



## **AGRIBREW BIODISRUPTOR (ABD): Broad-Spectrum, Contact Insecticide-Miticide, and Repellent**

ABD is a biologically enhanced cedar 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 ABD comes from its complex formulation designed with a unique cedar oil composed of three key compounds in cedar oil: Cedrol, Thujopsene, and Cedree that drive ABD's modes of action.

ABD 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. ABD 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 ABD?**

#### **THE KEY DIFFERENCES**

- Highly selected cedar 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**

##### **PARALYSIS BY NEUROTOXIC EFFECT**

- The botanical oil in active compounds in ABD affect the octopamine receptors specific to the insect, disrupting its nervous system, thus causing paralysis followed by death.

##### **REPELLENCY EFFECT**

- The vapors within ABD induce hyperactivity and avoidance behavior, thus keeping pests away and limiting chances of crop establishment.

##### **SUFFOCATION BY CONTACT**

- ABD provides true and strong pest suffocation by blocking air entering the spiracles resulting in death.

##### **DESICCATION BY CONTACT**

- The formula disrupts the waxy cuticle, allowing the active ingredients to quickly penetrate the pest, resulting in desiccation, water loss, and death.

#### **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.

- ABD 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