

# Captain Jacks branding strategy brings innovation to organics



- ✓ Cold Pressed Neem Oil
- ✓ Contains Neem Oil including Azadirachtin and limonoids.
- ✓ Far broader insect listing than hydrophobic Neem Oil
- ✓ 70% Neem plus surfactants, mixes easily with water
- ✓ Stays in suspension and won't clog sprayers or hydroponic lines
- ✓ 4-in-1: Insect, Disease, Mite, Nematodes
- ✓ Suffocate, Anti-Feedant, Repellent, Insect Growth Regulator, Molting Disruptor and more
- ✓ Use as a spray or drench





- Only EPA Registered Label with full range of insects in a National Consumer Brand
- 4 in 1 control – Insecticide, fungicide, miticide, **nematicide**
- 20 gallons of RTU for an 16oz concentrate of product
- For use on: **bulbs**, cucurbits, fruiting vegetables, leafy and brassica (cole) vegetables, legumes, root and tuber vegetables, small fruit and berries, citrus and tropical fruits, pome and stone fruits, tree nuts, herbs, and spices, **grass, lawn**, **hemp** and ornamentals
- Application: Product can be applied as a spray or a **Drench**
  - Drench allows for control of Soil Fungal Diseases: Fusarium Oxyporum, Pythium and Rhizoctonia Solani
- Zero-day Pre-Harvest interval
- Insects listed but not limited to: Aphids, Grasshoppers, Scales, Beetles, Leafhoppers, Thrips, **Borers**, Leafminer, True Plant bugs, Caterpillars, Mealybugs, Weevils, Flies, gnats, psyllids, Wireworms, whiteflies.
- Diseases listed but not limited to:
 

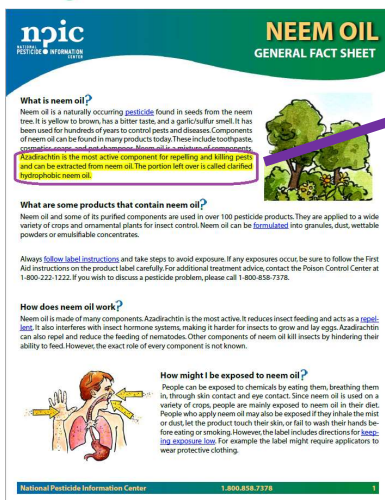
|                              |                  |                   |
|------------------------------|------------------|-------------------|
| • Alternaria                 | • Downey Mildew  | • Scab            |
| • Anthracnose                | • Molds          | • Stem Mildew     |
| • Blight (early, late, leaf) | • Powdery Midlew | • Southern Blight |
| • Botrytis Black spot        | • Rust           | • Sour Rot Grapes |
- Available in: 8oz and 16oz Conc.
- SRP: 8oz at \$11.97 and 16oz at \$17.47

Forward Looking: 2023 Ready to Use Neem Max



# What is Azadirachtin?

- It is a biological, botanical insecticide that is produced by the neem tree.
- **Antifeedant** – Induces increased neural activity of the **chemoreceptors**. Insects will starve to death rather than touch plants that carry traces of Azadirachtin.
- **Insect Growth Regulator** - Induces hormonal changes by lowering the hormone Ecdysone in insects which disrupts growth/molting, sterilizes adults and inhibits egg laying.
- If it is ingested by insects it works as a stomach poison.
- Is sensitive to high temperatures and ultraviolet rays.



“Azadirachtin is the **most active** component for repelling and killing pests and can be extracted from neem oil. The portion left over is called clarified hydrophobic neem oil.”



Chemoreceptors

NeemMax contains over 50 biological active compounds including key “limonoids” such Salannin, meliantriol, nimbim & nimbolides . These limonoids are IGR's and repel and reduce the feeding of many insects including nematodes

# How Neem Oil is Made



## Extraction Processes

### Solvent/Heat Extracted

Neem kernels are crushed and steeped in solvent.

Solvent releases oil from kernels **leaves limonoids behind**

Solvent with oil is **heated** and solvent is vaporized to create the extract

Alcohol is used to **extract** main limonoids from residue



Hydrophobic Extract of Neem

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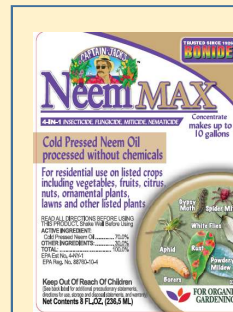
Azadirachtin

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### Cold Pressed

Neem Kernels are crushed and squeezed mechanically which releases the **unadulterated** oil

Adjuvants and **sunscreens** are added to the formulation which helps the oil mix water and lengthen efficacy



Final product contains Azadirachtin and other biological ingredients



# Neem Max vs. Hydrophobic Neem Extract



## Neem Max

### How it Works

- Antifeedant
- Repellency
- Poisoning
- **Chitin** inhibition
- Reduces gut motility
- Deters egg laying
- Molting Disruption/blocking
- Inhibits eggs from hatching
- Disrupts mating
- Sterilization
- Suffocation
- Smothers fungal growth



Can be used as a drench to control soil fungal disease and soil insects (including Fungus Gnat and Parasitic nematodes)



## Clarified Hydrophobic Extract of Neem

### How it Works

- Suffocation
- Smothers fungal growth



Cannot be used as a drench.