ANALYSIS METHODS FOR IDENTIFICASION OF RED ACARIAN OF TREES PANONYCHUS ULMI KOCK IN THE AUTUMN OF THE YEAR 2009 FROM A FRUIT-GROWING FARM IN THE SIBIU COUNTY

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Abstract: *The present work represents a study about the biological reserve of the red spider Panonychus ulmi Koch accomplished to a private fruit-growing farm from the county Sibiu, from a surface of 30 tchick. In order to recomand a treatment against this spyder, we accomplished researches regarding the digital density of the winter eggs layng , on the unit of the surface/ branches on lots from the farm. The reserches regarding the digital density of the winter eggs layng pest, were made after the prelevation of 10 cm branches for an easier analize with the maginifing glass binocular. The red acarian Panonychus ulmi Koch, is a pholyphagic species frequently pointing out the in orchards fruit-growing and winegrowing, species of dendrologic plant. Presents 5-6 the generation on year depending on the climatic conditions. Hibernates in the stage of egg, on branches, around his buds in the cracks barks. The haching of the larvs from the hibernante eggs is in progress when is exceeded the inferior development the shold 8ºC and is achieved a sum of temperature of 20-50ºC. The female has the oval body the curved dorsal and when it appears has a brown color. With the time becomes brown to red. The whole body is covered with wintergreens, the one disposed on the dorsal part by-path in number of 26, thread on warts of white color.the body length is variating from 0,3-to 0-5 mm. The male has the oblong body that sharpness on the posterior part. He is less than female. As much as the female the male form male 4 couples of feet. The egg is cepiform, striate dorsal, he is foreseed with a fine pedicel. The winter one has a red shining color, and a diameter of 0,15 mm. The summer one has a yellow color. The larva is red, with three pairs of feet, with a length of 0, 1-0 1-0 2MM. Depending on the attack degree of the prove of analize we recommended the fitosanitare measures of prevention and struggle harmful.*

Key words**:** *Panonychus ulmi Koch, fruits farm, prevention and control*

INTRODUCTION

The red acarien *Panonychus ulmi* Koch, is a pholyphagic species frequently pointing out the in orchards fruit-growing and winegrowing, species of dendrology plant. Presents 5-6 the generation on year depending on the climatic conditions.

Hibernates in the stage of egg, on branches, around his buds in the cracks barks. The hatching of the larva from the hibernate eggs is in progress when is exceeded the inferior development the shold 8ºC and is achieved a sum of temperature of 20-50ºC.

The *female* has the oval body the curved dorsal and when it appears has a brown color. With the time becomes brown to red. The whole body is covered with wintergreens, the one disposed on the dorsal part by-path in number of 26, thread on warts of white color. The body length is varies from 0,3 to 0-5 mm.

The *male* has the oblong body that sharpness on the posterior part. He is less than female.

As much as the female the male form male 4 couples of feet.

The *egg* is striate dorsal, he is foreseed with a fine pedicel. The winter one has a red shining color, and a diameter of 0,15 mm. The summer one has a yellow color.

The *larva* is red, with three pairs of feet, with a length of 0, 1-0 1-0 2MM,

MATERIAL AND METHODS

For knowing the biological reserves of the winter layng deposited by the species *Panonychus ulmi* Koch branches from species of apple entered on fruitages were prelevated, starting with February 2009, the analysis material originating from an apple farm from the locality Cisnadie, jud Sibiu, measuring a surface of 23, 2 thick

It is well known that the temperature has direct influence over the red spider population fluctuation from the study zone. During our research it observes the egghacin of the larvas from the population of the 2008 winter point until de begining of june 2009 when it was observed the development of 3 even 4 generations.

In the interest of our research there were prelevated branches with *Panonychus ulmi* Koch, and for the determination of the biological reserve of the spider we proceed the following way:

Two crops each of two branches/tree, one was 1 year old and the other was two years old

the branches that made the object of the analyze was prelevated at the end of the apple's rim

there were chosen 20-30 cm branches cut from the ring

The determination of the attacked area in cm^2 in order to calculate the density of the attack by the number of eggs/cm^2 was achieved as it follows: branches diameter multiplied with its length.

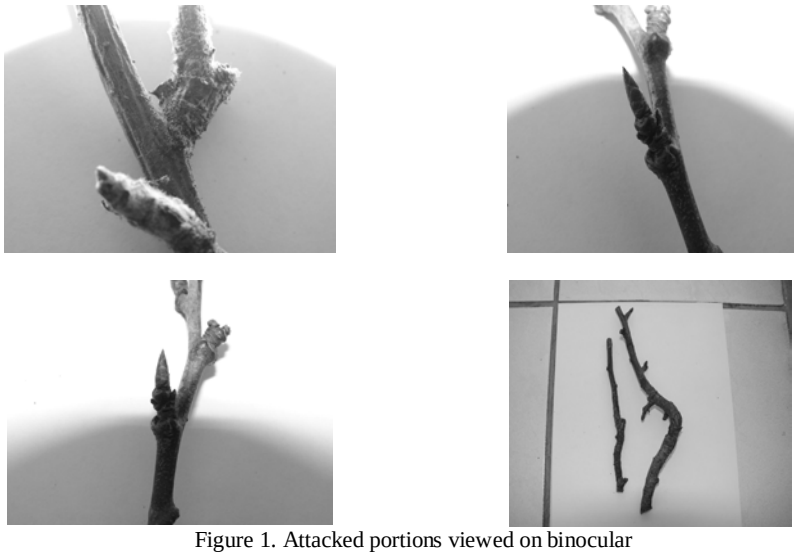

Figure 1. Attacked portions viewed on binocular

In the Warning and Prognosis laboratory of the Fitosanitare unit Sibiu, the place of the research 10 cm of the length's branches were fashoneded from the attacked portions to be easier to analyze the data at the binocular (fig.1).

The working way: the branch was laid on the plate binocular magnifying glasses and counted the alive eggs and the dead ones. At this point counting was easy made, because the eggs were deposited only in one layer.

Tablel 1

The determination was made in lots and the data was centralized in the table below

Lot	Lot surface-ha	Nr. Cm^2	Total eggs	eggs		Alive eggs /cm^2	Natural death %
				alive	dead		
1	4,0	177	768	691	77	0.39	10,0
2	3,4	317	3086	2564	522	8,0	16,9
3	2,0	234	10270	9860	410	42,1	3,99
4	6,0	308	670	646	24	2,1	24,0
5	3,2	293	4825	4770	55	16,4	1,1
6	3,0	305	606	604	2	2,0	0,3
7	1,6	218	10900	10747	153	49,2	1,4
TOTAL	**23.2**	**1852**	**31125**	**29882**	**1243**	**16,1**	**3,9**

The estimation of the winter pont was made as it follows:

Thin Atack between 1-5 eggs/cm^2.

Middling Attack between 6-10 eggs/cm^2.

Big Attack between 11-20 eggs/cm^2.

Very big attack across 21 eggs/cm^2

Measures of prevention and struggle:

In order to combat the winter reserve of the *Panonychus ulmi* Koch we recommended the chemical treatments depending on the numerical density of the eggs or the adult larvas/leafs, branches.

-Treatment 1: was recommended in the in period of vegetative rests(when the reserve is greatly decreased of the *Panonychus ulmi* Koch.

-Treatment 2: was recommended at the egg haching of the larvae from the winter pont.

In order for the biological reserve diminution of the spider, to be the best, is recommended another chemical treatment: at the egg hacing larvas from each generation or if the case every time D.E.W level is passed.

The D.E.W. (pest economical wall)on witch the treatment should be made is the next one: 3-5 acarians , on leaf, 5-10 acarians on inflorescence, 5-10 acarians on leaf

RESULTS AND DISCUSSIONS

In our study case the estimation of the pont gives an orientative image over the biological harmful reserves of *Panonychus ulmi* Koch, and the effectuation of the chemical fitosanitar chemical is to be applied differentiated on parcels in function of the degree of attack.

The infestation degree of trees with the red spyder varies in a fruit-growing farm from lot to lot, whence and auditing act concerning the density populations of spyders sight effectuation chemical treatments of rebutment.

From the table 1 can be noticed the big difference of the pont on comparative lot with the pont media on total lot observations were made.

The chemical treatment was recommended to be applied on the parcels where was recorded a viabile pont with a middle attack degree.

In order to limit the *Panonychus ulmi* Koch population, it must permanently kept under observation the evolution of the red spyder, because its development and degree attack as well as its dynamic are influenced by the climatic factors of each year.

Likewise we recommend applying the chemical treatments on the surfaces where eggs density of the spiders touches the middle attack degree or even higher than middle.

From our researches we find out that the density of the spiders pont is higher on the surfaces where no chemical treatment was applied last years comparative with the ones they did.

CONCLUSIONS

As a final conclusion of the facts we noticed is that after the treatments, the existence of the remaining population wich is due to the resistance to insecticide used or acaricidele in their rebutment.

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