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Research Article

TEST RESULTS INSECT OAKARI ZIDA KARATE KADAM 5% K.E. AGAINST APPLE MOTH ON THE APPLE TREE

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ABSTRACT

The main place in the economy of the Republic of Uzbekistan is occupied by agriculture. Modern technologies for the production of agricultural products, based on the widespread use of pesticides and mineral fertilizers, have made it possible to largely solve the problem of providing the population with food, and, at the same time, have given rise to multiple environmental, medical and environmental problems, problems of environmentally friendly and biologically valuable food, rehabilitation land, restoring their fertility. Therefore, the arrival of new classes of pesticides with different mechanisms of action, high selectivity and low toxicity for warm-blooded animals to replace them is very modern.

KEYWORDS

Organophosphorus insectoacaricides, neonicotinoids and pyrethroids, global importance, humans and animals.

INTRODUCTION

At present, the development and application of new plant protection products that are non-toxic to humans and animals is of global importance. Priority is given to research aimed at creating plant protection products based on microorganisms and their metabolites, as well as the search for plant substances

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with potential pesticidal activity, but at the same time remain research in the development of pesticides based on chemical compounds that have high efficiency, selectivity to the objects of application and rapid degradation in the environment.

LITERATURE REVIEW

On January 9, 2006, the President of the Republic of Uzbekistan signed Decree No. UP-3709 "On measures to deepen economic reforms in horticulture and viticulture." For this purpose, the Cabinet of Ministers created the necessary regulatory framework for the formation and organization of the activities of agro-industrial firms. Further, on January 11, 2006, the Decree of the President of the Republic of Uzbekistan No. PP-255 "On organizational measures to reform horticulture and viticulture" was issued. Significant funds have been allocated to achieve these goals, support has been provided to fruit farmers, and the result has borne fruit. Horticultural products from Uzbekistan are in demand on the world market. Currently, the export of food, fruit and vegetable products totaled about 5 billion dollars. Over the past three years, the volume of exported agricultural products has more than tripled. Our country sends more than 180 types of selected fruits and vegetables and products made from them to 80 countries of the world. Uzbekistan is among the top ten countries in the world - leaders in terms of exports of apricots, plums, grapes, nuts, cabbage and many other types of fruits and vegetables [14].

Those caterpillars that eat apples are codling moths. And these are the most common and dangerous pests (since there are several types of them). More often than others, apple and oriental are found. These are butterflies whose larval stage feeds on both the pulp and seeds of the growing fruit of the apple tree. What causes its early fall and rapid decay. With an outbreak of a pest, up to ¾ of the entire collection of apples can be lost. In this article we will tell you how to save an apple tree from a codling moth.

Apple trees that are properly and timely pruned, fed, watered and with properly groomed soil can withstand the invasion of these pests. Trees weakened by frost, hailstorms or overfed with "organic nitrogen" are much easier and more damaged by pests. In addition, it is necessary to maintain a bio-balance in the garden and expand the bio-diversity of species, then natural predators and enemies of the codling moth can destroy up to half of the pest, thereby protecting the garden from insect invasion and the use of synthetic poisons on apple trees. Chemicals for treatment Spraying of apple trees from harmful insects is carried out with synthetic chemicals based on organophosphorus compounds. But you can use both neonicotinoids and pyrethroids. Below we will consider how to process an apple tree from codling moths and when, so as not to damage the crop. Fitoverm The effect of aversectin (Fitoverm) is complex: penetrating into the caterpillar by absorption into the outer shells when spraying, or after eating apples treated with poison, the poison affects the nervous system of the caterpillar, causing its death.

In the 21st century, FAO experts recognized the concept of integrated plant protection as the leading one in solving the food problem [12].

To maintain the potential for environmental sustainability of plants, including their resistance to pathogens, the use of pesticides should be minimized. Especially dangerous for plants are organophosphorus insectoacaricides that can block the work of important redox enzymes responsible for environmental resistance, including pathogens [11].

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The requirements for registration of pesticides are increasing more and more, so in the USA more than 1,200 active substances of pesticides are registered and 20,000 drugs worth $ 12 billion are in circulation annually. requirements, so it improves the quality of the range of pesticides [3]. In the EU countries, out of the list of 967 pesticides, a decision was made to support 463 pesticides. 429 drugs are not subject to re-registration, 48 drugs are included in the list and 27 drugs are excluded [13].

M.T. Petrukhin [6] conducted an experiment using entobacterin mixed with Bordeaux liquid, on the 12th day of the experiment, the efficiency was 98.8%. OZ Metlitsky [6] proved the high efficiency of the use of biological preparations against the American white butterfly. In 1986-1987, employees of the Institute of Zoology of the Academy of Sciences of Ukraine used lepidocide at a rate of 1.5 kg/ha against garden pests, the effectiveness was 84.0-90.0% [10].

So far, a complete rejection of the chemical method in orchards and vineyards is not possible, but as a result of the reorientation of farms to bioprotection, the consumption of pesticides is reduced by a factor of three [5]. The expediency of using biological means of protection is also confirmed by the increase in the profitability of production, in Primorye, for example, the profitability from the chemical method was 19.5%, from the combined use of biological and chemical - 26%, and from the biological method, the profitability was already 36.7% [2].

On fruit crops and vines, one of the most dangerous pests are mites. Biological control measures on these crops have not yet been developed so perfectly as against pests belonging to the class of insects. There are studies where the effects on the number of spider mites on grapes of pubescence of leaves are noticed, where varieties with weak and medium pubescence are especially affected by the mite, and varieties with felt pubescence are slightly damaged [1].

PLACE AND METHODOLOGY OF RESEARCH

Insecticide Karate Kadam 5% a.e. tested in an intensive semi-dwarf apple orchard of the Ravshan farm, Sredne-Chirchik district , Tashkent region. The zone is located in the foothill zone of agriculture. The gardens were founded 6 years ago .

The treatments were carried out using a tractor sprayer " Agroma 2000", with an estimated rate of consumption of the working fluid of 1000 l/ha. The experiments were carried out in the morning, from 7 to 8 hours, when the air temperature did not exceed 28 ° C and the wind speed was 1 m/sec.

Bookmark experiments, subsequent accounting and calculations of biological efficiency was carried out in accordance with the "Guidelines ..." (2004), approved by the State Chemical Commission of the Republic of Uzbekistan [4].

TEST RESULTS

The object of testing the drug Karate Kadam 5% a.e. there were codling moths that damage the apple tree. After treatment against codling moth with Karate Kadam 5% a.e. at a consumption rate of 0.4 l/ha on the 14th day, the efficiency was 92.3 % (see table).

The results obtained almost slightly exceed those of the reference variant, where Aikido insectoacaricide 5% a.e. was used. consumption rate of 0.4 l/ha , where on the 14th day the efficiency was 88.0% (see table). Thus, the insecticide Karate Kadam 5% a.e. can be included in the "List ..." for use against codling moth on an apple tree at a rate of 0.4 l/ha.

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CONCLUSIONS

Insecticide Karate Kadam 5% a.e. showed high efficiency against codling moth on an apple tree at a rate of 0.4 l/ha. The preparative form is convenient to use, when mixed with water, it quickly forms a working mixture. The manifestation of phytotoxicity after spraying was not recorded. We recommend including Karate Kadam 5% a.e. in the "List…" for application on the apple tree against the codling moth on the apple tree at a rate of 0.4 l/ha., by spraying apple orchards during the growing season.

Table

Biological efficiency of Karate Kadam 5% a.e. against the codling moth on the apple tree

production experience, 05/20/2020, Tashkent region, Sredne-Chirchik district, farm named after " Odil Mansur "

№	Options	Consumption rate of preparations l, kg/ha	The number of codling moth per 1 tree, ind.					Biological effectiveness per day: %			
			Before processing	After processing for a day:							
				3	7	14	21	3	7	14	21
1.	Karate Kadam 5% k.e.	0.4	32	12	8	4	11	69,1	82,9	93,2	82,5
2.	Aikido 5% k.e. (reference)	0.4	36	18	14	8	16	58,8	73,4	88,0	77,5
3.	Control (no processing)		28	28	34	41	52	55	-	-	-

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