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CHEMICALS USED IN COTTON AGROCENOSIS AND THEIR HARMFUL EFFECTS ON THE ENVIRONMENT

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ANNOTATION

Inefficiently considered chemicalization of industry, agriculture and household causes a great danger to the environment and human health. Violation of norms and rules of application of pesticides and fertilizers lead to the fact that the content of toxic substances increases and in some regions exceeds permissible values. The consumption of chemically contaminated food has a negative impact on the health of people, especially children. Biological activeness of pesticides causes the deaths of not only harmful but also beneficial organisms. Therefore, much attention is currently paid to the creation of selective treatment aimed only against harmful organisms. These works are based on biochemical different organisms.

Keywords: pesticide, the negative effect of pesticide, fertilizer, harmful substances, human health.

INTRODUCTION

On the basis of modernization and intensive development of agriculture in the country, the priority task is to increase production and fully satisfy the needs of the population and industry.

Since gaining independence, the country has undergone profound reforms in agriculture. The area under cotton has decreased, and the amount of pesticides used in these areas has dropped sharply. Thus, the type and amount of toxins released into the environment, including soil and water, from cotton-growing areas has been dramatically reduced. As a result, the ecological environment of soil and water has improved. The use of pesticides used in agriculture, including cotton, in strict standards and conditions is an urgent problem for environmentally friendly living and growing organic food.

Toxic pesticides used in agriculture are known to adversely affect soil, water, the environment and living things. Excessive use of chemical fertilizers, toxic pesticides leads to an increase in the amount of cadmium, lead, mercury, fluorine and natural radionuclides in soil, water, animal and plant products

As part of agricultural activities, in order to to combat diseases and pests of plants, range of agricultural practices are implemented, such as creation of resistant pests and disease varieties, usage of biological, chemical and other methods directly or indirectly affecting pests of cultivated plants, etc. Currently, agricultural production is more effective in combating diseases and pests of plants by using chemical method which provides protection for harvest and high economic efficiency.

The discovery of the chemical means of plant protection from different pests and diseases is one of the most important achievements of scientific-technical advances. The usage of such chemical means has become an integral part of the development of modern agricultural techniques.

Each year the range of pesticides for agricultural purposes is increasing. In all countries of the world, currently more than 10,000 different mixtures are applied for production, which contain more than 600 chemical compounds belonging to different classes. In the United States of America (USA), for example, in the range of pesticides 1000 names in France 400-450, in Germany – 300, Japan, 140-160, in the USSR in 1980 104 treatments were produced. {4}.

Economic efficiency of application of pesticides is confirmed by robust data. According to Norman (1974), in 1850, one person who is working in an agricultural activity in the USA, could provide the agricultural products for four people, in 1900 this number increased to seven people, in 1940 to 11 and in 1974 to 55 accordingly. Researchers mostly associate this productivity growth with increasing implementation of intensive usage of pesticides. They calculated that if the USA did not implement chemical means of protection of harvest on a large scale, production of potato, apple and cotton would have been be reduced by 50%, and meat, milk and wool by 25%.

MAIN PART

Experts estimate that timely and effective protective measures allow to save 2-3 kg of grain on average per hectare, 5 kg of rice, not less than 15 kg of potatoes, vegetables, sugar beet, fruits and grapes.

Brief details about pesticides. Pesticides is a common collective name for chemicals used for agricultural purposes to protect plants and animals and originating from the word “pestis” – plague, destruction, “cido” – to kill. This is a variety a chemical compound that has the ability to destroy or stop the development of living organisms – insects, mites, mammals (rodents), bacteria, viruses, spores, fungi, harmful vegetation, etc.

Due to the biological activity, pesticides cause the death of not only harmful but also beneficial organisms. Therefore, at present great attention is paid to creation of preparations of selective action, directed only against harmful organisms. These works are based on different biochemical organisms.

Methods of application of pesticides. Pesticides are used in various reparative forms, most often in the form of dusts, granular preparations, suspensions, emulsions, aerosols and fumigants. Dust is a powdery mixture consisting of a basic poison (active substance) and a filler. Talc, chalk, gypsum, kaolin, etc. are used as fillers. Dusts are produced in a centralized manner at the plants. It is not allowed to prepare local dusts (on collective farms and other farms) {3}.

Granular compounds are prepared by impregnating granules or various minerals (bentonite, kaolin, vermiculite), or mineral fertilizers. The size of the granules depends on the purpose of the drug (from 0.25 to 5 mm in diameter).

Methods of using pesticides depend on their formulation and purpose (seed treatment, spraying, pollination, treatment with granular preparations). Application strategies of pesticides is based on biological features of vermin, pathogens, and weeds. When using pesticides, the correct choice of the rate of consumption of the treatment is of great importance. It is determined by the active substance contained in a particular preparation, at the rate of per unit area (per 1 ha, per tree). The following formula is used to calculate the rate of application: H = 100 D/C, where H is the application rate of the drug; D is the dose of active substance; C – content of active ingredient in the treatment (in %). The obtained value shall not exceed the norm provided for by the "List of

chemical and biological means of pest control, plant diseases and weeds permitted for use in agricultural activities". Pesticides should have standard composition, stability in storage {3}.

It is however, not yet possible to abandon the usage of pesticides which is the most effective means of combating pests and plant diseases. Nevertheless, it is necessary to ensure strict control over their use of it, in order to avoid possible harmful effects of pesticides on human health. It is necessary to regulate the established requirements of safety, storage, transportation and use of pesticides.

CONCLUSION

One of the negative consequences of the use of chemicals is the emergence of a pesticide-resistant population on a rapidly cultivated crop. However, these measures do not fully address environmental and conservation concerns. This can only be solved by non-chemical treatments.

The use of biological methods can solve two problems at once: to protect the crop from pests and most importantly, to protect the environment from hazardous chemicals. Methods of biological pest control is being developed in all countries of the world.

To prevent or reduce pollution in Uzbekistan, various measures are carried out including but not limited to technological, sanitary, technical, legal, medical, etc. Control of the content of harmful substances is regulated by sanitary and hygienic norms (PDK) and is considered to be the basis of all the carried out measures. Regulation is necessary to order to obtain information on the level of pollution, as well as on the sources of emissions, causes and factors that determine pollution. The data obtained allows to choose or carry out protective, recreational activities and monitor their implementation.

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