

## For Mosquito Control

### Where to use Sumilarv® 0.5G?

Apply **Sumilarv® 0.5G** at mosquito breeding sites:

**Standing water:** reservoir, swamp, rain pool, pond, cistern, etc.

**Running water:** drain, ditch, creek, stream, river, etc.

### What amount is required to achieve results?

#### Standing water:

**Sumilarv® 0.5G** should be used as shown in the table below, based upon a target concentration of 0.01 – 0.05 ppm A.I. (2 – 10 g/m<sup>3</sup> of Sumilarv® 0.5G).

#### Running water:

**Sumilarv® 0.5G** should be used as shown in the table above, based upon a target concentration of 0.01 – 0.05 ppm A.I. (2– 10 g/m<sup>3</sup> of Sumilarv® 0.5G) against flow volume per hour.

\*Running water volume

(t)/hour = width (m) × depth (m) × flow rate (m/hour)

Depth (cm)	Sumilarv® 0.5G (kg/ha)
10	2 – 10
20	4 – 20
30	6 – 30
50	10 – 50

\*Water volume in the treated area (t) = length (m) × width (m) × average depth (m)

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**Please Read and Follow Product Label  
Directions and Precautions Before Use.**

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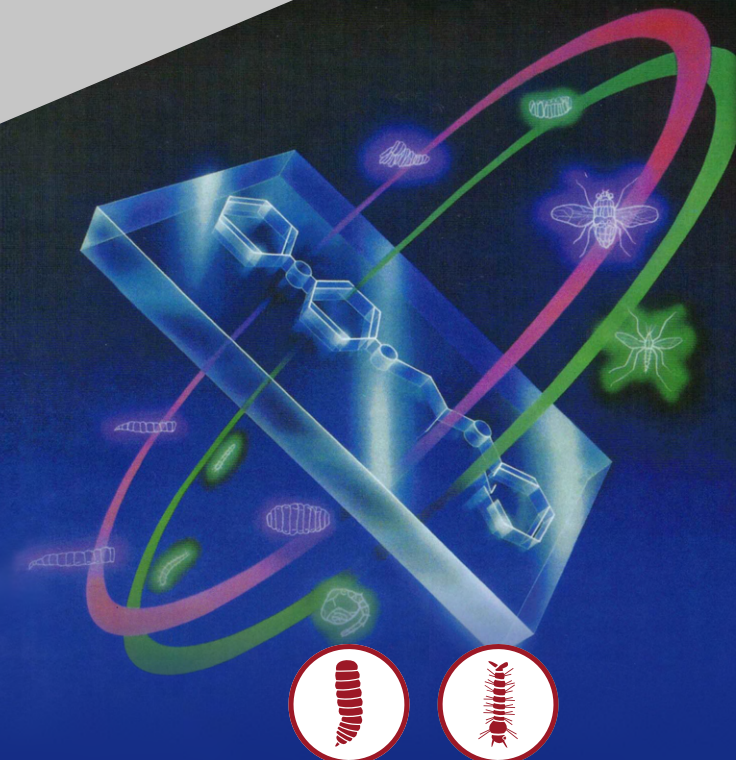
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**Sumilarv®  
0.5G**



**Insect Growth Regulator**



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# Sumilarv®

## For Perfect Pest Control, Toward a World without Pest Problems.

As a new generation insecticide, Insect Growth Regulator (IGR), **Sumilarv®**, provides you with a new approach to insect control.

Stop pest propagation with **Sumilarv®**. For nonrecurring populations, no more problem with pests. Forever! Now why **Sumilarv®**? Because it breaks the life cycle of the insect, prevents a pre-adult from maturing into an adult. Thus, it can't reproduce, resulting in a decreased population. If a faster, stronger and longer lasting pest elimination system is desired, **Sumilarv®** should be used in combination with adulticides. The choice of **Sumilarv®** is a key to success in the control of fly, mosquito, flea and other insect populations

### Thanks to Sumilarv®

- ◆ Long-term pest population elimination, by subtly altering insects' life cycle.
- ◆ At low levels, it promises surprisingly effective control.
- ◆ Won't harm man and animals.

### What is Sumilarv®?

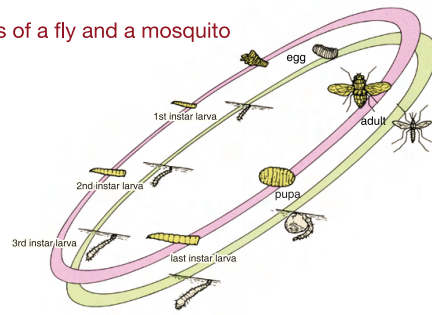
**Sumilarv®** is an insect growth regulator with unique mode of action. **Sumilarv®** affects the physiology of morphogenesis, reproduction and embryogenesis of insects. The morphogenetic effect of **Sumilarv®** is primarily seen during larval - pupal or nymphal - adult transformation. Under the presence of **Sumilarv®**, various degrees of incomplete metamorphosis can be seen.

Due to such unique modes of action, **Sumilarv®** prevents successful growth of insect population.

### What Happens with the Application of Sumilarv®?

Against flies and mosquitoes, **Sumilarv®** inhibits their life cycles at the pupal stages. Where applied, larvae develop normally to pupation, but they cannot become adults. That is, normal maturing into an adult capable of reproduction is inhibited. And thus, the target population gradually decreases.

### Life cycles of a fly and a mosquito



### Sumilarv® 0.5G

<b>Formulation:</b>	Granule	
<b>Composition:</b>	Sumilarv(Pyriproxyfen)	0.5
	Adjuvants	4.0
	Carrier	balance 100.0 (% w/w)

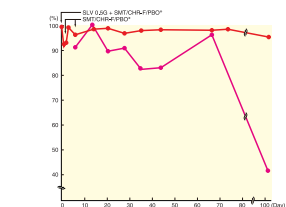
### At Low Levels, It Promises Surprisingly Effective Control.

**Sumilarv®** is much more effective than organophosphates, pyrethroids or other IGR against larvae of flies and mosquitoes, being active at substantially lower rates. Moreover, it provides the long-lasting control you have been seeking.

If combined with adulticides, you can easily attain optimum perfect pest control.

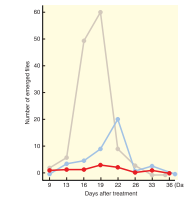
### High Performance in the Field

**Sumilarv®** has demonstrated its high potency in field tests. **Sumilarv® 0.5G** is effective against flies in a waste treatment facility at a rate of 40g per square meter. Furthermore, a pig house trial showed that **Sumilarv® 0.5G** combined with an adulticide space spray gave more rapid and complete control of flies. Similarly, with mosquito control, **Sumilarv®** provided 100% inhibition of emergence for 12 weeks in a fire pond. This powerful larvicidal action allows long term control of flies and mosquitoes, thus promoting a more healthy and comfortable environment for all to enjoy.

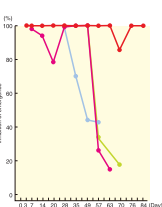


**Fig-4 Field evaluation of Sumilarv® for flies in a pig house**  
 Test material: Larvicide - Sumilarv® 0.5G, 20g/m<sup>2</sup>, single treatment  
 Adulticide - Sumithion (Chlorofluoride) PBO 0.5% (0.5% EC). Control: three treatments  
 Method: Number of adults in a certain area was counted and 100 was calculated. Larvae and pupae were collected from the test site. Number of emerged adults was counted and EI was calculated

● EI (Recovery inhibition (%))  
 =  $\left[ 1 - \frac{\text{No. of adults counted after treatment}}{\text{No. of adults counted before treatment}} \right] \times 100$   
 ● EI (Emergency Inhibition (%))  
 =  $\left[ 1 - \frac{\text{No. of collected larvae and pupae}}{\text{No. of collected larvae and pupae}} \right] \times 100$



**Fig-3 Field evaluation of Sumilarv® for flies in a waste treatment facility**  
 ● Sumilarv® 0.5G 10g/m<sup>2</sup> (20g A.I.)  
 ● DIB (Benzocaine) 25WP 4g/20m<sup>2</sup> (10g A.I.)  
 ● Control

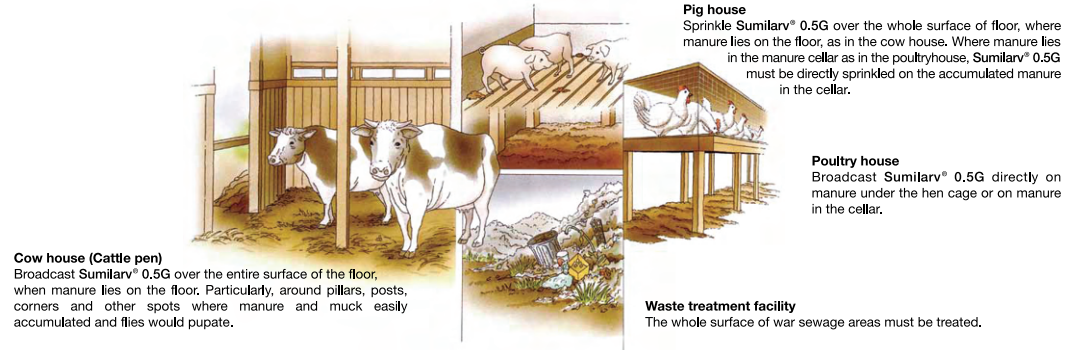


**Fig-5 Field evaluation of Sumilarv® for mosquitoes in a fire pond (24m<sup>2</sup>)**  
 ● Sumilarv® 0.5G 20g/m<sup>2</sup> (51 ppm A.I.)  
 ● Sumilarv® 0.5G 10g/m<sup>2</sup> (25.5 ppm A.I.)  
 ● Methoprene 10F 5g/m<sup>2</sup> (5.2 ppm A.I.)  
 ● DIB (Benzocaine) 25WP 4g/20m<sup>2</sup> (10.2 ppm A.I.)

# For Fly Control

## Where to use Sumilarv® 0.5G?

Sprinkle **Sumilarv® 0.5G** all over housefly breeding sites such as livestock and poultry houses or waste treatment facilities, as uniformly as possible.



## When and how often to use Sumilarv® 0.5G?

The time required for fly growth depends upon temperature. For a housefly, it takes about 10 days at 25°, from egg-laying to the birth of a new fly. The higher the temperature, the faster it develops. Where it is below 10° or beyond 35°, they can't breed. **Sumilarv® 0.5G** must be applied at the beginning of fly propagation, to attain the most effective control. For example, it should be applied before the adult fly population reaches a nuisance level as follows:

- ◆ 4 – 5 flies/board (m<sup>2</sup>) in a poultry house
- ◆ 4 – 5 flies/head in a pig house
- ◆ 12 – 25 flies/head in a cow house
- ◆ If the manure depth is over 20 cm, another **Sumilarv® 0.5G** treatment is required.

## What amount is required to achieve results?

**Sumilarv® 0.5G** should be applied at the rate of 20g/m<sup>2</sup> single application or at 10g/m<sup>2</sup>, double applications with 2 weeks interval.

- ◆ Poultry house (80 m × 10 m) ≥ 8 kg/house
- ◆ Farrowing unit (2 m × 3 m) ≥ 60 g/unit
- ◆ Breeding pen (4 m × 5 m) ≥ 200 g/pen
- ◆ Others ≥ 10 g/m<sup>2</sup>

## How to use?

**Sumilarv® 0.5G** can be easily applied manually or by machinery.



**Hand granule aprader**  
 Effective reach : 5 – 8 m  
 Outlet capacity : - 4 kg/min

**Blower with granule nozzle (with engine)**  
 Effective reach : 15 m  
 Outlet capacity : -12 kg/min

**Crawler mount type power granuler**  
 Horizontal throw (in still air): 30 m  
 Vertical throw (in still air): 20 m  
 Outlet capacity: - 25 kg/min

## Recommended control system against houseflies, by the combination of Sumilarv® 0.5G and adulticides

To reduce the overall fly population more quickly and surely, one needs an effective control system. A combination of Sumilarv® 0.5G with adulticides offers such a system.