T.R.I. ADVISORY CIRCULAR No.PU 4

Issued in: March 2024 Serial No. 25/24

CHEMICAL CONTROL OF INSECT, MITE AND NEMATODE PESTS

(This Advisory Circular supersedes the Advisory Circular PU 4, Serial No. 04/23 issued in March 2023 and related previous Advisory Circulars and links with Advisory Circulars PM 2, PM 3, PM 4, PM 6, PM 7, PM 9, PM 10 & PM 11 issued in February 2024)

The active ingredients (a.i.) of TRI-recommended insecticides, acaricides, fumigants and nematicides, and their names with Registrar of Pesticides (ROP) Registration No., dosages/rates, application procedures and pre-harvesting intervals (PHIs) are given in this Circular.

The chemicals and their use in tea are periodically subjected to change owing to restrictions from food and beverage markets, cost-effectiveness, and social and environmental acceptance.

1. Nematodes

Active ingredient (a.i.)	Trade name/s	ROP Registration No.	Dosage	Remarks	PHI (weeks)
Nursery fumigation					
Methyl Isothiocyanate/ Metam	Metam Sodium	D340000	800 ml per one cube of soil	Sprinkle the chemical evenly on the surface of soil heap and mix into the soil immediately For descriptive methodology, please refer Advisory Circular PM 11	n/a
Prophylactic measures at planting					
Fluopyram	Velum 400 SC	P060000	2 L in 500 L water per ha (40 ml of solution per plant)	Apply solution as soil drench after planting	n/a
Prophylactic measures after pruning in mature tea fields					
Fluopyram	Velum 400 SC	P060000	2.5 L in 1000 L water per ha (80 ml of solution per plant)	Apply solution as soil drench at tipping	n/a

2. Tea Tortrix

Active ingredient (a.i.)	Trade name/s	ROP Registration No.	Dosage	PHI (weeks)
Nursery plants				
Emamectin benzoate	Proclaim 5 SG	H350000	0.028% solution (2.8 g in 10 L of water) 2 – 4 L solution for 1000 plants using Knapsack sprayer	n/a
Young tea not brought into bearing and fields recovering from pruning				
Emamectin benzoate	Proclaim 5 SG	H350000	0.028% solution (2.8 g in 10 L of water) 140 g in 500 L of water per ha using Knapsack sprayer	n/a
Mature tea fields				
Emamectin benzoate	Proclaim 5 SG	H350000	0.028% solution (2.8 g in 10 L of water) 252 g in 900 L of water per ha using Knapsack sprayer	2

3. Mites

Active ingredient (a.i.)	Trade name/s	ROP Registration No.	Dosage	PHI (weeks)
Nursery plants				
Sulphur 80%	Baurs S	5940100	0.5% solution (5 g in 1 L of water) 2 – 4 L solution for 1000 plants using Knapsack sprayer	n/a
	Kumulus S	5940200		
	Thiovit Jet S	2560000		
	Cosavet S	K510000		
Young tea not brought into bearing and fields recovering from pruning				
Sulphur 80%	Baurs S	5940100	0.5% solution (5 g in 1 L of water) 3 kg in 600 L of water per ha using Knapsack sprayer 1.8% solution (81 g per 4.5 L of water) 4.5 kg in 250 L of water per ha using Mist blower	n/a
	Kumulus S	5940200		
	Thiovit Jet S	2560000		
	Cosavet S	K510000		
Mature tea fields				
Sulphur 80% *	Baurs S	5940100	0.5% solution (5 g in 1 L of water) 4.5 kg in 900 L of water per ha using Knapsack sprayer 1.8% solution (81 g per 4.5 L of water) 4.5 kg in 250 L of water per ha using Mist blower *Ensure bulking of tea from sprayed and unsprayed fields at 1:10 ratio	2
	Kumulus S	5940200		
	Thiovit Jet S	2560000		
	Cosavet S	K510000		

Use either the hollow-cone nozzle, or the solid-cone nozzle which produce a circular pattern of very fine droplets with Knapsack sprayers. Maintain a high pressure in the Knapsack sprayers (3 bars or 42 psi) during spraying.

4. Shot Hole Borer

Active ingredient (a.i.)	Trade name/s	ROP Registration No.	Dosage	Remarks	PHI (weeks)
Prophylactic treatments for nursery plants					
Fipronil 50 SC	Grand Fipronil	9980200	5 ml in 4 L of water for 1000 nursery plants	Spray onto susceptible stems and branches* of 8-10 months old nursery plants	n/a
	Baurs Fipronil	9980300			
Lime Sulphur	Limbux or ordinary Lime (clean and finely powdered lime for easy mixing and applying) and powdery form of commercial / industrial Sulphur	n/a	Lime: Sulphur 1:1 100 g of Lime and 100 g of Sulphur in 4 L water for 1000 plants		n/a
Prophylactic treatments for young, immature tea and new clearings					
Fipronil 50 SC	Grand Fipronil	9980200	1st Spray: 200 ml in 250 L of water per ha using Knapsack sprayer 2nd Spray: 400 ml in 500 L of water per ha using Knapsack sprayer	Spray I: Spray onto susceptible stems/branches*, 6 - 10 months after planting Spray II: Spray onto susceptible stems/branches* of the 2nd year plants	n/a
	Baurs Fipronil	9980300			
Lime Sulphur	Limbux or ordinary Lime (clean and finely powdered lime for easy mixing and applying) and powdery form of commercial / industrial Sulphur	n/a	Lime Sulphur 1:1 1st Spray: 6-10 months after planting: 6.25 kg of Lime and 6.25 kg of Sulphur in 250 L water per ha using Knapsack sprayer 2nd Spray: 2nd year plants: 12.5 kg of Lime and 12.5 kg of Sulphur in 500 L water per ha using Knapsack sprayer		1

Active ingredient (a.i.)	Trade name/s	ROP Registration No.	Dosage	Remarks	PHI (weeks)
Prophylactic treatments for mature tea fields					
Lime Sulphur	Limbux or ordinary Lime (clean and finely powdered lime for easy mixing and applying) and powdery form of commercial / industrial Sulphur	n/a	Lime Sulphur 1:1 25 kg of Lime and 25 kg of Sulphur in 1000 L water per ha using Knapsack sprayer		1

**Stems / branches of pencil thickness in size are susceptible to Shot Hole Borer infestation*

4. White Grubs

Active ingredient (a.i.)	Trade name/s	ROP Registration No.	Dosage	PHI (weeks)
Chlorantraniliprole 200 g / L SC	Coragen	N620000	1 ml in 1 L of water (Apply 200-400 ml solution per immature plant as soil drench)	1

5. Ants

Active ingredient (a.i.)	Trade name/s	ROP Registration No.	Dosage	PHI (weeks)
Diazinon 5% G (W/W)	Dinoser Diazinon	D280400	Incorporate 10 g per square meter of soil; repeat application after 2 weeks if necessary	1
Diazinon 50 % EC	Diazol Diazinon	C720000	2 ml in 1 L of water Apply the solution onto ant nest using Knapsack sprayer	1

6. Special considerations:

Ensure worker safety by using Personal Protective Equipment (PPE) such as masks and eye protectants *etc.* when using PPPs.

Tea Research Institute of Sri Lanka

Talawakelle