Compatibility of Altus®, Kontos® and Savate® with Beneficial Insects & Mites

Altus, Kontos and Savate have favorable toxicity profiles that allow them to be used successfully with a number of beneficial predators, making them good conventional pesticide partners to complement this approach. This is an important consideration when using beneficial insects and mites as a primary or secondary method of pest control.

Altus, Kontos and Savate Compatibility with Beneficial Insects & Mites

Beneficial Group	Beneficial Species	Target Pest	Altus Impact	Kontos Impact	Savate Impact
Predatory Mite	*Amblyseius swirksii*	Thrips, spider mites, whitefly	Nontoxic	Slightly toxic as spray; nontoxic as drench	Moderately toxic
Predatory Mite	*Typhlodromus pyri*	Mites	Nontoxic	Slightly toxic	No data
Predatory Mite	*Amblyseius cucumeris*	Thrips	Slightly toxic	Slightly toxic	Slightly toxic
Predatory Mite	*Hypoaspis miles*	Fungus gnats, thrips	No data	Slightly toxic	Nontoxic
Predatory Mite	*Kampimodromus aberrans*	Mites	Nontoxic	No data	No data
Predatory Mite	*Amblyseius californicus*	Spider mites	Slightly toxic	Moderately toxic	Moderately toxic
Predatory Mite	*Neoseius fallacis*	Spider mites	No data	Moderately toxic	No data
Predatory Mite	*Phytoseiulus persimilis*	Spider mites	Slightly toxic	Moderately toxic	Moderately toxic
Hover fly	*Episyrphus*	Aphids	Slightly toxic	Nontoxic	No data
Parasitoid Wasp	*Aphidius colemani*	Aphids	Nontoxic	Nontoxic	Nontoxic
Parasitoid Wasp	*Eretmocerus eremicus*	Bemisia whitefly	Moderately toxic to adults; nontoxic to larva	Slightly toxic	Nontoxic to adults; slightly toxic to larva
Lacewing	*Chrysoperla sp.*	Aphids	Slightly toxic as spray; nontoxic as drench	No data	No data
Ladybug	*Coccinella septempunctata*	Aphids, mites, caterpillars, insect eggs	Nontoxic	No data	No data
Parasitoid Wasp	*Aphelinus mali*	Aphids	Slightly toxic	No data	No data
Predatory Bug	*Anthocoris nemoralis*	Aphids, spider mites	Toxic as spray, nontoxic as drench	No data	Nontoxic
Predatory Beetle	*Atheta coriaria*	Fungus gnats, thrips	No data	Nontoxic	No data
Predatory Beetle	*Cryptolaemus*	Mealybugs, whitefly	Slightly toxic	Nontoxic	Nontoxic
Predatory Bug	*Orius insidiosus*	Thrips, whitefly	No data	Nontoxic	Nontoxic
Parasitoid Wasp	*Anagyrus sp.*	Vine mealybugs	No data	Nontoxic	No data
Parasitoid Wasp	*Microplitis mediator*	Noctuid caterpillars	No data	Nontoxic	No data
Parasitoid Wasp	*Aphitis melinus*	California red scale	No data	Nontoxic to larvae; slightly toxic to adults	No data
Parasitoid Wasp	*Eretmocerus mundus*	Bemisia whitefly	No data	Slightly toxic	Nontoxic
Parasitoid Wasp	*Encarsia formosa*	Greenhouse whitefly	Moderately toxic to adults as spray; nontoxic as drench; nontoxic to larva	Slightly toxic	No data
Parasitoid Wasp	*Diglyphus isaea*	Liriomyza leafminer	No data	Slightly toxic to larvae; nontoxic to adults	Nontoxic
Parasitoid Wasp	*Tamarixia radiata*	Asian citrus psyllid	No data	Moderately toxic	No data

An effective pest management strategy incorporates many methods of control. With a foundation of strong sanitation, exclusion, and scouting practices, growers can successfully integrate both biological and chemical controls to manage pest populations. Biological control agents are most effective in suppressing low to moderate pest pressure. Under optimal pest reproductive conditions or growing sites with high surrounding pest pressure, traditional chemical controls may be required.

Best Practices for Integrating Biocontrols with Traditional Chemistry

- Establish biocontrol populations early, before pest pressure builds up.
- Biocontrols are most effective in managing low to moderate pest pressures.
- Save traditional chemistry options for pests that aren't well-controlled by biocontrols or when a pest population exceeds the economic threshold.
- Consider different approaches for different phases of the crop cycle. For example, you may use exclusively biocontrols in propagation before incorporating traditional chemistry in finished crops.
- Consider using banker plants that can support a beneficial insect population and remain untreated.
- Where possible, choose application methods that limit the exposure of biocontrols to pesticides. For example, use drench applications for biocontrols that live in the plant canopy. Use foliar applications for soil dwelling and drench-applied biocontrols.
- Time application to align with the least-susceptible life stage of the biocontrol. Some traditional chemistry is more toxic to one life stage but can be used safely with another.
- Use spot treatments to control hot spots of pest pressure rather than treating the entire crop area with traditional chemistry.
- When using traditional chemistry, choose options that are inherently less toxic to non-target insects. Avoid broad spectrum and non-selective products. Contact your chemical and biocontrol providers for more information on the compatibility of specific products.