



## **AGRIBREW BIOPELLENT (ABR): Broad-Spectrum, Contact Insecticide-Miticide, and Repellent**

ABR is a biologically enhanced garlic oil-based insecticide-miticide and powerful repellent that controls and repels a wide range of pests such as lepidopteran and other soft-bodied insects on a variety of specialty crops. The powerful effect of ABR comes from its complex formulation designed with a unique garlic oil composed of four key organosulfur active compounds: diallyl thiosulfonate (allicin), diallyl sulfide (DAS), diallyl disulfide (DADS), and diallyl trisulfide (DATS) that drive ABR's modes of action.

ABR is formulated by AGRIBREW SMART BLEND TECHNOLOGY which consists of sustainable active ingredients in a sophisticated carrier of functional ingredients comprised of botanical oil, ethyl alcohol, and apple cider vinegar. ABR plays a major role in Integrated Pest Management (IPM) Programs limiting the likelihood of target pests developing pesticidal resistance, minimizing any impact on beneficial insects and the environment.

### **Why should I use ABR?**

#### **THE KEY DIFFERENCES**

- Highly selected garlic oil source and screening of biologically active compounds.
- Unique and consistent composition of the biologically active constituents.
- Strong understanding of the active ingredients and relative concentrations.
- Effective formulation development with consistent performance.

#### **MODES OF ACTION**

##### **CONTACT EFFECT = DESICCATION**

- ABR lipophilic plant oil kills the insect pest by degrading the waxy cuticle causing dehydration.

##### **OLFACTORY EFFECT = ANTIFEEDANT DETERRENT**

- ABR discourages the pest from feeding, preventing future leaf damage.

##### **PEST BEHAVIORAL PERTURBATOR - ADULT MATING DISRUPTER**

- ABR affects the pest's odor-binding receptors that interfere with the way that adult male and female locate each other, decreasing the likelihood of successful reproduction.
- ABR disrupts the adult female pest from laying eggs on the leaf, preventing future infestation break out.

##### **REPELLENT EFFECT**

- ABR interferes with the pest's sensing faculties, disguising the odor signal emitted by crops, hence keeping them away and limiting chances of their establishment on crops.

#### **TARGET PESTS CONTROLLED**

Broad-spectrum control and repellency of soft-bodied insects and mites, including but not limited to aphids, thrips, whiteflies, flies, scales, mealybugs, various species of caterpillars, moths, leafhoppers, psyllids, beetles (weevils, borers), plant bugs, chinch bugs, and grasshoppers.

#### **DIRECTIONS FOR USE - IPM**

- ALWAYS READ AND FOLLOW ALL LABEL DIRECTIONS
- SHAKE WELL BEFORE USE
- MUST BE DILUTED BEFORE USING
- USE DILUTION IMMEDIATELY
- DO NOT STORE DILUTED SOLUTION

#### **APPLICATION TYPES: GROUND – AERIAL – CHEMIGATION**

##### **FOR FOLIAR APPLICATION:**

- Use most common ground application equipment, such as tractor mounted boom, air-blast high clearance, hose-end, backpack, etc.



- For best results, a sufficient spray volume and an adequate spray pressure are needed to ensure complete and thorough coverage of all plant surfaces including both the top and bottom of the leaves.

APPLICATION TIMING:

- Start applications at the first appearance of pests; do not wait until plants are heavily infested
- Early morning or late afternoon
- At any time up to and including the day of harvest
- In between other sprays in an IPM program to reduce insect resistance

TANK MIX:

CAN BE APPLIED ALONE OR IN COMBINATION WITH OTHER CHEMICAL INSECTICIDES.

- ABR is compatible with the most commonly used insecticides and miticides; however, a jar test for compatibility and phytotoxicity is recommended before using.
- Follow the strictest label directions.

pH:

- For optimal product efficacy we recommend adjusting the pH of the water solution to neutral or slightly acid (around 6-6.5).

USE SITES:

For indoor and outdoor crops, food, and non-food crops, such as, but not limited to:

- Small fruits and berries
- Pome and stone fruits
- Brassica (cole), bulb vegetables
- Leafy and oriental vegetables
- Herbs and spices
- Tree nuts
- Fruiting and legume vegetables
- Root and tuber vegetables
- Cucurbit vegetables
- Citrus fruits and subtropical fruits
- Greenhouse and nursery
- Residential landscape

RECOMMENDED APPLICATION RATES:

- A minimum of 30 gallons of total spray volume per acre.
- Maximum rate: 256 fluid ounces (fl. oz) per acre.
- Ensure mixed solution maintains the same ratio of ABR to water if mixing more than 100 gallons.
- Repeat applications as required to maintain an effective control (3 days as a minimum interval application).

**Recommended Rates: 100 gallon of water per acre**

<b>PREVENTATIVE</b> < Economic Threshold	<b>LOW PRESSURE</b> At Economic threshold	<b>MODERATE TO SEVERE PRESSURE</b> > Economic threshold	<b>RESCUE FROM HEAVY INFESTATION</b>
0.25%	0.50%	1.00%	2.00%
32 fl. oz	64 fl. oz	128 fl. oz	256 fl. oz
10-14 days interval	7-10 days interval	5-7 days interval	3-5 days interval