

GreenNeem® Neem oil

綠佑精

自然的力量

Nature's Power

# INTRODUCTION

## 簡介

- ▶ GreeNeem® Neem oil is a natural virgin vegetable oil.
- ▶ GreeNeem® Neem oil , from wild crafted Neem trees of India are 100% Organic (OMRI listed) and is used in different applications like cosmetic products production, Agriculture Sprays for vector control, pathogen control, etc.
- ▶ In Agriculture it is used as insecticide and insect repellent and also as germicide to control fungi, etc. GreeNeem has special liquid fertilizers called Nutri Power Series from Neem oil. [www.nutripowerseries.com](http://www.nutripowerseries.com) This has plant nutrients, Pest repellency, and microcode properties. We also do have Special “GreeNeem Shield” a Germicide from Neem, which can be used in Agriculture, House hold, Industrial disinfection, which removes stain, microbial strains, acts as wetting agent, and pest repellent.
- ▶ 1.綠佑精是天然純植物油
- ▶ 2.綠佑精是由印度野生苦楝樹種子榨取,100%有機(有OMRI認證)有許多用途:可做化粧品,農業上防媒介害蟲,及防病菌
- ▶ 3.農業上用做殺蟲劑,害蟲忌避劑,也是殺菌劑,綠佑精有一特殊由苦楝製造的液肥叫 Nutri Power,具有液肥,防蟲,防菌的功效,做為農業,工業,家庭消毒劑,溼展劑,害蟲忌避劑

# BIOLOGICAL EFFECT OF GREENEEM<sup>®</sup> NEEM OIL ON INSECTS

## 綠佑精對昆蟲之生物作用

Unlike Chemical pesticides, which are prone to pests adaptation to it

- ▶ GreeNeem<sup>®</sup> Neem oil works on the insect's hormonal system
- ▶ Does not lead to development of resistance in future generations
- ▶ Blocks the molting of larvae or nymphs

### MAIN PROPERTIES

Acts as

- ▶ Insect Growth Regulator
- ▶ Feeding Deterrent
- ▶ Oviposition Deterrent

▶ 綠佑精(苦楝油)對昆蟲之生物作用

主要之性質 作為

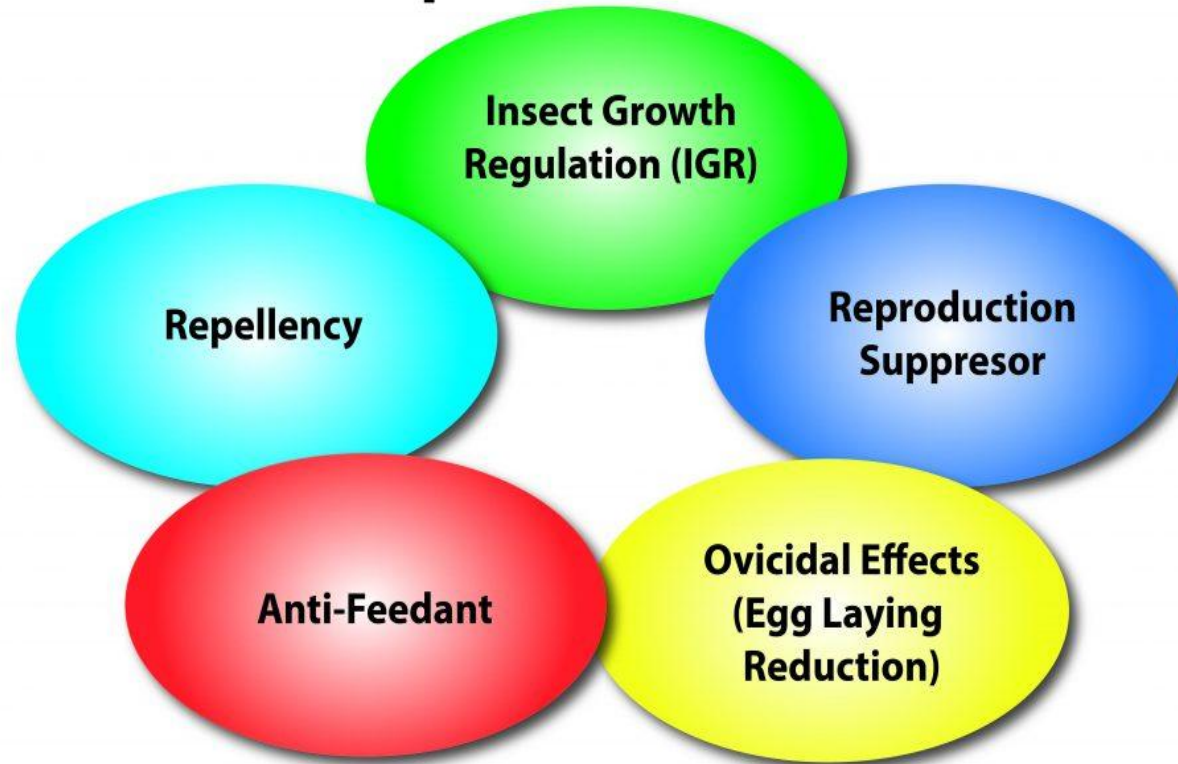
- ▶ 1. 綠佑精對昆蟲的荷爾蒙系統產生作用
- ▶ 2. 不會對其下一代產生抗藥性
- ▶ 3. 阻礙幼蟲及蛹之孵化

1. 昆蟲生長調節劑
2. 取食抑制劑
3. 產卵抑制劑

# BIOLOGICAL EFFECTS OF GREENEEM<sup>®</sup> NEEM OIL ON INSECTS

綠佑精對昆蟲之生物作用

## Multiple Modes of Action



# As INSECT GROWTH REGULATOR

## 干擾昆蟲生長

- ▶ Unique property which affects the Juvenile hormone.
- ▶ The insect larva feeds and sheds the old skin when it grows.
- ▶ The shedding of old skin is under the phenomenon of *ecdysis* and *ecdysone*
- ▶ The active ingredient Azadirachtin in the GreeNeem<sup>®</sup> Neem Oil supresses the *ecdysone activity and suppress molting*.
- ▶ 1.獨特的性狀可以影響害蟲之青春荷爾蒙
- ▶ 2.害蟲幼蟲進食生長必須蛻皮
- ▶ 3.昆蟲蛻皮受蛻皮激素影響無法蛻皮
- ▶ 4.綠佑精含印楝素抑制蛻皮激素之活性,因而無法蛻皮,而死亡

# As FEEDING DETERRENT

## 干擾取食

- ▶ When the leaf treated with GreeNeem<sup>®</sup> Neem Oil is ingested by the insects the presence of active ingredients like azadirachtin, salanin and melandriol, produces vomiting sensation in the insects. It also locks the maxillary jaw of the insects and arrests the feeding action of the pest.
- ▶ After treatment with GreeNeem Neem Oil on the foliage, some of the live pests visible on the leaf surface are actually starving to death.
- ▶ 1.當葉片噴施綠佑精後害蟲吃到其含有之印楝素,檸檬苦素等造成嘔吐感,小顎閉鎖阻止進食
- ▶ 2.當葉片噴施綠佑精後在葉片上可以看到一些餓死的蟲體

# As OVIPOSITION DETERRENT

## 干擾產卵

- ▶ The insects pests do not lay eggs on the plants treated with the GreeNeem Neem Oil.
- ▶ 1. 害蟲不會在噴施綠佑精的植物上產卵

# Some Common Insects controlled with GreeNeem<sup>®</sup> Neem Oil 用綠佑精防治一般害蟲

## Orthoptera (*Acridomorpha*):直翅目(蚱蜢)

- ▶ Plant eating pests such as grasshoppers, crickets, locusts
- ▶ Control exhibited through Anti feedant property of GreeNeem<sup>®</sup> Neem Oil
- ▶ 1.吃作物的害蟲如浮塵子,蟋蟀,蝗蟲
- ▶ 2.綠佑精使其產生拒食作用達到防治效果





# Some Common Insects controlled with GreeNeem<sup>®</sup> Neem Oil 用綠佑精防治一般害蟲

## Fall armyworm(*Spodoptera frugiperda*):秋行軍蟲

- ▶ GreeNeem<sup>®</sup> Neem Oil treated foliage's are toxic to these worms.
- ▶ Growth retardation, disruption of molting is exhibited by the larvae when ingests GreeNeem<sup>®</sup> Neem Oil treated foliage and GreeNeem Neem oil also repels the adults.
- ▶ 1. 噴施綠佑精的葉片對此秋行軍蟲有毒
- ▶ 2. 其生長受抑制,幼蟲吃到噴施綠幼精的作物後無法蛻皮,也對成蟲有忌避作用



# Some Common Insects controlled with GreenNeem<sup>®</sup> Neem Oil 用綠佑精防治一般昆蟲

Hemiptera (*Aphis gossypii*):半翅目:蚜蟲

- ▶ It is a cotton aphid.
- ▶ When the plant is treated with GreenNeem<sup>®</sup> Neem Oil the nymph mortality increases, reduction of survival period and fecundity of larvae are exhibited.
- ▶ 1.這是棉蚜蟲
- ▶ 2.當作物噴施綠佑精後蟲的死亡增加,蟲的存活期短,繁殖力受抑制



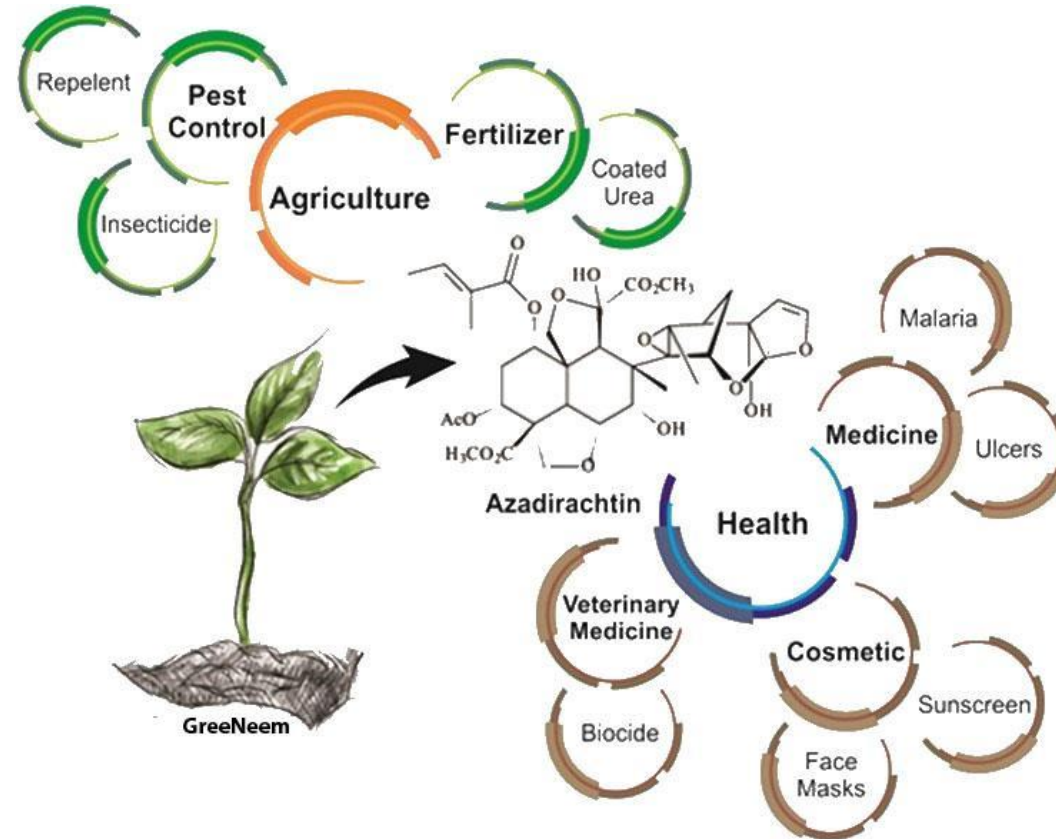
# Benefits of GreenNeem<sup>®</sup> Neem Oil

## 綠佑精之優點

- ▶ No Known insecticide resistance mechanisms
- ▶ Compatible with many commercial insecticides and fungicides
- ▶ Low use rates
- ▶ Formulation flexibility
- ▶ Application flexibility - can be sprayed or drenched
- ▶ 1. 無一般殺蟲劑之抗藥機制
- ▶ 2. 可以和許多上市之殺蟲劑, 殺菌劑混合
- ▶ 3. 使用劑量低
- ▶ 4. 易調配各種製劑, 有彈性
- ▶ 5. 易施用, 有彈性- 可以噴施或根部灌施

# GreenNeem<sup>®</sup> Neem Oil

綠佑精用途廣: 農業用, 醫藥用, 獸藥用, 化妝品用



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