









(a) Alluma Maria

Biological Synergist Works with Insecticides to Better Manage Hard-to-Control Pests

ALLUMA™ is a high-potency broadspectrum, plant-based essential oil that acts as an insecticide, insect repellent and miticide - a powerful new tank mix option to make insecticides more effective.

An innovative formulation that works as a contact repellent and trans-laminar product, ALLUMA also acts as a feeding and oviposition deterrent. It performs best as a synergist added to growers' existing insecticide programs to target hard-to-control pests like mites, thrips and lepidoptera.

ALLUMA works on contact through interference with the sensing faculties of pests, disguising the odor signal emitted by crops and thus preventing females from laying eggs. It also has a direct effect on the pest, acting through ingestion as a chitin inhibitor. ALLUMA's trans-laminar effect contributes to the control of mites, thrips, lepidoptera and soft-bodied insects.

It is an ideal solution to increase the efficacy of other insecticides, whether in a tank mix or in rotation programs enhancing overall insect control. Trial work with Cinnerate and azadirachtin insecticides has shown a high synergy and increased pest spectrum and control. ALLUMA provides a strong tool to increase efficacy on some of the more difficult to control pests in conventional and organicgrown crops.

ALLUMA leaves no residue and will not affect harvest quality or flavor. It can be applied any time, even the day of harvest. Studies show that ALLUMA provides high efficacy to reduce crop damage and high young larvae control using low per acre rates, thanks to the increased bioavailability of its active ingredient.

- · Fruit, citrus and nut trees
- Vegetables
- Fruits
- · Herbs and spices
- Field crops
- And more

Labeled Pests

· Mites and soft bodied, piercing and sucking insect pests such as: aphids, beetles, caterpillars (early stages), flies (maggot stage), leafhoppers, leafminers, mites, mealybugs, psyllids, scale (crawler stage), thrips, cabbage looper, fruit worms, tomato pin worm, armyworm and whiteflies

Quick Facts

- Insecticide and miticide 2-in-1
- · Innovative formulation works as a contact repellent and trans-laminar product, as well as a feeding and oviposition deterrent
- · High repellence action
- · Compatible with most biological control agents
- Easily incorporates into existing programs
- 25B exempt, certified USDA NOP organic, WSDA Organic Listed
- Suitable for resistance management

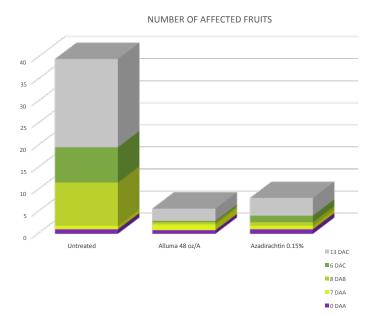






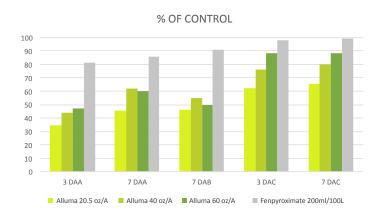
Control of European red mite on apple orchard. 3 applications at 7 days interval.

Better control than the reference



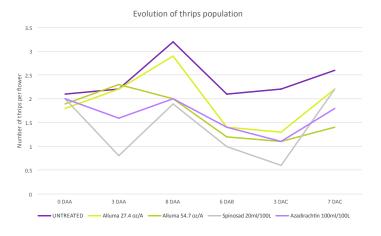
Control of Cotton Bollworm *Helicoverpa armigera* on pepper. 3 applications at 7 days interval.

High efficacy



Alluma is a registered trademark of Sym-Agro.

Efficacy trial against *Frankliniella occidentalis* on strawberry. 3 applications at 7 days interval.



Application Guidelines

- Start applications at the first appearance of pests
- · Apply any time up to and including the day of harvest
- Spray in early morning or late afternoon.
- Repeat as needed, minimum interval of 5 days

Crops	Pints per acre*
Pome and stone fruits, tree nuts, small fruits and berries, brassica and bulb vegetables, leafy and oriental vegetables and cereal grains	1-3
Citrus and subtropical fruits	2-4
Root and tuber vegetables, fruiting and legume vegetables, cucurbit vegetables, Grass and non-Grass animal feeds and other crops	1-3.5
Herbs and spices	1-2.5

*In those crops where water volume applications are up to 100 gallons per acre or more, it is advisable to use a dilution rate between 40-55 fl. oz per 100 gallons.

