NeemAQ® Use for Greenhouse Whitefly (*Trialeurodes vaporariorum*) control, in Greenhouse Horticulture

NeemAQ® is a soluble concentrate formulation containing active ingredients from the Indian Neem tree (*Azadirachta indica*).

These active compounds affect development of Greenhouse Whitefly, by disrupting the transition between 1st and 2nd, 2nd and 3rd , 3rd to 4th instar larvae , and 4th instar to pupa. They therefore act as insect growth regulators (IGR) in a similar way to older products such as Applaud® (buprofezin) . ***NeemAQ***® has no noticeable effect on adult greenhouse whitefly once they have completed their lifecycle, and does not prevent adult whitefly hatching from the pupal stage – it is NOT a knockdown insecticide.

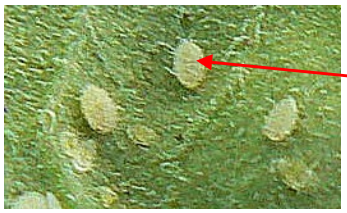
Unlike many contemporary insecticides there is very little chance of insect pests developing resistance to ***NeemAQ***® . However, overuse of ***NeemAQ***® during times of no whitefly population pressure or where there are no existing infestations, is not recommended.

Instead, use of ***NeemAQ***® should be dictated by routine monitoring for the presence of greenhouse whitefly nymphs on the underside of crop leaves.

First: Install Yellow sticky traps.
These traps do NOT control whitefly, but they do give an early indication of an influx of greenhouse whitefly adults. Once more than a few adults are seen on the traps, apply a fast acting knockdown insecticide, and start a program of crop monitoring.

Crop Monitoring:

Where NeemAQ® Works …



- Starting at the top of the plant, check under the leaves for eggs. The eggs are small black whisker-like objects. These take between 4 to 10 days to develop to the first instar - a clear oval stage under the leaf.
- During the week that whitefly eggs are noticed, an application of ***NeemAQ***® can be made at the full application rate.
- This first application needs to be repeated three times at weekly intervals (7 days) for a total of 4 applications at the full rate (10ml/l and 20 litres/hectare).
- Every week count the number of live nymphs on the underside of leaves from between 20 and 30 random 2 – 3 weeks old leaves (2 -3 weeks growth from the top of the plant). You may need to wash the undersides of the leaves to remove honeydew and any dead nymphs.

- If after four applications the numbers of live nymphs have declined, ***NeemAQ***® use can be reduced to half the normal application rate (5ml/litre and 10 litres per hectare) at weekly intervals. For ***NeemAQ***® use outside of whitefly season, this half rate application can be extended to every two weeks. Continue to monitor whitefly nymph numbers each week.
- If during monitoring, the numbers of live nymphs are increasing, or a large influx of adults is noticed on the yellow traps, increase the application rate to 15ml per litre and increase the application frequency to every three days, for four applications, then resume weekly applications at the normal rate.
- ***NeemAQ***® should not be mixed with other spray products.

For more information or crop specific advice contact **Horticentre Ltd** or
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