NOVATEUR PUBLICATIONS
JournalNX- A Multidisciplinary Peer Reviewed Journal
ISSN No: 2581 - 4230
VOLUME 10, ISSUE 4, April -2024

DISEASES AND PESTS OF MULBERRY TREES, MEASURES TO COMBAT THEM

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Abstract
This article describes the conditions of occurrence of mulberry bacteriosis and powdery mildew diseases, as well as measures for their prevention and control.

Keywords: mulberry varieties, seedlings, mulberry tree, diseases, control of agricultural technology, leaf, mushroom,

Introduction

In agriculture, various diseases and pests cause great damage to crops.
It is better to prevent a disease than to fight it, because it costs less to prevent it than to treat infected plants and animals. Therefore, seedlings planted for the garden should be selected from highly selected, healthy, disease-free, vigorous seedlings. Orchards planted from such seedlings, including fruit mulberry varieties, grow healthy for a long time and produce high-quality fruit.
Chemical, mechanical, agrotechnical and biological methods are widely used in the fight against diseases and pests in mulberry trees. Good results can be achieved if they are used comprehensively.

Chemical method of combat - is one of the main methods in vegetable growing and horticulture. But in the fight against plant diseases and pests, agrotechnical and biological methods are preferable. Because the chemical method has several disadvantages. For example, if the wrong solution is prepared when using medicines or protective equipment (mask, gloves, etc.) is used incorrectly when spraying it, it can harm human health. In addition, when various toxic substances are used in pest control, a number of beneficial insects die, thereby disturbing the balance of nature.
Considering the above negative aspects, there is a question of less use of chemical methods and instead of them in the future wide use of biological methods.

Biologically - in the fight against plant pests and diseases, their compounds (bracol, golden eye) are used. These include birds, insects, predators, various bacteria, etc. With their help, they destroy many insects that harm plants.

Agrotechnical method - mainly plant care (fertilizing, weed control, soil loosening, branch care).

Mechanical fighting method - removing the hump of insects wintering in the bark of trees. It consists in removing worms, as well as butterflies of pests, with the help of various traps.

Microorganisms that cause all kinds of mold and other diseases hibernate in fallen leaves, so it is recommended to collect such leaves and burn them. When the leaves begin to fall, it is better to plow the ground deeply with plows, and in small gardens to loosen the base of the trees with a spade.
The main issue in the protection of plants is to prevent the proliferation of pests and disease-causing insects and microorganisms and to create conditions for combating them.

Mulberry diseases

Bacterial disease. This disease mainly affects leaves, branches and buds of young plants. Its appearance is such that a "spot" is formed on the leaf, the veins darken, then the leaves turn yellow and become wrinkled. First, multifaceted brown and black spots appear on the leaves. When there is a lot of precipitation, a white or yellowish sticky substance appears in the spots. Severely infected leaves turn yellow and fall.
Elongated spots form on infected young branches, then the branch darkens and the bark cracks, severely affected branches may even die. Infected buds darken and gradually dry up.
Cuttings are made only from healthy plants. Infected and shed leaves are burned. However, at the same time, it is necessary to observe the rules of agrotechnics (planting residues, irrigation, mineral fertilizers, potassium, etc). The diseased variety is cut 20 cm below the affected area and the cut area (ISO) is sprayed with lime-sulfur solution. Rows are plowed deep in autumn.

Powdery mildew disease

This is one of the most common diseases in mulberry leaves. Usually, this disease appears in the second half of summer. External symptoms of the disease are as follows: separate spots appear on the head (white flour-like powder). Then, with the development of the disease, thick floury white dust covers the leaf surface. A brown spot appears on the affected area of the leaf. The disease-causing fungus hibernates among the fallen leaves and also on the branches. Overwintering cleistocarpium is formed at the end of the following year, from which ascospores fly out and fall on the leaves.
Certain agrotechnical measures are used for this. Plant care, deep plowing between rows in autumn, softening the base of trees, fighting against weeds during the growing season. Damaged leaves are burned, mulberry trees are treated with 5% lime-sulfur solution (ISO) before leafing in summer or autumn. 320 g of sulfur and 160 g of lime are taken to prepare one liter of ISO. Boil the mixture for 45-60 minutes. The rate of consumption of a 1.5 percent suspension of sulfur is as follows: 1-1.5 l for a two-year-old leafless seedling, 3-4 l for one small tree, 2-3 l for a leafy bush mulberry, 8 -10 l for tall trees.

Summary

In recent years, the control of mulberry diseases in existing tall mulberry trees and mulberry groves in our Republic is being carried out in an unsatisfactory condition. As a result, the yield of leaves from mulberry trees is decreasing sharply in all regions. As a result, it affects the yield of cocoons. Scientists of the institute came to this conclusion in their long-term experience.We recommend working with lime-sulfur (ISO) solution after the silkworm feeding season on mulberry trees in our country.

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