

WHITEPAPER

Intra Eco Shield and biological control, stronger together



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Crop production is always at risk due to the high incidence of pests. Previously, pesticides were the only solution available, but in the last decade the use of biological control products significantly increased. Biological control is defined as the practice of using a living organism to suppress a pest population, decreasing its abundance and making it less damaging than it would otherwise be. The use of biological control decreases the need for chemical pesticides. Therefore, it is important that future proof solutions, like Intra Eco Shield, can be used in combination with biological control.

Intra Eco Shield

Intra Eco Shield is a plant enhancer containing a high concentration of ortho-silicic acid. The product improves nutrient uptake and hardens the outer cell wall, increasing the plants' resilience. Biological control often needs complex management and a precise balance of circumstances. A combination of different modes of action by applying Intra Eco Shield and biological control would reduce the overall damage by pests and diseases.

Intra Eco Shield and biological control

To ensure the success of biological control and Intra Eco Shield, it is crucial that they do not interfere. Therefore, trials were performed to determine the effect of nutrient foliar spray with Intra Eco Shield on two biological control species; *Orius laevigatus* and *Transeius montdorensis*. Plant leaves were treated with the advised dosage of 0.2% Intra Eco Shield, or an overdosage of 2%. The results showed that the treatments with the advised dosage do not have a negative effect on the mobility and survival of both biological control agents. Also, repeated application of 0.2% Intra Eco Shield, up to 6 times, did not have a negative effect.

T. montdorensis showed reduced mobility on leaves treated with 2% Intra Eco Shield, caused by the residue present on the leaves. The larvae of *T. montdorensis* were not able to move on the residue, making them stuck and eventually die. *O. laevigatus* did not have any hindrance from the residue of Intra Eco Shield caused by the overdosage. Nonetheless, *T. montdorensis* and *O. laevigatus* both seem to be more sensitive to water droplets in general. Therefore, spray treatments with any kind of product have to be done with care.

In conclusion, as long as the advised dosages are not exceeded, Intra Eco Shield can be safely used in combination with biological control agents.

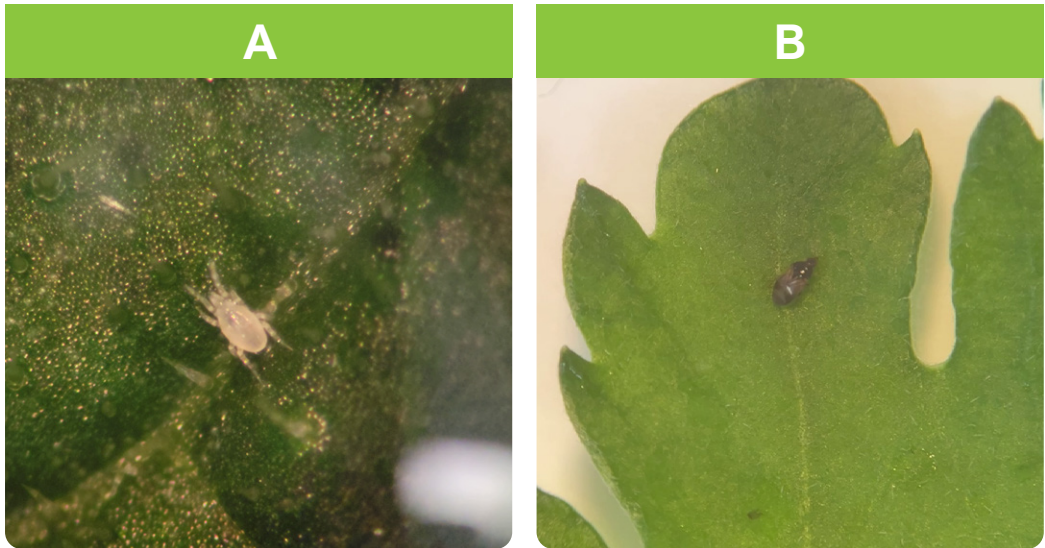


Figure 1. *Transeius montdorensis* on a cucumber leaf (A) and *Orius laevigatus* on a chrysanthemum leaf (B) treated with 0.2% Intra Eco Shield.

Stronger together

Intra Eco Shield improves plant strength and resilience, beneficial during periods of high pest load. Results show that Intra Eco Shield does not have a negative effect on biological control agents, posing the possibility to be applied simultaneously. The combination of Intra Eco Shield and biological control would have a synergistic effect, reducing the need for chemical pesticides and future proofing your cultivation.

