

F. **Citrus:** **citrus flat mite: *Brevipalpus californicus***
Dr. Gamal Abdel Mageed **citrus rust mite: *Phyllocoptruta oleiovora* Ashmed**
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A complete randomized block design with four replicates (six trees/replicate) was used. Two concentrations, 1000 cc (1 %) and 2000 cc (2 %) per 100 liter of water, from the product, GC-Mite 20 % E.C were tested in each of the four experiments. Sample size was 80 leaves from each treatment (20 leaves per replicate). Weekly sampling was collected randomly after spraying. A pre-count was taken just before spraying at each replicate. Lower surface of the leaves was examined carefully, alive mites were counted and recorded.

For the citrus fruit trees, sample size, for the citrus rust mite, was 12 fruit and 40 leaves per treatment per sampling date while it was 80 leaves and 80 fruits for the citrus flat mite. Fruit samples were examined directly on the trees using a manual lens (10X) while leaf samples were transferred to the laboratory for inspection and counting using a stereomicroscope. All sprays were applied by using a motor sprayer of 600 liters capacity. Percentage of reduction in all motile stages was estimated according to the equation of **Henderson and Tilton (1955)**.

RESULTS and DISCUSSION

Efficiency of the natural product, GC- Mite 20% EC, at the recommended concentrations 1% and 2%, on the motile stages of the spider mites, *Brevipalpus californicus* and *Phyllocoptruta oleiovra* infesting citrus fruit trees was evaluated under the Egyptian environment.

Data in tables (3 & 4) and fig (2) pointed out that the natural product GC-Mite 20 %, when it was sprayed on the citrus trees, at the concentrations of 1 and 2 %, gave reduction of 83.07 and 92.6 %, respectively on the motile stages of the citrus flat mite, *B. californicus* infesting the leaves and 81.17 and 92.40 %, respectively on the motile stages infesting the fruits. 82.12 and 92.5 % were the total average of the percentage of reduction in the motile stages of the pest on both the leaves and the fruits, at the concentrations of 1 and 2 %, respectively.

Table (3): Evaluation of different concentrations of GC - Mite 20 % on the motile stages of the spider mite, *Brevipalpus californicus* on citrus leaves in Egypt.

Treatment	Rate of application	Pre-count / 80 leaves	No. of motile stages/ 80 leaves and % reduction after treatments								Average of Reduction %
			One week		Two weeks		Three weeks		Four weeks		
			No.	%	No.	%	No.	%	No.	%	
T1	1 %	611	118	83.28	129	82.99	179	83.07	209	82.97	83.07
T2	2 %	533	44	92.90	51	92.44	53	93.53	85	91.54	92.60
Control	-	598	688	-	754	-	913	-	1124	-	

Table (4): Evaluation of different concentrations of GC - Mite 20 % on the motile stages of the spider mite, *Brevipalpus californicus* on citrus fruits in Egypt.

Treatment	Rate of application	Pre-count/ 80 fruits	No. of motile stages/ 80 fruits and % reduction after treatments								Average of Reduction %
			One week		Two weeks		Three weeks		Four weeks		
			No.	%	No.	%	No.	%	No.	%	
T1	1 %	800	168	82.39	182	81.82	224	80.75	242	79.75	81.17
T2	2 %	811	62	93.59	76	92.51	96	91.86	105	91.64	92.40
Control	-	818	976	-	1024	-	1190	-	1268	-	

Data in tables (5 & 6) and fig. (3) demonstrated that the natural acaricide GC-Mite 20 %, when sprayed against the motile stage of the citrus rust mite, *P. oleiovora*, at the concentrations of 1 and 2 %, gave percent reduction of 46.69 and 61.12 % on leaves and 43.21 and 59.46 % on fruits, with a total average of 44.95 and 60.29 % on both leaves and fruits, respectively.

Table (5): Evaluation of different concentrations of GC - Mite 20 % on the motile stages of the citrus rust mite, *Phyllocoptruta oleivora* Ashmed on citrus leaves in Egypt.

Treatment	Rate of application	Pre-count/ 40 leaves	No. on motile stages / 40 leaves and % reduction after treatments								Average of Reduction %
			One week		Two weeks		Three weeks		Four weeks		
			No.	%	No.	%	No.	%	No.	%	
T1	1 %	349	223	45.33	258	43.91	293	42.64	324	40.98	43.21
T2	2 %	386	146	67.64	185	63.63	256	54.68	292	51.91	59.46
Control	-	302	353	-	398	-	442	-	475	-	-

Table (6): Evaluation of different concentrations of GC-Mite 20% on the motile stages of citrus rust mite, *Phyllocoptruta oleiuora* Ashmed on citrus fruits in Egypt.

Treatment	Rate of application	Pre-count per 12 fruits	No. of motile stages / 12 fruits and % reduction after treatments								Average of Reduction %
			One week		Two weeks		Three weeks		Four weeks		
			No.	%	No.	%	No.	%	No.	%	
T1	1 %	704	426	48.9	456	48.99	612	44.36	692	44.52	46.69
T2	2 %	628	253	65.90	295	63.01	412	58.01	472	57.58	61.12
Control	-	578	684	-	734	-	903	-	1024	-	