

Biological

- Is susceptible to attack by various parasites and predators (about 22 of various families) with coccinellids lady birds having the greatest potential.

Chemical

- Recommended during heavy infestation.
- Drench the infected trees giving special attention to the underside of leaves.
- Spray the litter under the coffee canopy.

Recommended insecticides

COMMON NAME	TRADE NAME	FORMULATION	RATE OF APPLICATION PER HA /20L OF WATER	
Azinphos-methyl	Azinphos-methyl Gusathion	200 (20%) EC 200 (20%)EC	3.4 l 3.4 l	68ml 68ml
Bifenthrin	Talstar	25(2.5%) EC	400 ml	8 ml
Chlorfenvinphos	Birlane	250 (25%)EC	2.1 l	50 ml
Chlorpyrifos	Chlorpyrifos Dursban	480 (48%)EC 480(48%)EC	1.4 l 1.4 l	28 ml 28 ml
Chlorpyrifos + Dimilin	DC 702	480 (48%)EC	1.4 l	28 ml
Chlorpyrifos + Dimethoate	Salut	500(50%) EC	1.5 l	30 ml
Cypermethrin Alpha	Bestox Fastac	100(10%) EC 100(10%) EC	1 l 1 l	20 ml 20 ml
Omethoate	Folimat	500 (50%) EC	1.7 l	354l
Primiphos-Methyl	Actellic	250(25%) EC	2.5 l	50 ml

Good Agricultural Practices and Health Safety

- Control infestations to prevent:
 - Loss of quality
 - Failure of berries to ripen
 - Death of the plant
- Use only recommended dosage and amounts of pesticides to prevent residue accumulation.
- Use Personal Protective Equipment when applying agro-chemicals .



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IDENTIFICATION AND MANAGEMENT OF FRIED EG SCALE, (*Aspidiotus sp*) AND COTTONY SCALE, (*Icerya pattersoni newst*) IN COFFEE



1.0 Fried egg scale (*Aspidiotus sp*)

1.1 Symptoms

- Rows of flat, circular crusty -white scales with a yellow brown center resembling fried eggs.
- It attacks both side of the leaves.
- Leaves become chlorotic then yellow followed by heavy defoliation and berry drop.
- Severe infestation may spread to berries, shoots, twigs and the main stem.

1.2 Alternate host

Fried Egg Scales have also been reported in tea plantations.

1.3 Life cycle

Eggs: Eggs are laid under the carapace where they remain until they hatch into crawlers and walk away.

Females: Wingless with body length of 1.35 mm and width of 1.1 mm. Fully grown females are sedentary throughout their lifespan.

Males: Tiny fly-like two winged insects.



Fried egg Scale

1.4 Management Biological

- Several predators and parasites have been associated with fried egg scales

Cultural

- Remove infested / attacked parts of the plant .

Chemical

- An epidemic infestation can be controlled by two applications of insecticides with an interval of 2-3 weeks between sprays. Hand knapsack sprays give better coverage than tractor sprays.

Recommended insecticides

COMMON NAME	TRADE NAME	FORMULATION	RATE OF APPLICATION PER HA PER 20L OF WATER	
Alboleum	* White oil	Oil EC	3.2 l	635 ml
Azinphos-methyl	Azinphos-methyl Gusathion	200 (20%) EC 200 (20%) EC	3.4 l 3.4 l	68 ml 68ml
Carbaryl	Sevin	260 (26%) EC	300 m l	6 ml
Carbosulfan	Marshal	250 (25%) EC	1.75 l	35ml
Chlorpyrifos + Dimethoate	Salut	500 (50%) EC	1.75 l	35 ml
Chlorpyrifos + Dimilin	DC 702	480 (48%) EC	1.4 l	30 ml
Ethion	Ethion Rhodocide	480 (48%) EC 500 (50%) EC	1.75 l 1.75 l	35 ml 35 ml
Monocrotophos	Azodrin	400 (40%) SC	1.7 l	34ml
Omethoate	Folimat	500 (50%) SC	1.7 l	34 ml
Triazophos	Hostathion	400 (40%) EC	500 ml	10 ml
Confidor	Imidacloprid	200 (20%) SL		3 ml per tree

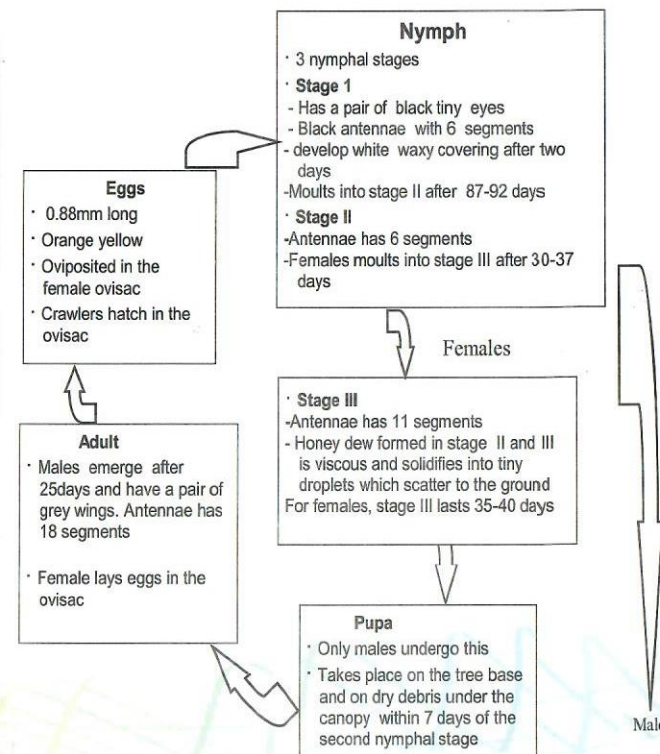
2.0 Cottony Scale (*Icerya pattersoni*)

2.1 Symptoms

- Attack begins on the under side of the leaves from the branches near the ground.

- As infestation spreads. It aggregates to cover the veins on the underneath of leaves giving a sparkling white appearance.
- Heavy infestation leads to clusters of the scales on shoots, berries and the main stem.
- This gives the coffee tree a a white "Christmas tree" appearance. Ground under the tree is covered with intertwined cottony mass like sprinkled white wash.
- The tree begin to wither, leaves turn yellow and fall.
- The tree dies when heavy infestation persist

2.3 Life cycle



2.4 Management Cultural

- Remove all devastated (severely infested) parts of the plant and destroy away from the field burning