

**ANOSOM<sup>®</sup>**  
**Squamocin( Annonin)**  
**Extract of *Annona squamosa***  
**BioInsecticide**

### Introducing ANOSOM<sup>®</sup>

ANOSOM<sup>®</sup> is a biological insecticide based on botanical extract of *Annona squamosa* (Custard Apple / Seethaphal). ANOSOM<sup>®</sup> contains squamocin (annonin) as active ingredient and is formulated as 1% Emulsifiable Concentrate (10,000 ppm). ANOSOM<sup>®</sup> is non phytotoxic and not toxic to higher animals.

Registration data Package for ANOSOM<sup>®</sup> is being submitted to the Indian Pesticides Regulatory Authority - Central Insecticides Board, Govt of India and the same is under process for registration.

### A Historical Brief

Chand and Mclaughlin ( 1990) have described squamocin as an extract from the *Annona squamosa* seed which was described as stereochemically undefined 15 ,24,28 – trihydroxy-bis-tetrahydrofuran actogenin.

### Mode of Action

Squamocin(Annonin) present in ANOSOM<sup>®</sup> revealed an inhibitory effect on the NADH-cytochrome c-reductase and complex I of insect mitochondria . Annonaceous acetogenins present in ANOSOM<sup>®</sup> have pesticidal and/or insect antifeedant properties.

It is recommended that BioPesticides are sprayed in early hours of morning or late afternoon for better results. UV radiation in peak sunny hours of the day may reduce the bio efficacy of BioPesticides.

### Method of Application

Foliar application: Mix ANOSOM<sup>®</sup> @ 2ml/ L of water and spray on crop canopy.

The spray volume depends upon the crop canopy..

### Target Pests

*Helicoverpa arimigera*, *Helicoverpa zea*, *Spodoptera litura* , *Spodoptera exigua*, *Earias spp.* , *Achae janta*, *Nephotetix virescens*, *Periplaneta americana*, *Callosobruchus chinensis*, *Phyzopertha sominix*, *Musca domestica*, *Urentius echinus*, Bunch caterpillar, Green Leaf Hopper, Leaf Folder, Army worm, Cut Worm  
Aphid, Brown Plant Hopper of Rice.

## Crops

ANOSOM<sup>®</sup> is suitable for application on Cereals , Millets , Pulses, Oilseeds, Fibre Crops , Sugar Crops , Forage Crops , Plantation crops ,Vegetables, Fruits, Spices , Flowers , Medicinal crops , Aromatic Crops , Orchards and Ornamentals.

## Compatibility

ANOSOM<sup>®</sup> is compatible with BioPesticides and with conventional chemical pesticides.

## Shelf Life

ANOSOM<sup>®</sup> is stable for a period of 24 months from the date of manufacturing.

## Mass Composition

CONSTITUENT	W/W %	FUNCTION
Squamocin (Annonin) (A.I)	1.0%	Active
Debitterized Annona oil	30 %	Active
n-Butanol (Solvent)	51%	Inactive
Butyl acetate (Solvent)	23%	Inactive
Emulsifier (Polyoxyethylene (20) Sorbitan monoleate)	15%	Inactive

## BIOLOGICAL COMPOSITION

CONSTITUENT	POTENCY
Squamocin (Annonin)	10,000 ppm

Free from Salmonella, Shigella , E.Coli

## Cautions for handling and use of product

1. Direct incidence of ANOSOM<sup>®</sup> on eyes may be dangerous. It is mandatory that the operator wears eye goggles, face mask and protective clothing while handling the product.
2. Do not spray against the wind. The product must be diluted in sufficient water once the sealed container is opened.
3. Avoid inhalation and skin contact while diluting as there could be spillage / splashes of the product

4. Mixing and spraying equipment is to be thoroughly rinsed with water and detergent before using the same equipment for spraying other pesticides.
5. Surplus spray solution should not be disposed in crop lands / stagnant water / flowing water where there is a possibility of causing pollution to natural resources.
6. Do not eat / drink / smoke during application.

### Symptoms and Antidotes

In the case of ingestion: Consume either Gulkund or Murabba of *Terminalia chebula*. Symptomatic treatment is advised.

In the case of contact with Eyes: Flush with water liberally for 20 minutes. Consult a Doctor immediately

### Citations

Agrow Projects - a reputed Pesticides Industry publication (PJB Publications, UK) monitoring future promising research products has cited ANOSOM® in their recent publication and it is the only product of its kind in the world

There are many citations in public domain on effectiveness of *squamocin* as a BioInsecticide.

### Commitment to Nature

- ANOSOM® can be used along with conventional chemical pesticides thus optimizing pesticide usage.
- ANOSOM® is safe to natural parasites, pollinators and predators.
- ANOSOM® can be used as an effective component in IPM programmes, thereby leading to a reduction in use of chemical pesticides and creating a safer environment.
- ANOSOM® does not lead to residue problems and doesn't cause resistance or resurgence problems.

### Benefits from ANOSOM®

- ANOSOM® effectively controls most of the economically important pests such as *Helicoverpa arimigera*, *Helicoverpa zea*, *Spodoptera litura*, *Spodoptera exigua*, *Earias spp.*, *Achae janta*, *Nephotetix virescens*, *Periplaneta americana*, *Callosobruchus chinensis*, *Phyzopertha sominix*, *Musca domestica*, *Urentius echinus*, Bunch caterpillers Green Leaf Hopper, Leaf Folders, Army worm, Cut Worm Aphid, Brown Plant Hopper of Rice
- Pest reduction leads to improved plant health and thereby increased crop productivity.