

# VectoBac® 12AS

Biological Larvicide  
Aqueous Suspension

**Active Ingredient:**

*Bacillus thuringiensis*, subspecies *israelensis*, 1200 International Toxic Units (ITU) per mg (Equivalent to 4.84 billion ITU per gallon; 1.279 billion ITU per liter) ..... 1.2%  
Inert Ingredients ..... 98.8%  
Total ..... 100.0%

EPA Reg. No. 73049-38

EPA Est. No. 33762-IA-001

List No. 5605

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**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**For MEDICAL and TRANSPORT Emergencies ONLY  
Call 24 Hours A Day 1-877-315-9819. For All Other  
Information Call 1-800-323-9597.**

**1.0 STATEMENT OF PRACTICAL TREATMENT**

**If In Eyes:** Flush with plenty of water. Get medical attention if signs of irritation persists.

**If on Skin:** Wash thoroughly with plenty of soap and water. Get medical attention if signs of irritation persists.

**2.0 PRECAUTIONARY STATEMENTS**

**2.1 HAZARD TO HUMANS (AND DOMESTIC ANIMALS)  
CAUTION**

**Hazards to Humans**

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash contaminated clothing before reuse.

**2.2 Physical and Chemical Hazards**

Diluted or undiluted VectoBac 12AS can cause corrosion if left in prolonged contact with aluminum spray system components. Rinse spray system with plenty of clean water after use. Care should be taken to prevent contact with aluminum aircraft surfaces, structural components and control systems. In case of contact, rinse thoroughly with plenty of water. Inspect aluminum aircraft components regularly for signs of corrosion.

**3.0 DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply directly to finished drinking water reservoirs or drinking water receptacles.

Do not apply when weather conditions favor drift from treated areas. Do not apply to metallic painted objects, such as automobiles, as spotting may occur. If spray is deposited on metallic painted surfaces, wash immediately with soap and water to avoid spotting.

**3.1 Chemigation**

Do not apply this product through any type of irrigation system unless labeling on chemigation is followed.

**4.0 STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.

**STORAGE:** Store in a cool [59°-86° F (15°-30° C)], dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not reuse container.

**5.0 GROUND AND AERIAL APPLICATION**

VectoBac 12AS may be applied in conventional ground or aerial application equipment with quantities of water sufficient to provide uniform coverage of the target area. The amount of water needed per acre will depend on weather, spray equipment, and mosquito habitat characteristics. Do not mix more VectoBac 12AS than can be used in a 72-hour period.

For most ground spraying, apply in 5-100 gallons per acre using hand-pump, airblast, mist blower, etc., spray equipment.

For aerial application, VectoBac 12AS may be applied either undiluted or diluted with water. For undiluted applications, apply 0.25 to 2.0 pt/acre of VectoBac 12AS through fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or rotary atomizers.

For diluted application, fill the mix tank or plane hopper with the desired quantity of water. Start the mechanical or hydraulic agitation to provide moderate circulation before adding the VectoBac 12AS. VectoBac 12AS suspends readily in water and will stay suspended over normal application periods. Brief recirculation may be necessary if the spray mixture has sat for several hours or longer. **AVOID CONTINUOUS AGITATION OF THE SPRAY MIXTURE DURING SPRAYING.**

CONTINUED

Rinse and flush spray equipment thoroughly following each use.

For blackfly aerial applications, VectoBac 12AS can be applied undiluted via fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or open pipes. Rate of application will be determined by the stream discharge and the required amount of VectoBac 12AS necessary to maintain a 0.5 - 25 ppm concentration for VectoBac 12AS in the stream water. VectoBac 12AS can also be applied diluted with similar spray equipment. Do not mix more VectoBac 12AS than can be used in a 72 hour period.

## 6.0 APPLICATION DIRECTIONS

Do not apply when wind speed favors drift beyond the area of treatment.

### Suggested Rate Range\*

#### Mosquito Habitat VectoBac 12AS

(Such as the following examples):

Irrigation ditches, roadside ditches, flood water, standing ponds, woodland pools, snow melt pools, pastures, catch basins, storm water retention areas, tidal water, salt marshes and rice fields.

In addition, standing water containing mosquito larvae, in fields growing crops such as: Alfalfa, almonds, asparagus, corn, cotton, dates, grapes, peaches and walnuts, may be treated at the recommended rates.

When applying this product to standing water containing mosquito larvae in fields growing crops, do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Polluted water 1 - 2 pts/acre  
(such as sewage lagoons, animal waste lagoons).

\*Use higher rate range in polluted water and when late 3rd and early 4th instar larvae predominate, mosquito populations are high, water is heavily polluted, and/or algae are abundant.

### Suggested Rate Range\*

#### Black flies Habitat VectoBac 12AS

Streams  
stream water\*\* (=ppm) for 1 minute exposure time 0.5 - 25 mg/liter  
stream water\*\* (=ppm) for 10 minutes exposure time 0.05 - 2.5 mg/liter

\*\*Use higher rate range when stream contains high concentration of organic materials, algae, or dense aquatic vegetation.

\*\*Discharge is a principal factor determining carry of Bti. Use higher rate or increase volume by water dilution in low discharge rivers or streams under low volume (drought) conditions.

## 7.0 CHEMIGATION

Apply this product through flood (basin) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop Injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.

A person knowledgeable of this chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### 7.1 RICE-FLOOD (BASIN) CHEMIGATION

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

VectoBac 12AS is metered or dripped into rice floodwater at application stations positioned at the point of introduction (levee cut) of water into each rice field or pan. Two to three pints of VectoBac 12AS are diluted in water to a final volume of 5 gallons. The diluted solution is contained in a 5 gallon container and metered or dispersed into the irrigation water using a constant flow device at the rate of 80 ml per minute. Introduction of the solution should begin when 1/3 to 1/2 of the pan or field is covered with floodwater. Delivery of the solution should continue for a period of approximately 4-1/2 hours. Floodwater depth should not exceed 10-12 inches to prevent excessive dilution of VectoBac 12AS which could result in reduced larval kill.

Agitation is not required during the period in which the VectoBac 12AS solution is being dispersed.

Application of VectoBac 12AS into rice floodwater is not permitted using a pressurized water and pesticide injection system.

## 8.0 SMALL QUANTITY DILUTION RATES

### Gallons Spray Solution/Acre (Ounces Needed per Gallon of Spray)

#### VectoBac 12AS

#### Rate in Pints

Per Acre	10 Gal/A	25 Gal/A	50 Gal/A
0.25 (4 oz)	0.4	0.16	0.08
0.5 (8 oz)	0.8	0.32	0.16
1.0 (16 oz)	1.6	0.64	0.32
2.0 (32 oz)	3.2	1.28	0.64

## 9.0 NOTICE TO USER

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE CONCERNING USE OF THIS PRODUCT OTHER THAN AS INDICATED ON THE LABEL. USER ASSUMES ALL RISKS OF USE, STORAGE OR HANDLING NOT IN STRICT ACCORDANCE WITH ACCOMPANYING DIRECTIONS.