

B. Apple (Red Chief & Stayman): European Red Mite: *Panonychus ulmi*

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Sipcam Experimental Service

This trial was conducted to test the efficacy of GC-Mite under field conditions for the control of European red mite on apple, and to verify GC-Mite activity, phytotoxicity on apple tree against European Red Mite.

Materials and methods

The trial was set up at Lodi, Trento and Bologna, Italy. The trees were six, four years old, apple Red Chief at variety and eight years old for the Stayman variety in Bologna. GC-Mite efficacy in comparison to mineral oil experiment was conducted. Plots of 6 trees at four replications and four applications. A completely randomized design was employed, trees were marked out. Treatments were assigned to individual trees by random and marked with colored flags. This experiment was done three once on June 5th, 2000, July 19th, and July 3rd, 2000 on different ranch of 4, 6 and 8 years old apple trees on different apple varieties. Treatments included a control with no treatment, GC-Mite one gallon per 100 gallon water / acre, GC-Mite one and half gallon per 100 gallon water/acre and Biolid E 1000 ml. PF per 100 gallon water / acre. Applications were made with a motor powered sprayer. All applications were applied to the point of run-off, approximately 100 gallons per acre.

Results

GC-Mite at two rates 1 % and 1 1/2 % compared to mineral oil (Biolid E), after four – six weeks counts at different location was analyzed, GC-Mite treatment in comparison to mineral oil Biolid E treatments and control showed that good activity when tested. No phytotoxicity was observed at any assessment timings. Table (1), (2) and (3) show the average movable (*P.ulmi*) stages when treated with different rates of GC-Mites compared to Biolid E (mineral oil) at three different locations in Italy.

Table (1) GC-Mite effect on European Red Mite in Lodi, Italy.

	6/5/00	6/17/00	6/27/00	7/3/00	7/17/00	7/28/00
Control	2.4	5.4	9.4	2.5	3	2.1
GC-Mite 1 %	0	0	0.3	0	0.1	0.6
GC-Mite 1 1/2 %	0.1	0	0.4	0	0.1	0.6
Biolid E	0.1	0	1.4	0	0	2.1

Table (2) GC-Mite effect on European Red Mite in Trento, Italy

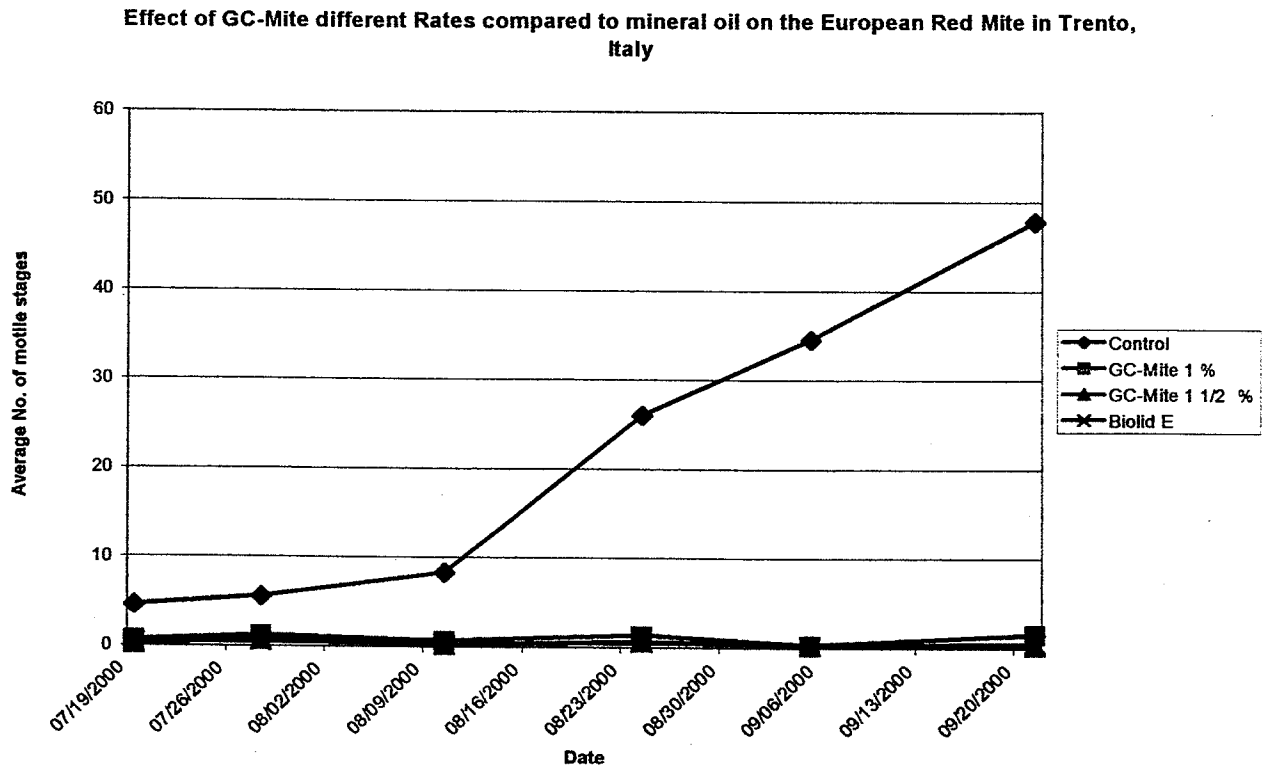
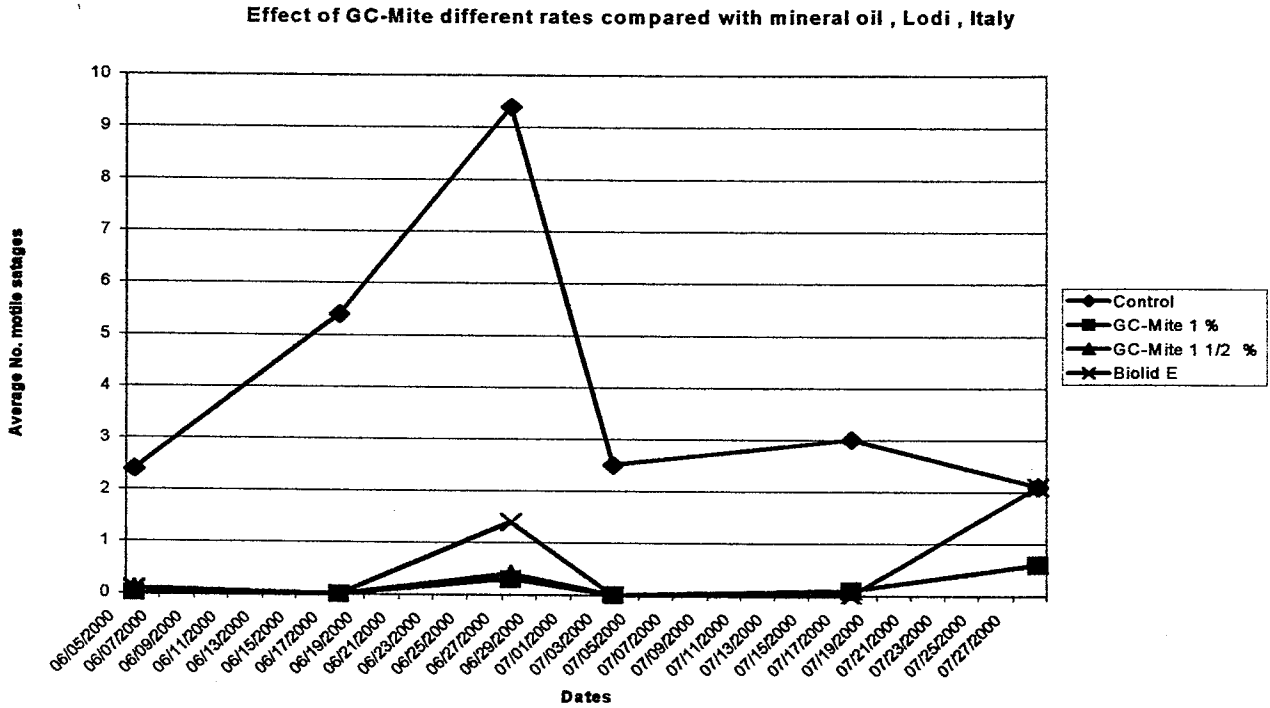
	7/19/00	7/28/00	8/10/00	8/24/00	9/5/00	9/21/00
Control	4.6	5.6	8.3	26	34.5	47.8
GC-Mite 1 %	0.6	1.2	0.6	1.3	0.3	1.5
GC-Mite 1 1/2 %	0.1	0.7	0.2	0.6	0.2	0.3
Biolid E	0.4	0.5	0.2	0.5	0.2	0.5

Table (3) GC-Mite effect on European Red Mite in Bologna, Italy

	7/17/00	7/30/00	8/17/00	8/24/00
Control	7.5	8.7	26.9	31.7
GC-Mite 1 %	0.7	1.4	1.3	1.9
GC-Mite 1 1/2 %	0.1	0.9	0.2	0.5
Biolid E	0.5	0.8	0.2	0.7

Discussion

GC-Mite at 1 ½ % as well as the mineral oil performed very well in this trial, results showed higher degree of control compared GC-Mite –1 % to control the European Red Mite motile stages. Therefore using either GC-Mite at 1 ½ rate with two weeks intervals spray will give good results for the European Red Mite control as using mineral oils without any phytotoxicity.



Effect of GC-Mite different rates compared with mineral oil , in Bologna , Italy

