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# Plant Pests, Prevention of Grain Insects with Insects

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**Annotation:** This article provides information and advice on plant pests, their types, occurrence, and plant protection against pests found in cereals.

**Keywords:** polyphages, phylloxera, agrotechnical protection method, mechanical and physical protection methods.

Plant pests are animals that infect or destroy cultivated plants. There are many plant pests in the mammalian class of vertebrates, especially rodents. From invertebrates, some species of gastropods, and most roundworms from the nematode class, infect plants. Arthropods include insects, spiders, some species of amphibians, as well as a variety of crustaceans (donkeys) and many species of plant pests. Insects are especially harmful to crops. More than 60,000 species of herbivores are known, including about 4,000 species that damage crops, spoil crops, and more.

Pests of agriculture are classified according to a systematic principle (by category) and the nature of nutrition. Herbivorous insects and canals are polyphagous, all herbivorous insects that feed on plants of different families; oligophages, insects that feed on different types of plants in the same family; insects that feed on only one species of plant, monophages. The crops are damaged by all kinds of pests: locusts, some squirrels, beetles, black beetles (fake beetles), etc. Insects that feed on different types of plants in the same family also make up the majority. These include the Swedish fly, the Hessian fly, etc., and feed only on cereals.

Among the insects that feed on only one species of plant, phylloxera (the main pest of the vine), alfalfa leafhopper (phytonus) and others are considered dangerous pests. Pests and canals are also classified according to the groups of plants they infect. For example, cereal pests, cotton pests (there are more than 200 species), garden pests, vegetable pests, etc.

Plant protection, protection of plants from pests and diseases - 1) a branch of agricultural science; studies the damage caused to plants by pests, diseases and weeds and develops measures for their prevention and elimination; 2) a system of measures developed for the destruction of pests, plant diseases and weeds in agriculture and forestry. Its task is not only to destroy or limit the activities of pests, but also to determine in advance the timing and extent of their emergence, as well as to prevent the spread of the most dangerous pests from one area to another. Protection of cereals. It is based on agricultural entomology, phytopathology, botany, mycology, bacteriology, virology, ecology, biocenology, chemistry, biochemistry, animal and plant physiology, physics, biophysics, genetics, selection, toxicology, and other sciences. Pests and diseases of cereals and weeds cause great damage to crops, especially crops. Therefore, plant protection plays an important role in the cultivation and preservation of agricultural products. The harmful effects of pests and diseases on plants have long been known. In the early 18th century, the French botanist J. Turnefor tried to classify plant diseases. In the second half of the 18th century, the contagion of most diseases was proved experimentally (A.T. Bolotov in Russia, A.Tillet in France, F.Fontana in Italy, J.Fabritsius in Denmark and others). In the second half of the 18th century, German scientist A. de Bari, Russian scientist MS Voronin and others identified new species of phytopathogenic fungi, their morphology and developmental characteristics. The damage that plant pests and diseases caused to the economies of many countries in the second half of the 19th century necessitated the study and control of them.

Effective crop protection is routinely implemented through a system of measures such as forecasting the development and spread of pests and diseases, screening crops, seedlings, and weeds, and treating plants using a variety of methods and tools to identify pest numbers and disease foci in a timely manner. There are several methods used to control pests, diseases and weeds. Methods of agro-technical protection of plants include organizational and technical methods of crop care, as well as ways of storage of agricultural products, ie the reproduction and accumulation of pests, methods of disease control (timing and methods of sowing, tillage, fertilizer norms, weed control, exchange). planting, reclamation). Mechanical and physical protection methods include methods to prevent pests from entering agricultural crops (catching, burning, freezing, flooding, electrocution, etc.). Light traps are used to attract and then kill pests, as well as organic compounds - attractants. The method of chemical protection of plants is based on the use of various chemicals; Despite its many disadvantages, this method is currently one of the leading methods in plant protection. In 2005, about 200 chemicals were used in Uzbekistan against plant pests, diseases and weeds alone. The State Commission on Chemicals and Plant Protection under the Cabinet of Ministers of the Republic of Uzbekistan authorizes the use of chemical and biological drugs and monitors strict compliance with the rules of their use. Biological protection of plants is used against pests, parasites, predators, microorganisms and antibiotics.

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The genetic protection of plants is based on the interaction of two organisms: a parasite and a plant owner. Immunity (resistance) of plants to diseases and pests is important. Microbiological protection of plants uses microorganisms to control diseases and pests. Chemical and biological control methods are used to control pests and canals in an integrated plant protection system. In this case, the species in the agrobicenosis damaged by man is relatively restored, which is one of the important factors in the protection of the biosphere.

Each plant can produce good yields after certain agro-technical stages. In addition, high quality and high yields cannot be achieved without protecting plants from diseases and pests. This issue is especially important in ensuring food security in our country. According to experts, today the share of harmful diseases in the country's arable lands is growing. Pests and weeds are factors that negatively affect crop yields and crop quality. Today, chemical methods are used as an easy and quick way to protect plants from diseases and pests. However, this method is not environmentally or economically advantageous. The chemical method can only be used as a last resort. The farm's fruit and vegetable and melon crops have been severely damaged by aphids, various plant lice and other pests this spring due to the rainy season. In this case, the sudden use of chemicals is both beneficial and economically and environmentally harmful.

Therefore, our scientists, using non-traditional methods used by our ancestors, experimented with a complex compound made from natural medicinal plants and achieved effective results.

It was observed that this complex combination gives better results when used in combination with the drug "ElSMiK", developed and produced by scientists of the Navoi branch of the Academy of Sciences and specialists of JSC JV "Electrokimyozavod". The process of applying and expanding the experience of this field in various crops is underway.

Grain is one of the most serious and sometimes severely damaged plants with many different diseases and pests. To date, more than 50 different species of pests have been observed in the grain fields of the country.

In the fight against the pea beetle, disinfection of pea grains, especially seed peas, with carbon sulfide gives the best results. For this purpose, carbon sulfide is used at the rate of 100-120 g per 1 m 3 of the building. When disinfecting, the pea pile should not be thicker than 75-100 cm. If the pea is covered, it is folded into four layers, leaving a small gap between the bags before disinsection. Chlorpicrin is also used for disinsection of peas at the rate of 25-35 g per 1 m 3 of the building. The moisture content of the disinfected peas should not exceed 15%. Experiments in recent years have shown that sulfur can be used to disinfect peas from this pest. This drug is consumed at the rate of 1.5-3.5 kg per 1 m 3 of the building, depending on the temperature in the building

Disinsection lasts 12-48 hours. Instead of sulfur, chlorine mixture can be used at the rate of 400-450 g per 1 m 3 of the building.

More recently, seed peas have been treated with approved insecticides instead of gas, and small amounts of seeds with naphthalene. You can also use machines to treat the seeds. Beetles treated in this way can be killed in 15-25 days. Peas are treated with naphthalene when the moisture content is not more than 15%. Peas are treated for at least 7 days at a temperature of at least 20-25 ° C. One ton of seeds requires 1-2 kg of naphthalene. Peas treated with naphthalene should be stored in cooked bags.

Edible peas can be fumigated with hydrogen sulfide

If not, you can clean it by soaking it in table salt. The concentration of brine is determined by the navigation of the pea. For example, to clean medium-sized peas, about 3 kg of salt is added to 16 liters of water. Peas on the surface of the brine are removed, and healthy grains are immediately washed in water and dried.

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