IMPROVEMENT OF ORIENTAL FRUIT BIOLOGY, INJURY AND USE OF CHEMICAL CONTROL IN APPLE

X.S.To'g'onboyev
Andijan Institute of Agriculture and Agrotechnology

Annotation . *This article presents the biological effectiveness of chemical agents used against the eastern fruit-eating pest in intensive apple orchards. According to this, the biological efficiency reached 91.5% when working solutions of KAVANCHA 5 EC against the oriental fruit borer were used.*

Key words: *intensive orchard, apple varieties, pest, oriental fruit borer, worms, core, insecticide, biological efficiency.*

In the world food products was demand year after year increased to go village economy crops cultivation size more expand and high good quality food products with constant requires provision . The world according to today's 4,9 million per day . hectares on the field apple gardens there is 83.1 mln . up to tons apple work is issued.

In the world apple work release and export in doing China , USA , Turkey , Poland , Iran , Chile, France , Russia, Brazil and Argentina countries high to the results is reaching Because this in the states the apple cultivation , productivity increase , fruit quality improvement , harmful species composition of organisms , bioecological features and to them against fight progress resource efficient methods Create such as priority in directions scientific researches take to go big attention directed.

East fruit worm in the world-wide spread-out insect. It is Australia , North and South America, Europe medium and southern part of Ukraine , Caucasus, Russia southwest in the part occurs . in Uzbekistan east fruit worm Ferghana of the valley all in the regions meeting can [2; page 229]

China and Korea are the countries of origin of the oriental fruit eater. Oriental fruit eater pest as the first in March 1899 in Japan and in 1913 in America determined South in 1959 Australia, later in Brazil spread By the 1970s Medium land the sea spreading around managed to of Europe Austria , Bulgaria , Hungary , Greece , Germany Italy , Spain, Poland , Romania , Slovenia , France , Switzerland Czech Republic , Yugoslavia in the states wide distributed [3; page 3]

Oriental fruit-eater - Grapholitha molesta Busck. Tanganyika or Order of butterflies (Lepidoptera). Belongs to the Torticidae family. The wingspan of the butterfly is 11-15 mm, the front wings are dark-brown, 7 pairs of flowing shiny lines pass from the front edge, the back wings are whiter-light brown. Your egg length 0.5-0.9 mm, width 0.4-0.8 mm, color white , later blush starts Worms (9-13 mm) at the age of 1-3 - the head black body white tuda , next at the age of 4-5 , the head is red

and breast shield to brown becomes Bulb 5.2-7.6 mm, color brown , body 10-18 spines at the end there is Butterfly from the output before sponge it darkens . [2; page 229]

Lip part light-brown, belly part , orange-yellow brown , belly part of past while silky white in color legs dark in color , yellow white short feathers with covered Female butterfly to the man relatively bigger will be [3; page 9].

East fruit eater mature worm in the form of fruit of trees in itself (bark under , pores) and on the ground haschops under dense cocoon inside in winter comes out In the spring worm will be sponged and from him butterfly flying comes out A few from the day after female breed eggs to put enters Each breed is one from a few to 100 egg to put can 7-12 days then (in the spring) from the egg worm come out and branch out growth to the point gnaw enters and from the core down Corridor with 6-11 cm opens . Hard to the part upon arrival gnaw out comes out and another to the branch (or to fruit) tries to enter . Branch damaged part fade away it dries , as if it is " shredded ". branch out goes East of the fruit eater worms from branches except apple worm like a tree also damage the fruits can In this grainy fruits within (9-14 days) seed fruits from within less than (16-24 days). time will be [2; 229 – page].

Apple and pear young in the seedlings larva 1-2 cm up to come in goes , damaged parts darkens and it dries . Damaged seedling in parts in release and sticky drops meeting can One larva 4-5 seedlings damage can In fruits while fruit clauses surroundings and clauses through next moving to fruits as well harm brings [3; 13 – pages] .

East fruit eater worms damaged in fruits secondary disease ie brown rot (*Monilinia spp*) disease also occurred output observed . And this of fruit Entirely invalid become to come reason will be

Imago (adults). observation for pheromone from traps is used . That's it to emphasize it is necessary, feramon pitfalls East frugivorous G. molesta with one different at the time plum fruit eater (G. funebrana) attracted does That's two kind of pest only sexual members through separate can To pheromones add additional enzyme through East fruit eater evening , night at the time , plum fruit eater while half at night and tons at the time into a trap falls Young branches , later fruits check through East fruit eater learning necessary .[4; pages 20-21]

East fruit eater determination and his spread out regions determination in order to two times inspection will be held .[3; page 4]

First check : apple trees from the flower then 10-15 days after branches 5-10 cm grow up while remaining will be held .

Second inspection : damaged plants to the fruit from the entrance before i.e july of the month in the middle

Two times complete from inspection after plants quarantine state inspection by choose will be checked .

It's rough crops seedlings : apple , quince . pear chemical tools with two times is treated .

First : August At the beginning of of the pest the third to his generation against is treated .

Second : August month the end and September in their heads the fourth to his generation against is treated . [3; page 6]

East fruit eater the first in determining damaged fruit of seedlings young branches cut will be seen . Damaged seedlings three 1-2 leaves in part dry the rest and three part bent the rest with differs . Second times in determining damaged plants to the ground spilled fruits pick up is taken and will be checked , in them pests larvae separated is studied .

East fruit eater imago on fleas , eggs leaves , young branches , buds and fruits on , the larva young buds , fruits , bulbs branches between , fruits on or in , plant remains or in the soil meeting can

East to the fruiterer against applied chemical preparations efficiency increase in order to prophylactic and agricultural engineer to carry out events as well according to is considered An example for fruit gardens dry from branches , damaged from fruits cleaning , branches thinning , tomorrow varieties planting , handle from belts use such as deeds of the pest increase prevention takes From this except biological method young to worms against Bacillus thuringiensis serovar is also good to use the result shows . Trichogram apply while early in the spring to larvae against good the result gives

East to the fruiterer against any insecticide successful of application the key is this pheromone from handles received data local to the circumstances suitable to the temperature based on results based on to be need [4; page 21]

To the pest against applied of insecticides biological efficiency the following in the formula is :

$$C = \frac{Av - Va}{Av} \times 100\ (\%),$$ which is:

C is biological efficiency ;

A - in the experimental version, the number of pests before the drug is sprayed;

a - the number of pests in the next accounting days in the experimental option;

V - the number of pests in the control (without drug) option before spraying the drug in the experiment;

v - the number of pests in the control option in the next accounting days. Mathematical analysis of experimental results Dospekhov (1985) method according to take went ..

in 2022 Andijan province Andijan district Information advice center of DUK economy intensive apple in the garden east to the fruiterer against one series of insecticides biological efficiency determination according to scientific research take went

Table 1

Intensive apple in the gardens east mevaho ' against applied of fungicides biological efficiency .

Andijan province Andijan district Information advice center DUK (Gala variety).

No	Variants	Drug consumption per liter	10 bushes in the tree worms quantity (pieces)				Biological Efficiency S %		
			Spray medicine before	The drug is sprinkled switch from days					
				3	7	14	3	7	14
	Control	0	48.5	51.6	51.5	54.4	0	0	0
	Template - Arrivo 25% em.c.	0.32 l/ ha	51.0	14.2	13.0	11.2	73.9	76	80.4
	Experience - CAVANCHA 5 EC	0.4 l / ha	52.6	12.8	10.2	9.6	7 7	8 2	8 4
	Experience CAVANCHA 5 EC	0.5 l/ha	54.6	9.6	7.6	5.2	83.5	86.9	91.5

When Arrivo was applied at 0.32 l/ha per hectare for the sample, the results of 3.7 and 14 days showed 73.9%, 76% and 80.4% biological efficiency, respectively. When KAVANCHA 5 EC drug is used at the consumption rate of 0.5 l/ha, it shows a higher biological efficiency compared to Arrivo, and after 14 days, 91.5% biological efficiency was achieved.

REFERENCES:

1. Dospekhov B. A. Methodology polevogo opyta - Moscow , 1985. - 351 p .

2. SH . T. Khojaev General and village economy entomology and harmonized protection to do system basics (4th edition)// Tashkent OOO New Edition Publisher ” 2019

3. B. Muhammadiyev , F. Zohidov , J. Mamashev East fruit eater – Grapholitha molesta Busck . Quarantine insect about letter of recommendation // Tashkent - 2012

4. N. Nishonov , Kh. Turopova East fruit eater about what do you know ?// log SHirinMeva No. 9 2021

5. Khodjaev Sh. , T. Insecticide , acaricide , biological active substances and fungicides to try according to methodical instructions . - Tashkent , 2004. - B.83-90 . 6. Kokhabidze D.M. Itogi ispytaniya fungicides // J. Zashchita is a plant. - Moscow, 1973. - #9. - S.31.

7. Muradov SA General entomology course . - Tashkent: Labor , 1986.

8. A. Sh. Khamrayev , AG Kozhevnikova , BA Sulaymanov , KX Khushvaktov , Sh.

K. Aliev , T. B. Niyazov 0 ' protection of plants to do Andijan - 2017 " Hayat " publishing house .