

**Unique advantages of AzaSol over conventional/Popular neem insecticides**

Parameters	Neem EC Formulation	Neem oil	Water soluble powder
<b>Examples: Popular/Similar Products in US market</b>	- Aza - Direct - Azatrol - Nemazal - Margosan - Neemix	Triology	AzaSol
<b>Azadirachtin content</b>	300 ppm - 12,000 ppm normally  Less clarity on other neem compounds. Presence of unwanted neem metabolites/compounds may result in complex actions, which may cause unexpected adverse eco and bio effects. Presence of more of sugars and carbohydrates and other saprophytic substrates may occasionally lead to altered/increased pathogen load after application, which may become latent.	300-2,000 ppm  Less clarity on other neem compounds. Effect on non-targets is not very clear.	60,000 ppm  More sure of the neem metabolites and limonoids. Due to higher Azadirachtin (Aza), unexpected effects of other neem compounds is reduced. Contains defined contents of Aza and other secondary metabolites which are real a.i.. Unwanted sugars and lipids are completely removed.
<b>Water solubility</b>	- Not soluble - Only available as emulsion	- Not soluble - Need detergent to make miscible	Water soluble, helps in plant absorption
<b>Plant absorption</b>	- Creates layer on the plant surface - Plants generally do not readily absorb, though translaminar protection has been claimed	-Plant cannot absorb -Creates coating on the plant surface	Readily absorbed by plants
<b>Action</b>	Different types of actions on insect are possible, provided insect comes in contact or feed on the surface. Generally neem has repellent action, so existing insects try to move away. May not have residual protection for new populations.	Repellent, antifeedant actions, occasional contact control	Systemic, mostly IGR effect and quick kill compared to EC formulations. Apart from the initial repellent effect, because the plant sap contains Aza and other limonoids, the new population that feeds on the plant will be affected for at least the next 2-4 weeks
<b>Application Methods</b>	Spraying	Spraying	Spraying, stem injection, soil application, root feeding
<b>Crops</b>	Mostly field crops like paddy, cotton, vegetables. Generally not recommended on ornamentals and fruit crops, as it creates a coating	Vegetable, cotton, paddy, etc. early in the season	Field crops, trees, bushes & shrubs. No reservation as it appears like water
<b>Carrier/Solvents</b>	Liquid based, ethyl acetates, methanol, butanol, etc.	Oil	Micro-encapsulated powder
<b>Efficacy</b>	- Against surface feeding insects like caterpillars, beetles, weevils  - Limited action against sucking pests like aphids, mites, leaf hoppers etc.	Limited action	- Wide spectrum of against sucking complex & biting insects including tree and tissue borers, stem weevils  - Systematic action against sap feeding sucking pests
<b>Persistency of action</b>	Only against existing pests, no systemic action	Limited action against all insects	Against existing pests and further population that builds up in 12-15 days' time
<b>Stability</b>	- 3 to 6 months - Additional stabilizer required	Azadirachtin concentration is not stable	Stable for over two years
<b>Pest avoidance</b>	Possible	Possible	Not possible as the product is systemic