T. Khodjaev were applied.

Results. The experiments showed that among the representatives of the order Lepidoptera, only the European corn borer (*Ostrinia nubilalis*) was found on the corn plant, and it caused significant damage. The greatest harm from the corn borer was observed during the plant development stages from ear emergence to the milk stage, and the damage continued until the dough stage. Damage caused by the corn borer was studied in three groups of plant parts:

1. damage to the ear,
2. damage to the stem and leaves (not yet fully opened),
3. damage to the cob core (ear structure).

According to observations, in the control (untreated) variant, an average of 118.5 larvae were found per 100 plants. It was noted that their distribution among plant parts and the degree of damage varied.

The largest number of larvae was observed on the ear — 45.2% of all larvae, amounting to 53.5 individuals. The damage caused by the larvae on the ear delayed the natural development of the plant by 3–8 days compared to the treated plot. The damage resulted in delayed pollination of the ear and incomplete grain maturation. Damage to the ear by the corn borer began at the stage of mass flowering and ended when the larvae moved to the grains or the ear tips were formed.



During the experiment, it was established that the number of larvae on sweet corn grown as the main crop varied. On damaged plants, 3–4 larvae were found on the ear. On the most severely damaged plants, up to 8 larvae were recorded on a single ear, and the grains remained underdeveloped.

The harmful effects of the larvae include the formation of deep galleries inside the stem, damage to the leaves involved in photosynthesis, and direct damage to the ear. When the damaged plants were marked with fabric tags, it was noted that their growth and development lagged behind that of undamaged plants. The larvae located inside the stem formed galleries of varying lengths depending on their age. The gallery lengths ranged from 2.4 to 12.3 cm.

When counting larvae inside the ears, 1 to 3 individuals were found. The length of the galleries formed by the larvae in the ears ranged from 1.1 to 3.9 cm.

Conclusion. Although the lowest occurrence of larvae was observed in the cob core, this part sustained the greatest damage. Thus, the presence of even a single larva in an ear intended for grain production directly rendered the ear unsuitable and led to a reduction in the expected economic efficiency.

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