

### Learning Objectives

When you have completed this section, you should be able to:

- interpret labels of pesticides typically used in mosquito and black fly control.

The General Pesticide Safety Manual has highlighted the parts of the pesticide label. This section provides you with generic pesticide labels that are similar to those used in mosquito and black fly control. Be able to answer the review questions for each of the generic labels provided. You will need to refer to **The Pesticide Label** section of the General Pesticide Safety Manual.

**Sample Label #1**

NET WEIGHT: 15 KG

**BIO-300G**

BIOLOGICAL LARVICIDE

Granule

(Bacillus ferrengis, Serotype B-112)

**COMMERCIAL**

GUARANTEE: Bacillus ferrengis,  
Serotype B-112, 300 International Toxic Units  
(ITU per milligram (0.3 billion ITU/L).

CAUTION



Poison

KEEP OUT OF REACH OF CHILDREN  
READ THE LABEL BEFORE USING

REGISTRATION NO. 999, 999 PEST CONTROL  
PRODUCTS ACT

LOT NO. 1146-117

E.P.A. Est. No. 1122-33-4

Chemical Products Division  
X,Y,Z Limited  
Montreal, Canada, XXX YYY

(BIO 300G continued)

FOR USE BY COMMERCIAL APPLICATORS IN COMMERCIAL AND MUNICIPAL MOSQUITO CONTROL PROGRAMS.

**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

#### **DIRECTIONS FOR USE**

##### **MOSQUITOES**

Apply Bio 300G at a rate of 3 to 10 kg/ha in temporary and permanent pools in pastures and woodlots, irrigation or roadside ditches, natural marshes or estuarine areas, catch basins and sewage lagoons. Use higher rates in deep and/or polluted water and when late 3rd and 4th instar larvae predominate.

Apply recommended rate by conventional ground equipment or measure required amount and broadcast over water using a can or appropriate container and a gloved hand. Uniform coverage is necessary for best results.

A 3 to 14 day interval between applications should be employed. Monitoring will indicate the appropriate retreatment interval. BIO 300G does not affect non-target, aquatic, invertebrate predators and parasites which are non-filter feeders. Therefore, longer periods of suppression may result since these beneficials would be conserved to aid in mosquito population management.

##### **LIMITATIONS:**

Do not apply to water that will be used for drinking by humans.

##### **PRECAUTIONS:**

Avoid contact with skin and eyes. May cause irritation. In case of contact, flush eyes with plenty of water. If irritation persists, contact a physician.

##### **STORAGE AND DISPOSAL :**

Storage: Tightly reclose containers of unused Bio 300G. Store in a cool, dry place.

Disposal: Empty container thoroughly. Follow provincial instructions for any required additional cleaning of container prior to its disposal. Render empty container unsuitable for any additional use. Dispose of container in accordance with provincial requirements.

For information on the disposal of unused, unwanted product and the cleanup of spills, contact the regional office of the Environmental Protection Service, Environment Canada.

#### **LIMITATION OF WARRANTY**

Seller's guarantee shall be limited to the terms set out on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

**Sample Label #2**

**MOSE 30EC**

**INSECTICIDE**

**EMULSIFIABLE CONCENTRATE**

For Control of Mosquito Larvae and Black Fly Larvae

**RESTRICTED**

GUARANTEE:..... menetos 30 g/L

REGISTRATION NUMBER: 11111      PEST CONTROL PRODUCT ACT

Caution



Poison

**KEEP OUT OF REACH OF CHILDREN  
READ THE LABEL BEFORE USING**

NET CONTENTS: 10 L

Manufactured By:  
Meno Inc.,  
234 Inger Street,  
Orangeville, Ontario  
Z1T G1G

**(MOSE 30EC continued)**

**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

**NATURE OF RESTRICTION:** This product is to be used only in manner authorized, consult local Pesticide Regulatory authorities about use permits which may be required.

**RESTRICTED USES:**

**USE LIMITATIONS:** Do not use on crops grown for food or forage or pasture or allow spray drift to contaminate these crops.

When small areas are treated, do not allow livestock to drink water for 72 hours after application.

**MOSQUITO LARVAE CONTROL:** Apply MOSE 30EC Insecticides as a uniform spray in sufficient water for good coverage at the rate of 35 to 100 millilitres per hectare. Apply to standing water in pools, shallow ponds, swamps, marshes, catch basins and similar areas where mosquitoes breed. Use 35 mL per hectare to clean open water and 70 to 100 mL per hectare in waters high in organic matter content. The higher rate should be used in areas known to have organophosphate resistant mosquitoes. Repeat applications as necessary.

**BLACK FLY LARVAE CONTROL:** Use MOSE 30EC insecticide to treat black fly breeding sites in fast flowing water. Treatment should be made when there are numerous larvae from one half to one centimetre long. Repeat applications may be necessary to control larvae of later generations. Treatment sites should be located below beaver dams or other obstructions to the flow of water and below the outlets of lakes. Longer fast flowing streams may require treatment sites at one half to one kilometre intervals.

Apply MOSE 30EC insecticide into the water at a concentration of 0.3 parts per million (ppm). The amount of chemical required is dependent on the volume of water being treated. The rate of stream flow (in cubic metres per second) is calculated by multiplying the average depth (in metres) of the stream by the average width (in metres) of the stream by the average velocity (in metres per second).

**(MOSE 30EC continued)**

It is necessary to maintain the required concentration of MOSE 30EC insecticide for 15 to 20 minutes in the water. The following chart can be used as a guide:

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Average stream flow (cubic metres per second)	Amount of MOSE 30EC insecticide (millilitres) required for 30 minute dispensing for a concentration of 0.3 parts per million
0.5	600
1.0	1200
2.0	2400
3.0	3600

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The MOSE 30EC insecticide should be mixed with water and the mixture dispersed into the stream from a container with an adjustable valve set to empty within the required 30 minute period.

Better mixing with the water in the stream will be obtained if the MOSE 30EC insecticide is introduced at a turbulent spot in the stream, or from more than one container if the stream is fairly large.

**PRECAUTIONS:** Keep out of reach of children. Do not expose product to excessive heat or direct sunlight. Do not apply to crops used for food, forage or pasture. Harmful if swallowed or absorbed through skin. Causes skin and eye irritation. Do not get on skin, in eyes or on clothing. Wash thoroughly after handling, avoid breathing vapour or mist. Do not contaminate food or feed products.

**FIRST AID:** In case of contact, flush skin or eyes with plenty of water. Call a physician immediately in all cases of suspected poisoning.

**TOXICOLOGICAL INFORMATION:** This product may cause cholinesterase inhibition. Atropine is antidotal. Pralidoxime chloride (2 PAM) may be effective as an adjunct to atropine. Use according to label directions.

**THIS PRODUCT IS TOXIC TO BIRD AND BEES.** It should not be applied when bees are actively visiting area. Do not contaminate water by cleaning of equipment or disposal of wastes.

**RINSE AND DISPOSAL PROCEDURE:** Drain the container completely into the spray tank for dispensing container. Then rinse with water draining the rinse water into the spray tank. Dispose of container in a method approved by the Ministry of Environment.

**NOTICE TO BUYER:** Seller's guarantees shall be limited to the terms set out on the label and subject thereto the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

**DO NOT STORE BELOW FREEZING TEMPERATURES**

COMMERCIAL

# 1% Begone residual insecticide

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READ THE LABEL BEFORE USING

**GUARANTEE:**

Proposty .....1%

**REGISTRATION NO. 1156543**  
**PEST CONTROL PRODUCTS ACT**



**DANGER POISON**

Net Contents **4 LITRES**

**ACME Pest Control Ltd.** 235 Bromwell Drive, Rexdale, Ontario M9Q 1Z7

## 1% Begone (continued)

**Kills:** Brown Dog Ticks, Centipedes, Cockroaches, Clover Mites, Earwigs, Millipedes, Mosquitoes, Paperlice, Punkies, Sandflies, Scorpions, Silverfish, Sowbugs, Spiders and Wasps. Exposed Stages of: Angoumois Grain Moth, Cigarette Beetles, Drugstore Beetles, Indian Meal Moths, Saw-Toothed Grain Beetles and Weevils.

Acme 1% Begone residual insecticide is a ready to use formulation for control of the insects listed including those resistant to certain chlorinated hydrocarbon and organophosphorus insecticides. This product drives insects from their hiding places, gives rapid kill and long residual activity.

### Directions For Use

**General:** For use in areas of industrial, institutional, and commercial locations where treatment will present no human hazard or contamination of food.

Apply with a low-pressure sprayer equipped with a coarse spray nozzle. Spray surfaces only until wet. Avoid excessive run-off. Apply to all insect breeding sites. Also treat adjacent exposed surfaces where insects may crawl when they come out of hiding. Repeat treatment as necessary.

**Cockroaches:** Thoroughly treat the infested area. Spray baseboards, cracks and crevices; around window and door frames; the under surfaces of shelves, drawers and work areas; behind and beneath cabinets, refrigerators, sinks and stoves; in and around waste containers, switch panels, junction boxes, floor drains and other places where cockroaches hide or rest.

**Ants:** apply to trails and places where ants enter premises such as window and door sills, Spray hills and runways outdoors.

**Hornets and Wasps:** Spray directly to the nest after dark when all of the insects have returned to the nest.

**Exposed stages of Angoumois Grain Moth, Cigarette Beetles, Drugstore Beetles, Indian Meal Moths, Saw-toothed Grain Beetles and Weevils.** Thoroughly treat floors and the walls of the infested area with attention to cracks, crevices, corners and perimeters. Sanitation and dust control are of primary importance. Fumigate or destroy infested products.

**Silverfish:** Apply to localized areas infested by these insects.

**Brown Dog Ticks:** Spray sleeping quarters of pets around baseboards, window frames, wall cracks and local areas of floors. Repeat as needed. Fresh bedding should be placed in animal quarters after spraying. Do not spray animals.

**Clover Mites, Crickets, Earwigs, Millipedes, Sowbugs, Sowbugs, Scorpions and Spiders.** Thoroughly spray the interior and exterior perimeter of the infested premises. For Clover Mites give special attention to window sills.

**Fleas, Flies, Gnats, Mosquitoes, Punkies and Sandflies (outdoors only).** Spray infested areas thoroughly, including outside surfaces of screens, doors window frames, foundations, patios and other areas where insects may enter.

**For use in Meat Packing and Food Processing Plants.** Obtain a fine flat fan spray patterns. Use only in the inedible product areas of meat packing plants, including those that are federally inspected. Any exposed food products, equipment, or packing materials must be removed or covered before spraying. Rinse all equipment with water before resuming operations canning or other processing begins. Repeat applications, if necessary, when plant is not in operation. Spraying where insects congregate will aid in preventing re-infestation. Good sanitation and proper disposal of waste is essential in any effective insect control program.

**Restrictions:** Do not use a space spray. Provide adequate ventilation of area being treated. Do not allow children to contact treated areas until surfaces are thoroughly dry. Do not store near feed or food products. Avoid contamination of feed, food processing equipment and food handling and packaging surfaces. Do not apply to animals. Remove pets and cover fish bowls before spraying. DO not spray plants.

**PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN.** May be harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing of spray mist. Do not get in eyes, on skin, or on clothing. Wash hands, arms and face thoroughly with soap and water after using and before eating or smoking. Wash all contaminated clothing with soap and hot water before reuse.

**Flammable:** DO not spray near open flame. Do not smoke while using. Avoid excessive heat.

**RINSE AND DISPOSAL PROCEDURE:** Drain the container completely into the spray tank for dispensing container. Then rinse with water draining the rinse water into the spray tank. Dispose of container in a method approved by the Ministry of Environment.

**FIRST AID AND INSTRUCTION:** This product contains Petroleum Distillate. If swallowed DO NOT induce Vomiting. If patient is unconscious give him air. Obtain medical attention, if in eyes, flush with plenty of water. In case of skin contact, immediately wash skin with plenty of soap and water. **POISON:** Do not swallow.

**TOXICOLOGICAL INFORMATION:** Atropine sulfate is antidotal.

**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

**NON-WARRANTY:** Seller's guarantee shall be limited to the terms set out on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

COMMERCIAL

# 65-20 Mal-dane fogging oil concentrate

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READ THE LABEL BEFORE USING

**GUARANTEE:**

Mal-dane.....65%  
Beta sutoxy beta thiocarbdiie ether .....20%

**REGISTRATION NO. 9824**  
**PEST CONTROL PRODUCTS ACT**



**DANGER POISON**

Net contents **4 LITRES**

**Acme Pest Control Ltd.** 235 Bromwell Drive, Rexdale, Ontario M9Q 1Z7

## 65-20 Mal-dane (continued)

### DIRECTIONS FOR USE

Kills flies, gnats and mosquitoes, for use in specialized fogging and misting equipment.

**OUTDOOR FOGGING:** This concentrate should be diluted at the rate of 1 litre of concentrate in 21 litres of No. 2 fuel oil. Approximately 1 part concentrate to 21 parts base oil. Then use at the rate of 14-17 litres per hectare (10,000 m<sup>2</sup>) for control of mosquitoes, flies and black flies. For most effective treatment it is required that the fog remain close to the ground. Fogging should be done in the early morning or late evening when there are few wind currents.

**IMPORTANT:** Wet fog or mist can be used on dumps but care must be used on foliage. Avoid applying wet fog to valuable ornamental plants as injury may occur. When using thermo fogging generator, the equipment must be operated and maintained in accordance with the manufacturer's instruction manual.

**PRECAUTIONS:** KEEP OUT OF REACH OF CHILDREN. Hazardous if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing. Remove contaminated clothing and clean before reuse. Do not contaminate feed or foodstuffs. Avoid contaminating any body of water. Highly toxic to fish and bees.

**RINSE AND DISPOSAL PROCEDURE:** Drain the container completely into the spray tank for dispensing container. Then rinse with water draining the rinse water into the spray tank. Dispose of container in a method approved by the Ministry of Environment.

**FIRST AID:** In case of exposure to Mal-dane, remove patient from area and remove all contaminated clothing. Wash all exposed skin with soap and water. If swallowed and patient is conscious induce vomiting. If breathing is weak or irregular give artificial respiration. Get prompt medical attention.

**TOXICOLOGICAL INFORMATION:** Symptoms of poisoning: headache, weakness, sweating, giddiness, blurred vision, nausea, abdominal cramps, diarrhea and chest discomfort. Atropine is antidotal; 2-PAM is also antidotal and may be administered in conjunction with atropine but not as a substitute.

**NOTICE TO USER:** This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

**NON-WARRANTY:** Seller's guarantee shall be limited to the terms set out on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

## Review Questions

For each of the labels, answer the following questions:

BIO-300G

MOSE 30EC

1% BEGONE

65-20 MALDANE

1. What is the trade name?
2. What type of formulation is it?
3. What is/are the active ingredient(s)?
4. What is the concentration of the active ingredient in this formulation?
5. What is the federal use designation (classification)?



13. How should empty containers be disposed of?

14. What first-aid information is available?

