

Nico Neem

Botanical Pesticide (300ppm, 1500ppm, 3000ppm, 10000ppm)



Chemical Composition:

Nico neem is an oil-based, emulsifiable concentrate formulation consisting of neem oil obtained from *Azadirachta indica* seeds, and Karanj oil obtained from *Pongamia glabra* seeds and surfactant/emulsifier. The insecticidal action is due to the presence of several neem limonoids of which Azadirachtin is the most important. Azadirachtin concentration is maintained at a level of ~300, 1500, 3000, and 10,000 ppm in the formulation.

Mode of Action:

A very wide spectrum of phytophagous insect-pests is affected by this Neem formulation. It controls the pest population through a triple action activity - acting as a feeding deterrent, oviposition inhibitor and insect growth regulator. The neem based bio-chemicals act as contact and in a systemic manner. Bio-chemicals from Karanj oil, pongamol and karanjin, generally act synergistically.

Salient Features:

- Nico neem is non-toxic to beneficial and nontarget organisms.
- It is generally compatible with chemical pesticides (unless highly acidic or highly alkaline) so as to provide complementary activity in integrated pest management (IPM) programmes.
- It leaves no residue in the soil, crop or the environment and is highly bio degradable.
- An excellent alternative to hazardous chemical fungicides.
- It is extracted using the Cold Press Extraction process and therefore, retains nutrients and active ingredients.
- Effective pesticide, nematicide, insecticide, as well as miticide. Excellent for crops as well as for veterinary use.
- It is truly an environment friendly product.

Effectiveness:

Neem is effective against more than 200 species of insect-pests, some of whom are resistant to chemical pesticides or are otherwise difficult to control.

It acts as a feeding deterrent, oviposition inhibitor and insect growth regulator and therefore, though it may not kill instantaneously, the eventual results are very effective.

Nico neem is effective against sucking insects such as Aphids, Leaf Hoppers, Mealy Bugs, Mites, the White Fly and Thrips as well as chewing insects such as Stem Borer, Fruit Borer, Capsule Borer, Caterpillars, etc.

Nico neem increases the population of Beneficial insects (Bio Agents):

Experiments were conducted at the Gujarat Agricultural University, Anand – India.

One such experiment was conducted at the Bio- Control Project of Gujarat Agricultural University, Anand, India during 1994 to study the effect of Nico Neem in conserving beneficial insects (Bioagents).

The results are as follows:

Population per 25 plants

Bio agents	IPM with NICO NEEM	Insecticide	Control
Ladybird beetle	280	142	221
Chrysopa	270	92	129
Geocoris	60	21	39
Spider	92	42	66
Stephylimid	38	18	36
Schimnus	40	12	34
Anthocorid	56	31	47

There are rich communities of beneficial insects, spiders and diseases that attack insect-pests. The beneficial species often control insect-pests, especially in places where the use of broad spectrum pesticides is to be avoided. Without these beneficial species, the insect-pests would multiply so quickly that they would completely ravage the crop. Pests have high reproductive capacities to offset the naturally high mortality rate they face in nature. For example, a brown plant hopper female produces many offspring, but because of the action of predators, parasites and diseases, only about 1 or 2 survive after one generation. It is not unusual for the mortality rate to reach 98-99%. Natural enemies also have their own enemies. Parasites and predators, each has predators, parasites and pathogens. Most predators are cannibalistic –a behaviour which ensures that in the absence of prey, some will survive. The natural balance between insect-pests and their natural enemies is often disrupted by indiscriminate use of chemical insecticides. Although insecticides are needed in some cases, they must be used judiciously in order to save these vulnerable natural control agents.

Usage:

Nico neem gives best results when used as a preventive. Monitor the field continuously for pest attack. When the pest population is low or the damage system just begins to appear, apply a spray of Nico neem. The spray is generally effective for fifteen days.

Application Guidelines:

The emulsifiable concentrate can easily be diluted with water to make a colloidal suspension which should be sprayed on the crop. Being oil based, it is recommended that Nico neem be diluted with water in a separate container before filling into a spray pump. In order to avoid clogging of spray pumps, do not leave any left over mixture in it. Mix a fresh batch for each application. In case of rain after spraying of Nico neem re-apply the dose.

As Nico neem is photodegradable, it is advisable to spray the mixture during evening hours.

For 100% organic Nico neem the natural emulsifier is sold separately and can be mixed with water along with Nico neem.

Dosage:

300 ppm - 5ml to 7ml / litre of water

1500 ppm - 4ml to 5ml / litre of water

3000 ppm - 3ml to 4ml / litre of water

10000 ppm - 2ml to 3ml / litre of water

Depending upon canopy development,

400-600 litres of this colloidal suspension

can be sprayed on the crop of one hectare area.

Application guidelines: (using organic emulsifier)

70g/litre of Nico neem

First mix the emulsifier with Nico neem and then dilute it with water according to the dosage given above.

Packaging:

- 1000 litre tank
- 200 litre barrel
- 5 litre carboy
- 1 litre plastic bottle
- 500 ml. plastic bottle

Shelf Life: 2 years

Storage:

Store in a cool, dry place away from direct sunlight.

NICO NEEM for vector Control:

Vector borne infections (VBI) are common around the globe and they account for many devastating diseases like malaria, filariasis, dengue & chikungunya. Studies have shown Nico neem to be highly effective in vector control. A spray of Nico neem in mosquito infested areas can greatly reduce their population.

NICO NEEM treated bed nets (ITN):

An insecticide treated net is a mosquito net that repels, disables or kills mosquitoes coming into contact with it.

There are two types of treated nets:

1. Conventional Insecticide treated net (ITN)
2. Long lasting insecticidal nets (LLIN)

How is ITN different from LLIN?

LLIN is a factory treated net made with netting material that has insecticide incorporated within or bound around the fibers. Whereas a conventional ITN is a mosquito net that the user himself can treat by dipping in a WHO recommended insecticide. To make a natural insecticide treated bed net, make a mixture of Nico neem and water @ 50ml/litre of water and dip the bed net into this mixture. To ensure its continued insecticidal effect the net should be retreated after 3 washes or at least twice a year.

NICO NEEM for locust control:

Nico neem prevents locusts from developing into their migratory swarms which are destructive to vegetation. Although alive, they become solitary, lethargic, almost motionless and thus extremely susceptible to predators such as birds. Grasshopper nymphs are affected by Nico neem in a similar way.

Beneficial for Ladybird beetles



A list of a few Crops and pests on which Nico Neem is effective

ID	Crops	Pests
1	Cabbage & Cauliflower	Aphids,Whiteflies,Diamond Back moth, Spodoptera
2	Tomato	Leaf miners , fruit borer,white fly , Alphids , Nematodes
3	Egg Plant	Whiteflies Red spider mites , Shoot & fruit borer, Nematodes
4	Okra	Aphids , Jassids , Whiteflies , Borer , Red spider mites , fruit borer , Nematodes
5	Cotton	Whiteflies , Aphids , Leafhoppers , American bollworm , Spodoptera litura , Red spider mites , Spotted bollworm , Thrips , Pink bollworms , Cotton Stainers , Helicoverpa armigera ,Heliiothis
6	Rice	Leaf folder , Army worms , Ear head bug , Stem borer , Rice hispa , Brown plant hopper , Gall midge , Thrips , Nematodes
7	Gherkin	Leafminers
8	Marigold	Leafminers
9	Floriculture	Whiteflies , Red spider mites
10	Sugarcane	Early shoot borer , Internode borer , Whiteflies ,Stem borer , Top borer , White grubs , Leaf hoppers, Scales , Mealy bugs , Nematodes
11	Coconut, Areca nut, Oil Palm , Date Palm	Eriophyid mite , Black headed caterpillar , Red palm weevil , Mealybugs , Rhinoceros beetle , White grubs , Scales , Inflorescence caterpillars
12	Cucumber	Spot mites , Nematodes
13	French Beans	Mites , Nematodes
14	Lab-Lab	Black aphids , Nematodes
15	Chickpea	Pod borers , Nematodes
16	Pigeon tea	Pigeon tea , Cyst Nematode , Pod borer
17	Oil seed crops (Groundnut, Sunflower, Gingely)	Leaf miner , Red pod flies , Thrips , Helicoverpa , Hairy Caterpillar , Prodenia , Aphids , Stem borers , Nematodes
18	Sesamom	Castor semi looper , Til leaf webber
19	Millets (sorghum , Ragi , Maize)	Shoot fly , Stem borer , Ear head bug , Midge , Pink borer , Cut worms , Flea beetles
20	Wheat	Red flour beetle
21	Cashew	Stem borer , Root borers , Tea mosquito bug
22	Tea	Thrips , Purple mites , Looper caterpillar , Pink mites , Flush worms , Tea mosquito bugs , Red spider mites
23	Coffee	Scale insects , Coffee Stem borer , Berry borer , Mealy bugs
24	Albizia Lebbec (Forest Tree)	Jumping lice , Aphids , Mealy bugs , Thrips
25	Crotons	Mealy bugs
26	Red Rose	Red Scale insect
27	Vegetables	Shoot and fruit borer , Stem borer , Leaf miners , Fruit flies , Semiloopers , Spotted beetles , DBM , Leaf Webbers , Scales , Mites , Nematodes
28	Spices (Cardamom, Ginger , Pepper , chillies , Turmeric , Onion , etc.)	Thrips , Spodoptera spp , Helicoverpa spp , Rhizome borers , Poilu beetle , Shoot borers , Mites
29	Fruit Crops(Mango,Guava,Grapes,Sapota,Pomegranate,Pineapple,Banana,Cashew,etc.)	Hoppers , Stem borers , Fruit borers , Fruit flies , Leaf miners , Flea beetles , Fruit sucking moths , Leaf Webbers , Tea mosquito , Mealy bugs , Thrips
30	Tobacco	Tobacco caterpillar , Nematodes



Potato Nico-Neem



Potato Nico-Neem

Certificate of Analysis

NICO NEEM 300ppm

Neem Based Pesticides

Batch No. : 087
Date of analysis : 02/08/2014
Mfg. Date : 02/08/2014
Expiry Date : 02/08/2016

Sr. No.	Characteristic	Requirement	Results Obtained
1	Physical Appearance	Brownish viscous liquid	Complies
2	Azadirachtin content	307 ppm	Complies
3	Odour	Peculiar bitter odour	Complies
4	pH	6.75	Complies
5	Sp. Gravity	0.95	Complies

Remark: The above product complies as per specification.

For Nico Orgo Manures

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Quality Control Dept.

Partner

Chemist

MATERIAL SAFETY DATA SHEET

Nico Neem 300ppm

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

Name : Nico Neem

Company Identification:

NICO ORGO MANURES

Opp. Railway Station,

Dakor – 388225.

(Gujarat – India)

Tel.:- +91 2699 244403 / 244611

Fax: : +91 2699 244903

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

Neem Oil - Brownish Viscous Oily Liquid

**** SECTION 3 - HAZARDS IDENTIFICATION ****

Fire : Non inflammable. Non hazardous.

Other Hazards: Hazardous polymerisation will not occur.

**** SECTION 4 - FIRST AID MEASURES ****

Wash affected area with soap and water..

**** SECTION 5 - FIRE FIGHTING MEASURES ****

Non flammable

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

Recover free product. Use absorbent material to minimize runoff of mixed product..

**** SECTION 7 - HANDLING and STORAGE ****

Store in a cool, dry, & covered place. No other special arrangements required.

****** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ******

Use of mask is recommended. Use under ventilated conditions. Use gloves-avoid contact with open wounds

Avoid contact with eyes. Wash thoroughly with water and soap after exposure.

****** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ******

Appearance : Brownish Viscous Oily Liquid with typical organic & Neem odour.

Stable and non reactive

****** SECTION 10 - STABILITY AND REACTIVITY ******

Stable and non reactive

****** SECTION 11 - TOXICOLOGICAL INFORMATION ******

Non Toxic

****** SECTION 12 - ECOLOGICAL INFORMATION ******

Eco friendly Product.

****** SECTION 13 - DISPOSAL CONSIDERATIONS ******

Does not require special steps. May be disposed as per the requirements of

The local authorities.

****** SECTION 14 - TRANSPORT INFORMATION ******

Safe for transportation. Nonhaz.

****** SECTION 15 - REGULATORY INFORMATION ******

It is non toxic, non corrosive and does not contain any hazardous air pollutants.

****** SECTION 16 - ADDITIONAL INFORMATION ******

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. NICO ORGO MANURES., assumes no legal responsibility for use or reliance on these data.