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ECOLOGICAL AND HYGIENIC JUSTIFICATIONS FOR USING THE NEW SELLER INSECTICIDE IN AGRICULTURE

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Annotation.

Based on the studies carried out, it was established that the Seller insecticide, according to the parameters of acute toxicity, belongs to the IRS hazard class. The drug has an irritating effect on the mucous membranes of the eyes and skin. It has functional cumulation. The permissible daily dose at the level of 0.72 mg / person / day has been scientifically substantiated. The drug has no carcinogenic, mutagenic, embryotoxic effects.

Key words:

Seller, pesticide, insecticide, cumulation, toxicological assessment, permissible daily dose, blepharospasm.

Actuality:

P he problem of chemical plant protection products is attracting increasing attention not only working farm, chemical and medical sciences, but also the general public . About b is evidenced by numerous publications in the world of literary journals and books (1994 N. Melnikov, Golagonov PS 2004 Rahmanin YA 2013 .and others. The problem of public health due to the widespread use of pesticides care hygienists many Stra n (Sarkisov A.G.2000, Melnikov N.N1994., Rahmanin YA dr.2013).

First of all, it is a general hygienic, large-scale, complex and multifaceted problem. To protect crops from many pests and diseases , as well as the district trash and stitelno STI and used considerable ace with ortiment chemical tools designed to combat pests. All of these substances in the aggregate and each separately are designed to destroy harmful organisms.

The hygienic substantiation of the standards for the permissible content of pesticide residues in the environment, as well as the regulation of the conditions for their use, taking into account the whole variety of factors that determine the duration of the preservation of these chemicals in nature, are the basis of the system for the prevention of their possible adverse effects on humans (Labyntsev A.V. et al. ., 2010, Belan S.R. et al., 2011).

According to sanitary regulations, no chemical substance can not be approved for use in the national economy without deep t oksikologo-hygienic assessment (Law of the Republic of Uzbekistan on the sanitary and epidemiological welfare of population, 2015).

As a result of such searches created a new, promising insecticide " C Ellery 20% CS ." To address the question of the possibility of using it on the PLO w adyah , intended for food crops and the development of appropriate preventive regulations arose the need for toxicological and hygienic assessment of the drug, which is included in the terms of the Coordinating Council of the Ministry of DMDs and voohraneniya the Republic of Uzbekistan (Minutes № 2 dated 20 February 2019)

Purpose of the study

Before we set the goal to assess the danger Celler 20% to .c for humans and developed taking into account the specific characteristics of agriculture in Central Asia to guarantee safety regulations in the environment and consumers of agricultural products in a hot climate .

Objects and research methods

The object of study was the insecticide C Ellery 20% KS. Celler 20% KS . - non-systemic insecticide of contact and abdominal action with a pronounced residual effect on the treated plants . - non - systemic insecticide of contact and abdominal action with a pronounced residual effect on the treated plants.

The toxic effect of Seller 20% xc was studied on sexually mature animals of both sexes (white mice and kris) rabbits. Concurrent studies were undertaken cutaneous o- irritating action of the drug and allergiziruschie white rats by applying to the clipped skin sites in bearing native its formulation in the conjunctival sac .

Thus , the study of the toxicity of the drug was carried out in accordance with the methodological manual "Methodology of complex and accelerated rationing of pesticides in environmental objects" Approved by the Ministry of Health of the Republic of Uzbekistan on April 10 , 2014, No. 8N-P / 193

Materials and their discussions

The study of the acute toxicity of the drug was carried out on laboratory animals - rats. In the experiment were taken rats of both sexes, which were injected with the drug in doses of 50.0 - 500.0 mg / kg. As a result of the research, an average lethal dose was established at the level of 300.0 (204.0 ± 395.0) mg / kg of body weight, LD_{16} - 120.0 mg / kg; LD_{84} - 440.0 mg / kg (table 1). The clinical picture of poisoning appeared in the silt in the following way : the animals became lethargic, nasal discharge, increased salivation, difficulty breathing, the animals assumed a lateral position, after which clonic convulsions were noted.

Justification of the maximum permissible concentration (MPC) of the drug in the water of reservoirs

In order to establish the maximum concentration limit of the drug in the water of reservoirs, studies were carried out to study the effect of the drug on the organoleptic properties of water and the sanitary regime of water in reservoirs. According to the influence on the organoleptic properties of water (smell), the threshold concentration is set at the level of 0.04 mg / l. The drug in this concentration did not foam, did not change the color of the water. Taking into account the results of the sanitary and toxicological experience, the threshold concentration was set at the level of 0.72 mg / l.

The complex of studies carried out, taking into account the data of the sanitary-toxicological experiment, made it possible to recommend the MPC of the drug in the water of reservoirs at the level of 0.04 mg / l, the limiting sign of harmfulness is organoleptic.

Findings

Based on the experimental , sanitary and hygienic research and examination of the documentation provided by the company, it was established:

Seller 20% h.c. - non-systemic insecticide of contact and abdominal action with a pronounced residual effect on the treated plants. The drug has an anti-ingestion effect. Scope of application - on wheat against the harmful turtle, piyavitsy. Insecticide exposure uet the intestinal tract and nervous system of insects. The effect is manifested immediately after treatment within the first hour. The period of protective action is one full season. Spraying - during the growing season. The last processing time before harvest is 15 days.

According to the parameters of acute toxicity, the drug belongs to the III hazard class (SanPiN RUz No. 0321-15).

The study of the effect of the drug on the mucous membranes of the eyes of experimental animals made it possible to establish that the drug has an irritating effect on the mucous membranes of the eyes and skin.

The permissible daily dose at the level of 0.72 mg / person / day has been scientifically substantiated. Insecticide Celler 20% .s not carcinogenic, mutagenic, embryotoxic effects.

On the basis of the complex of the studies carried out, the Seller hygienic standards of 20% k. c : MPC in water of reservoirs at the level of - 0.04 mg / l (limiting sign of harmfulness - organoleptic); Sanitary protection zone (SPZ) - 200 meters; terms of going to work - 7 days.

Thus, on the basis of the above, the **Seller** insecticide **20% c.w.** can be recommended for use in agricultural practice, subject to the mandatory use of personal protective equipment for the eyes, skin, respiratory organs

(irritates the eyes and skin) and compliance with the regulations for the use of the drug, the recommended consumption rates and safety measures when working with pesticides.

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