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DAMAGE TO GROWING CROPS CAUSED BY DISEASES (ШКОДА ВИРОЩУВАННЮ РОСЛИН ВІД ХВОРОБ)

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Ключові слова: *хвороби, збитки, фунгіцид, сільське господарство*

This article is devoted to the study of diseases and their harmful effects on crops

Key words: *diseases, losses, fungicide, agriculture*

Everyone has had SARS (acute respiratory viral infection) at least once in their life. So each of us has experienced and is well aware of the symptoms of a viral disease. In 2020, the word coronavirus came from almost every person on our planet. Who would have thought that in the 21st century, the world's population will begin to adjust their crazy schedule to the whims of a virus. Prior to the current coronavirus pandemic, the general public paid little attention to this issue. And in vain! Viral epidemics can also occur in the plant world - epiphytosis, which can cause significant economic losses in agriculture. According to the Food and Agriculture Organization of the United Nations (FAO), crop losses from viral diseases can reach 40% and have unpredictable consequences.

A virus is a non-cellular infectious agent that can only exist inside living cells. Viruses do not have a cellular structure, they consist of an RNA or DNA molecule, which is usually surrounded by a protein shell. They multiply in the body of the host or vector, feeding on the contents of the cell, as a result of which it loses its energy potential, is destroyed and dies.

Non-communicable plant diseases occur due to high or low temperatures, sharp fluctuations in air and soil temperatures (eg, burning of crops, freezing of plants, protrusion of plants); due to excess or lack of moisture (in particular, soaking crops, draining of plants, premature wilting of plants); violation of the regime of mineral nutrition of plants, the wrong ratio of nutrients in the soil and more. Depending on the location, there are local and general plant diseases. Local plant diseases are characterized by lesions of individual plant organs in the form of spots (cercosporosis of beets, potatoes, septoria of cereals, coccidiosis of cherries and sweet cherries), pustules (rust of

plants), powdery or spider mites (Powdery mildew, Powdery mildew), growths (sagebrush)). In common plant diseases, wilting of plants as a whole is most common due to damage to the vascular system (eg, fusarium wilt, flax, cotton, potatoes, sunflower, etc.).
By the nature of the manifestation, there are latent (hidden) plant diseases that occur without symptoms (some viral, mycoplasma and bacterial diseases); chronic plant diseases, when the plant is sick for a long time or the whole period of life (wood rot, black apple cancer). Plant diseases are transmitted with seeds and planting material, plant remains, through soil, equipment, insects, wind, water, etc.

Rusty cereal diseases are the main reason for reduced yields of many important cereals. Harmfulness of rust diseases is that the assimilation of plants, their physiological processes are disrupted, winter hardiness of winter breads is reduced, resulting in reduced yields and quality. Sometimes the shortage of rust yield is 15-20%, and with the strong development of the disease, the crop can not be obtained. All pathogens of rust diseases belong to the basidiomycetes of the order igeaipaiez. Most of the causative agents of rust diseases of cereals belong to the genus Rissipia and only a few - to the genus Igitusev.

Measures to combat

Various measures are used to control plant diseases:

agrotechnical - aimed at neutralizing the development of pathogens and increase plant resistance to them (biologically justified crop rotations, compliance with the terms of planting and sowing, proper use of organic fertilizers, etc.);

selection and introduction into agricultural production of varieties, plants resistant to diseases and pests;

chemical - the use of pesticides, various toxic substances, their compounds or mixtures of substances of chemical or biological origin, designed to destroy, regulate and stop the development of harmful organisms that affect plants, animals, humans and damage material values, as well as rodents, storms , woody, shrubby vegetation, clogging fish species.

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