AGRO-CHEMIE
BUDAPEST

INTELLIGENT SOLUTION AGAINST MITES

FLUMITE® 200

Flumite® 200 is the own development of Agro-Chemie Ltd, and it is successfully used in many crops all around the world. The active ingredient is diflovidazin, which is equally efficient against gall mites and spider mites (Tetranychidae, Eriophydae), but it is harmless to beneficial arthropods like bees or the natural enemies of hebivorous mites. Therefore it fits excellently in IPM technologies. In addition, Flumite 200 also has a great price-value ratio.

ADVANTAGEOUS PROPERTIES

- Cost-effectiveness:
  - One-time application: based on signalization, a single well-timed treatment is enough to control mites for the season.
  - Miscibility: Flumite can be combined perfectly with other plant protection products (except alkaline compounds)
  - Long lasting effect: after the treatment, the mite population will be under control for 45-60 days
  - Low dose: Flumite can protect the crops even in low doses.
- Translaminar effect: the active ingredient is absorbed through the leaves therefore it can destroy the mites under their webs and on the lower surface of the leaf.
- Applicable in IPM technologies: Flumite destroys the phytophagous mites, but it is harmless to bees and spares the natural enemies of mites, even the predator mites.
- Broad efficacy spectrum: it has excellent efficiency against many different species of gall-mites, flat mites and spider-mites
- Resistance management: due to its unique mode of action, it can be used in rotation with different type of miticides in order to prevent the development of pesticide resistance (IRAC group 10A).
- Low human toxicity: because of its low human toxicity, it is safe for any users.

What you need to know for successful application of Flumite

1. IDENTIFICATION OF THE PEST

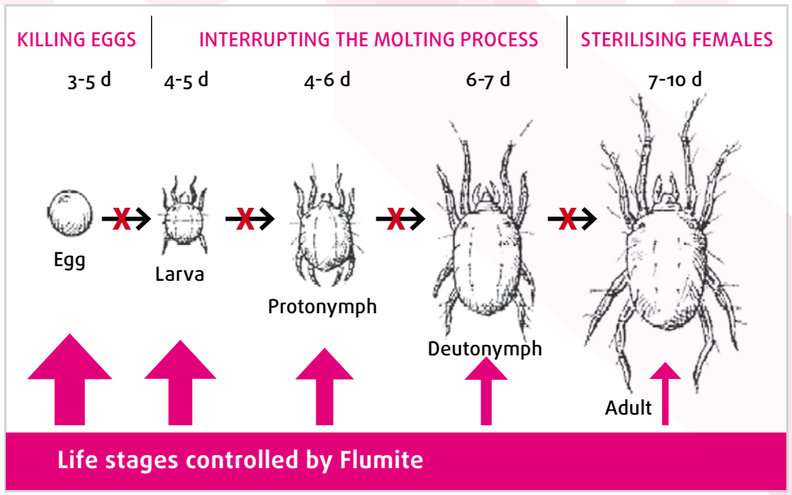
The exact identification of the pest species is fundamental to reasonable pest management. Due to their size, the different mite species can only be identified with a magnifier (adult spider mites) or a microscope (gall-mites, immature stages of spider mites). However, for successful protection it is absolutely necessary to keep track of the size of the mite-population, because when the damage becomes visible (yellowing, deformation and drying of leaves) no treatment will be effective due to the great number of the pest. Therefore we suggest that if you are uncertain in the identification of the pest, ask for help from a specialist.

2. MODE OF ACTION

Flumite is a mite growth regulator, which can interrupt the life-cycle of the mites in 3 different ways:

- It destroys the eggs.
- It disrupts the molting of the larvae and nymphs, so they die during the molting process.
- It sterilizes the female mites, so they lay unviable eggs until they feed from the treated plants.

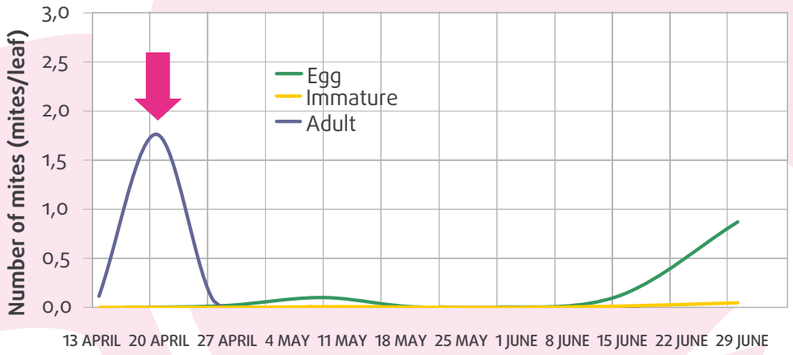
Flumite does not have a knock-out effect, but one week after the treatment the mite population collapse and stays under the damage threshold for a long time.



3. TIMING

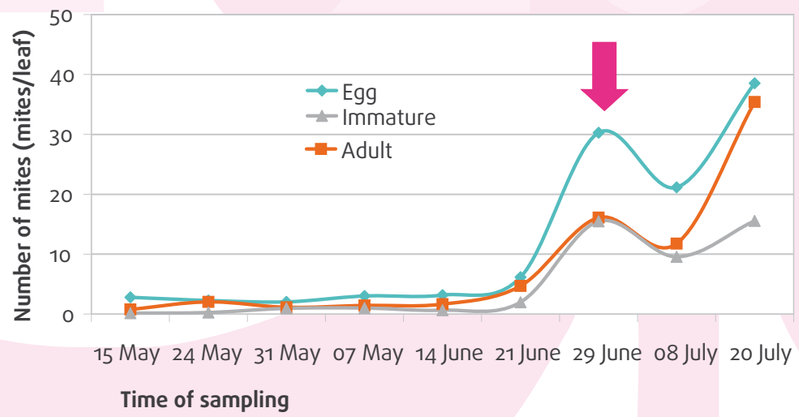
There is a saying that describes the protection against mites perfectly: "Time is money". Because of their rapid reproduction their numbers increase exponentially. If we don't recognize their presence in time, the treatment will be more expensive, and the loss will be greater too. Therefore the timing must be based on signalization in any case, and the treatment should be done before the outbreak, at low infestation level. The action threshold is different in various crops (see: Application).

Successfulness of a well timed application against European red mite (Panonychus ulmi) with long lasting effect in apple orchard (Hungary, 2015)



A delayed treatment is less effective because the spider-mite population can grow ten times bigger in just 2 weeks. Therefore it is only possible to control them with multiple applications, or not at all.

Inefficacy of a delayed treatment against the Two spotted spider mite (Tetranychus urticae) in apple orchards (Hungary, 2013)

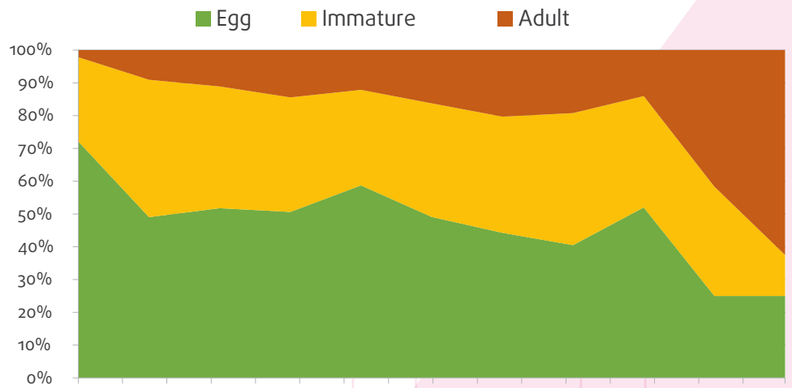


4. COMBINATION WITH DIFFERENT MITICIDES – IN CASE OF DELAYED TREATMENTS

There is no miticide that can equally control all life stages of mites. Miticides with knock-down effect can only destroy the motile stages of mites, but they are ineffective against eggs. Mite Growth Inhibitors on the other hand, are able to destroy the eggs, larvae and nymphs too. Within the mite population the number of adult mites is the lowest for most of the season. That is why it's important to use miticides like Flumite.

In case of delayed treatments however, when the number of adults exceeds 10%, it may be worthwhile to combine Flumite with knock-down miticides.

Two-spotted spider mite (Tetranychus urticae) instar ratio in apple orchard (Hungary, 2013)



5. RESISTANCE MANAGEMENT

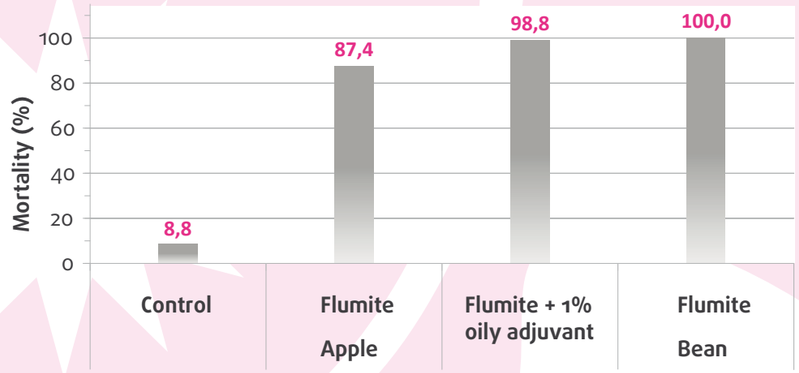
Mites can develop resistance against miticides very quickly. In order to prevent this, we suggest to apply Flumite only once per season against the same mite species on the same field. In consecutive years it is also recommended to use miticides with different modes of action, thus lowering the risk of resistance.

6. INCREASING EFFICACY – APPLICATION OF ADJUVANTS

Gall-mites usually have hidden lifestyle and spider-mites often prefer to stay on the lower surface of the leaves, thus the spray cannot reach them directly. Therefore to successfully control them it is important that the active ingredient should be absorbed into the leaves.

Thanks to its excellent translaminar effect, Flumite meets this requirement. However on the aging foliage of the orchards (apple, grapevine) it is harder for the active ingredient to be absorbed through the wax layer. Therefore we recommend to apply some kind of adjuvant (paraffin oil, silicone based compounds) in small amounts, to compensate the weaker absorption.

Translaminar efficacy of Flumite 200 on T.Urticae eggs, on apple leaves & bean leaves



APPLICATION (GLOBAL SUMMARY OF ALL REGISTERED CROPS)

CROP	PEST	TIME OF APPLICATION (BASED ON SIGNALIZATION AND MONITORING)	SPRAY	
			FLUMITE (l/ha)	WATER (l/ha)
POME-FRUITS (APPLE, PEAR)	European red mite (Panonychus ulmi)	In the spring, after the hatching of eggs, but before the appearance of adult mites	0,3-0,45	800-1000
	Two-spotted spider-mite (Tetranychus urticae)	When the motile stages of spider-mites reach the infestation threshold of 3-5 mites/leaf.		
GRAPE (TABLE GRAPE, WINE GRAPE)	Grape leaf rust mite (Calepitrimerus vitis)	At 2-4 leaves stage of grapevines at spring	0,4-0,5	600-1000
	Grape leaf blister mite (Eriophyes vitis)	Before flowering, in case of heavy infestation of the buds (100-200 mites /spur)		
	Two-spotted spider mite (Tetranychus urticae)	When the motile stages of mites reach the infestation threshold of 3-5 mites/leaf		
STONE-FRUITS (PEACH, PLUM)	Plum rust mite (Aculus fockeui)	When the infestation threshold is reached (30 motile mites/leaf)	0,4-0,5	800-1000
	Two spotted spider mite (Tetranychus urticae)	When the motile stages of mites reach the infestation threshold of 3-5 mites/leaf.		
WALNUT	Walnut leaf gall mite (Aceria tristriata)	After the winter dormancy period, against the mites overwintering in the buds	0,5	800
	Walnut blister mite (Aceria erinea)			
GOOSEBERRY, RED- & BLACK-CURRANT, RASPBERRY	Two-spotted spider mite (Tetranychus urticae)	When the motile stages of mites reach the infestation threshold of 3-5 mites/leaf.	0,4-0,5	500-600
DEWBERRY	Dewberry mite (Acalitus essigii)	At spring, based on plant monitoring, when mites are present on the green buds.	0,4-0,5	500-600
STRAWBERRY	Strawberry mite (Tarsonemus fragariae)	When the motile stages of mites reach the infestation threshold of 3-5 mites/leaf.	0,5	500-600
ELDERBERRY	Elder leaf mite (Epitrimerus trilobus)	Up to flowering, when the infestation threshold is reached: 30-40 mobile mites/leaf	0,4-0,5	500-800
VEGETABLES	Two-spotted spider mite (Tetranychus urticae)	When the motile stages of mites reach the infestation threshold of 3-5 mites/leaf.	0,4-0,5	300-600
ORNAMENTAL PLANTS	Two-spotted spider mite (Tetranychus urticae)	When the motile stages of mites reach the infestation threshold of 3-5 mites/leaf.	0,5	500-2000
ROSE				500-800
COTTON	Two-spotted spider mite (Tetranychus urticae)	When the motile stages of mites reach the infestation threshold of 3-5 mites/leaf.	0,25-0,3	300-600
SOYBEAN				
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