

Product Details

NIMBECIDINE



THE POWER OF NEEM

Neem (*Azadirachta indica*) is regarded as the king of future pesticides. Neem is reported to control over 300 species of pests. Unlike synthetic compounds, Neem has a collection of over 20 active ingredients, which makes it difficult for any pest to develop resistance to all of them at the same time. It is harmless to the natural enemies like predators and parasites of pests and human beings.

NIMBECIDINE FROM NEEM

We have harnessed all the goodness of neem in our product, NIMBECIDINE. It is a totally natural neem-oil based product with Azadirachtin as the labelled active ingredient. NIMBECIDINE is found to be effective against over 300 species of pests belonging to various orders of insects that infest very many cropping systems. It acts as an insect repellent, antifeedant, insect growth regulator and mating disruptor.

An effective supplement for synthetic pesticides, NIMBECIDINE has been proved and recognized as an ideal molecule in the Integrated Pest Management (IPM) programme the world over.



CHEMISTRY OF NIMBECIDINE

NIMBECIDINE, the neem-oil-based pesticide contains AZADIRACHTIN as an active ingredient. It also contains many other active compounds like Meliantriol, Salanin, Nimbin, and the like, of which Azadirachtin is the most effective insect growth regulator molecule. The Azadirachtin content in Nimbecidine is not less than 300ppm.

Neem based products are photodegradable to varying degrees. When isolated, Azadirachtin is highly photolabile and thermolabile. But then, NIMBECIDINE is an improved version of neem extract, which contains ingredients to protect Azadirachtin from photo and thermal degradation, making it highly bio-effective. This is achieved through hi-tech state-of-the-art technology of limonoids solvent extraction. NIMBECIDINE is also compatible with other chemical pesticides. So it can act independently as well as in combination with pesticides.

SPECTRUM OF ACTION

Nimbecidine	Orthoptera
	Coleoptera
	Heteroptera
	Homoptera.
	Diptera
	Lepidoptera

SPECIFICATION OF FORMULATION

The product is a dark/light brown liquid with sticky consistency with a repulsive odour and gets emulsified into a whitish emulsion with water. It does not leave any sediments. It reacts with HCl to give fatty acids. There is no reaction with alkali (Ammonia). It also contains phenolic diterpenoids, protomeliacins, limonoids, (Y-hydroxy butenolide side chain, azadirone group, gedunin group and vilasinin group) C-secomeliacins like Salanin, Nimbin and C-seco-limonoids amounting to 125 chemical constituents.



Colour	Dark brown oil
Consistency	Oily and sticky
Specific gravity (30°C)	0.9087
Refractive index (30°C)	1.4612
pH	4.8
Flash point	+77.7°C
E.C.	0.1 milli mhos/cm ²

CONTENTS	
Azadirachtin	0.03% (300 ppm)
Neem Oil*	90.57%
Emulsifier	5.00%
Stabilizer	0.50%

Solvent and other constituents	3.90% approx. (S.Q.)
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*Neem oil contains fatty acids as follows

Palmitic	20 – 70 ppm
Stearic	4 – 50 ppm
Oleic	275 – 500 ppm
Linolenic	1000 – 2000 ppm
Arachidic	5 – 15 ppm
Arachidonic	10 – 100 ppm

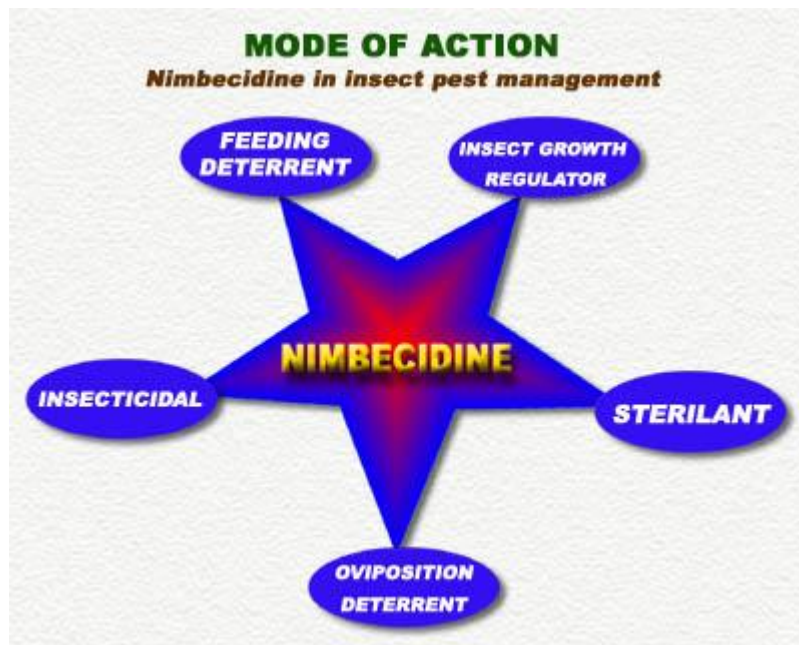
MELIANOIDS

Azadirachtin	300 – 600 ppm
Salanin	400 – 600 ppm

TOXICOLOGICAL INFORMATION OF NIMBECIDINE 0.03% AZA

- Acute oral LD₅₀ in Rat > 5000 mg/kg B.wt.
- Acute oral LD₅₀ in Mice > 5000 mg/kg B.wt.
- Acute Dermal toxicity in Rabbit > 10,000 mg/kg B.wt.
- Non irritant to Rabbit skin.
- Non irritant to mucous membrane of Rabbit
- Safe to Spray Operators at concentration of 0.2%
- Neurotoxicity in Hen 2000 mg/kg B.wt
- Reproductive toxicity in Rat N.O.E.L-200 mg/kg B.wt.
- Carcinogenicity in Mice N.O.E.L-2 mg/kg B.wt.

MODE OF ACTION



- Antifeedant
- Repellant
- Insect Growth Regulator
- Oviposition Deterrent
- Fecundity Reducer

EFFECT OF NIMBECIDINE

Effect of Nimbecidine on the *histomorphology* (hepatic ceaca) of *H.armigera*



MERITS OF NIMBECIDINE 0.03% AZA

- It is the only neem oil based pesticide registered under 9(3) category (Permanent registration) of Central Insecticide Board, India.
- [It is registered by EPA, USA \(70387-1\).](#)
- It is registered in Bangladesh and Vietnam.
- It is registered in the UAE
- It has won the National Award for its outstanding R&D research work, from the Ministry of Science & Technology, Government of India.
- It is totally safe to the environment.
- It is very safe to spray operators, fish, honeybees, birds and livestock.

DOSAGE RECOMMENDATIONS

CROP	PEST	Rate of Application Per Hectare	
		Formulation (ml)	Dilution in Water (Ltrs)
Rice	Stemborer, Leaf folder, Brown plant Hopper (BPH), Rice hispa, Thrips, Whorl maggot	500	500
Peanut	Leaf miner, Cutworm, Red hairy caterpillar	500-600	500
Cabbage	Diamond back Moth, Cutworm	1500	500
Cabbage (Sweet)	Aphids	1500	500
Cauliflower	Diamond back Moth	1500	500
Onion	Thrips	500	500
Carrot	Aphids, Leaf hopper	500	500
Broccoli	Aphids, Cabbage looper, Peet army worm	500	500
Spinach	Aphids	500	500
Coriander	Aphids, Whitefly	500	500
Tomato	Whitefly	400	500
Lab-Lab	Aphids	500	500

Egg plant	Spotted beetle, Fruit Borer	1000	500
Okra	Fruit borer, Jassids	1000	500
Pumpkin	Aphids, Semi looper	500	500
Corn	Cornborer	1000	500
Water melon	Aphids, Semi looper	500	500
Cucumber	<i>Helicoverpa</i> sp.	500	500
Sorghum	Shootfly, Stemborer, Ear head bug	1000	500
Cotton	Bollworm, Aphids, Jassids, Thrips and Pink boll worm	500	500
Tea	Looper caterpillar, Pink mites	1000	500
Ornamental Crops	Aphids, Thrips	400	500
Roses	Aphids, Thrips & Scales	500	500
Shrubs	Loopers, Army worm, Tortrix, Pine-butterfly, Fall web worm, Tent Caterpillar, Bag worms.	400	500
Lawns	Cutworm	1000	500

IMPORTANT

- Neem formulations with lower azadirachtin (300 ppm) are more effective when compared to water based formulation with higher azadirachtin.
- Neem formulation with lower azadirachtin (300ppm) could suppress the BPH resurgence caused by deltamethrin under field conditions.
- Oviposition deterrent: As an oviposition deterrent Nimbecidine significantly reduces the oviposition of BPH, WPH and GLH.

Source : N.V.Krishnaiah, et. al. 1999

International Seminar on Integrated Pest Management, Hyderabad, India.



METHOD OF APPLICATION

Ornamental Crops/trees

7-8 Sprays at an interval of 15 days. The spray frequency can be increased or decreased depending upon the pest infestation and crop canopy.

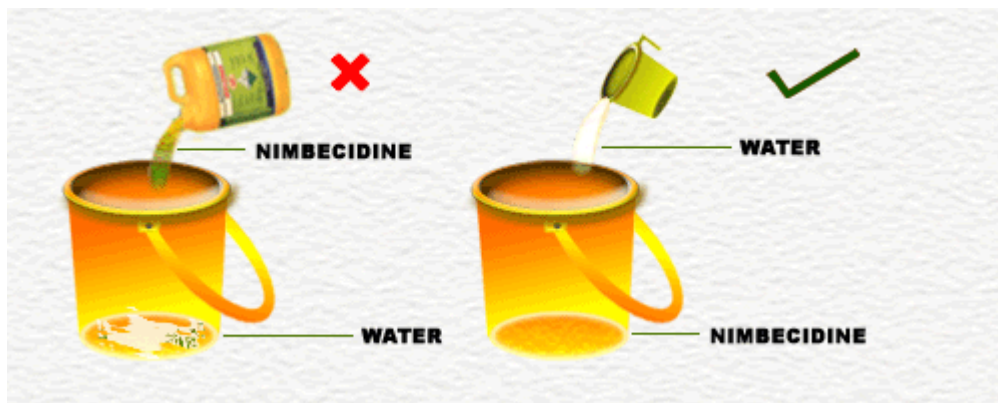
Vegetable crops

First spray in 15 days after sowing, 3-4 sprays at an interval of 15-20 days. Spray frequency can be increased or decreased depending upon the pest infestation and crop canopy.

Fruit crops

7 to 10 sprays at an interval of 20-30 days in between sprays. Spray frequency can be increased or decreased depending upon the pest infestation and crop canopy.

HOW TO PREPARE SPRAY SOLUTION



- Add water to NIMBECIDINE. Do not add Nimbecidine to water.
- Take NIMBECIDINE in a bucket and add water from a height of 3 feet.
- Stir with a wooden rod to get a good emulsion.
- Use the emulsion as direct spray fluid or add to pesticide.

COMPATIBILITY

Research findings by Universities indicate that nimbecidine is compatible with most of the agricultural chemicals.

PACKING

It is packed in Unique HDPE containers, heat sealed, screw capped, shrink wrapped and packed in CFB boxes (7 packs) as per 9(3) registration of CIB & RC, Ministry of Agriculture, Government of India.

5 litres	1 litre	500ml	200ml	100ml
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For any information on Phytotoxicity, Compatibility and Dosage

Please Contact: info@nimbecidine.com

(c) T.Stanes

