



भारत सरकार / Government of India

कृषि एवं किसान कल्याण मंत्रालय / Ministry of Agriculture & Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture & Farmers Welfare

वनस्पति संरक्षण, संगरोध और संग्रह निदेशालय

Directorate of Plant Protection, Quarantine & Storage

केंद्रीय कीटनाशी बोर्ड एवं पंजीकरण समिति

Central Insecticide Board & Registration Committee

एन. एच. - 4, फरीदाबाद 001 121 – (हरियाणा)

N.H.-IV, Faridabad-121 001 (Haryana)

MAJOR USES OF PESTICIDES

(Registered under the Insecticides Act, 1968)

(UPTO - 31/05/2022)

(Based on certificate issued)

Disclaimer: The document has been compiled on the basis of available information for guidance and not for legal purposes.

INSECTICIDES

1. Insecticides registered for Agriculture use (Page No. – 02)
2. Insecticides combination registered for agriculture use (Page No. – 53)
3. Insecticides registered for Public Health use (Page No. – 64)
4. Insecticides registered for Household use (Page No. – 68)
5. Ad-hoc approval of insecticides for Fall Army Worm (FAW) (Page No. 82)
6. Recommended chemicals by FAO for Locust Control (Page No. – 83)

Approved Uses of Registered Insecticides.

Agricultural Use					
Crop	Common Name of the pest	Dosage/ha			Waiting Period (days)
		a.i (gm)	Formulation (gm/ml)	Dilution in Water (Liter)	
Abamectin 01.90 % EC					
Rose (Ornamental)	Red spider mites (<i>Tetranychus urticae</i>)	0.00048-0.00096%	0.025-0.050%	500	03
Grapes	Mites	0.014/L	0.75 ml/L water	500 – 1000	03
Acephate 75 % SP					
Cotton	Jassids	292	390	500 – 1000	15
	Bollworms	584	780	500 – 1000	15
Safflower	Aphids	584	780	500 – 1000	15
Rice (Paddy)	Yellow stem borer, Leaf folder, Plant Hoppers, Green leafhopper	500 – 750	666 – 100	300 – 500	15
Acephate 97 % DF					
Cotton	Jassids & Boll wormcomplex	436.50 – 582	450 – 600	500	48
Paddy (Rice)	Yellow stem borer,Leaf folder, Plant hoppers, Green leafhopper	727.50	750	500	21
Acephate 95 % SG					
Rice (Paddy)	Stem borer, Leaf folder, Brown planthopper	562.50	592	500	30
Cotton	Jassids	750	790	500	18

Chilli	Thrips, Fruit borer (<i>Helicoverpa armigera</i>), Aphid	750	790	500	07
Acetamiprid 20 % SP					
Cotton	Aphids, Jassids	10	50	500 – 600	15
	Whiteflies	20	100	500 – 600	15
Cabbage	Aphids	15	75	500 – 600	07
Okra (Bhindi)	Aphids	15	75	500 – 600	03
Chilli	Thrips	10 – 20	50 – 100	500 – 600	03
Rice (Paddy)	Brown plant hopper	10 – 20	50 – 100	500 – 600	07
Afidopyropen 50 g/L DC					
Brinjal	Whitefly, Jassids	50	1000	500 – 750	01
Cotton	Whitefly, Jassids	50	1000	500 – 750	25
Cucumber	Whitefly	35 – 50	700 – 1000	500	05
Alphacypermethrin 10.00% EC					
Cotton	Boll Worms	15 – 25	165 – 280	600 – 1000	07
Alphacypermethrin 10.00% SC					
Cotton	Boll Worms	25 – 30	250 – 300	500 – 1000	10
Name of Commodity	Common name of the pest	Dose	Exposure Period	Aeration Waiting period	
Aluminum Phosphide 56 % (3g Tablet, 10g Pouch)					
Stored Whole Cereals and Seed Grains Millet, Pulses Dry Fruits,Nuts Spices & Oil Seeds	Rice Weevil (<i>Sitophilus oryzae</i>),Lesser Grain Borer, Khapra Beetle (<i>Trogoderma granarium</i>), Rust Red Flour Beetle, Saw	03 tablets (03 gm) per ton or 150 gm per 100m ³ or 10 gm Pouch Per ton of commodity or 150 gm per 100 m ³ .	Minimum 05 Days (<i>Sitophilus oryzae</i>) or 07 Days (<i>Trogoderma granarium</i>)	One hour of partial aeration in case non-polyethylene packed commodities allowed by 6-8 hrs of full aeration. For polyethylene	

	Toothed Grain Beetle, Cattle Beetle, Drug Store Beetle, Cigarette Beetle, Pulse Beetle			packed commodities minimum aeration period is 48 hrs. The waiting period for the release of stock is 48hrs in both the cases. Recommendation for bag stock 15 days.
Mild Products: De-oiled Cakes, Rice Bran Flour, Grain Animal & Poultry Food SplitPulses (Dal) & other Processed Food	Long Headed Floor Beetle, Coffee Borer, Dried Fruit Beetle, Flat Grain Beetle, Carpet Beetle	03 tablets/10 gm per ton or 225 gm/100 m ³	05 days	Aeration is waiting Period 07 days to be checked PH ³ detector strips.
Empty Godowns & Sheds	Rice Moth, Almond Moth, Mites, Fruit Fly, Granary Weevil, Cattle or Flour worm, Red Flour Beetle, Indian Meal Moth, Larger cabinet Moth, Wheat Kernel Damage in the field Cockroach.	14 tablets/1000 m ³ or 150 gm/100 m ³ or 4 pouch 10 gms each/1000 CFT or 150 gm/100 m ³	72 hrs.	Aeration Period 24 hrs detector strips or 4 phosphine detect tubes should be used in the premises to signal safety of atmosphere.
Rodents Burrows	Rodents	01 Tablet / Burrow	-	-
Aluminum Phosphide 15 % (12g Tablet)				
Stored whole cereals and seed grains.	Rice weevil, Rust redflower beetle	1 tablet (12 g) per ton or 600/100 m ³	Non polythene Packed commodities: Partial-1 hour. Full-(6-8) hour. Polythene Packed commodities: Minimum 48 hrs.	07-14

Millets, pulses, dry fruits, nuts, spices & oilseeds (Air tight cover or godowns)	Lesser Grain Borer, Khapra Beetle, Saw Toothed Grain Beetle, Rice Moth, Almond Moth	900 g/100 m ³	-	05
Milled products: De-oiled cakes, Rice bran	Rust red flower beetle	3 tablets/ton	48 hrs.	05
Flour Suji meals and Crushed grain (Animal & poultry feed), Split Pulses Dals)	Saw Toothed Grain, Beetle , Rice Moth, Almond Moth, long headed flour beetle & Mites	900 g/100 m ³	48 hrs.	03
Other processed food and Empty Godowns & Sheds (under air tight condition)	All insect pests.	14 tablets/1000 tons or 600 g/1000 m ³	48 hrs. 24 hrs.	03
Aluminium Phosphide 77.50 % GR				
Stored Grain	Red Rust Flour Beetle, Lesser GrainBorer, Rice Weevil,Khapra Beetle	3.35 gm	07 days	24 hours
Aluminum Phosphide 06 % Tablet				
Crop & Non-Crop area	Field rodents	0.72 g a.i./burrow	One tablet of 12 gm/burrow	-
Barium Carbonate 1% P				
Godowns, Residential Premises, Public halls	Rats, Mice, Field Rodents	10-20% Technical material to be mixed with bait	-	-

Beta-cyfluthrin 02.45 % SC					
Cotton	Bollworm	12.5-18.75	500 – 750	500 – 1000	20
Benfuracarb 03 % GR					
Rice (Paddy)	Stem borer, Leaf folder, Brown planthopper	1000	33000	-	20
Benfuracarb 40 % EC					
Red gram (Tur or Arhar)	Pod borer	1000	2500	500	20
Benzpyrimoxan 10% SC					
Rice	Brown Plant Hopper, White Backed Plant Hopper	75-100	750-1000	500	31
Bifenazate 50 % WP					
Rose	Two Spotted Mite (<i>Tetranychus urticae</i>)	375	750	3000	-
Bifenazate 22.60 % SC					
Rose	Two Spotted Mite (<i>Tetranychus urticae</i>)	120	500	2000	-
Bifenthrin 08 % SC					
Tea	Red spider mite, Tea Mosquito bug	40.00	500	400	11
Apple	Mites	60 gm (0.006% Conc.)	7.50 ml/tree	10 lit/tree	21
Bifenthrin 08.80 % CS					
Rice (Paddy)	Stem borer, Leaf folder	44	500	500	21
Bifenthrin 10 % EC					
Cotton	Bollworms, Whitefly	80	800	500	15
Rice (Paddy)	Stem borer, Leaf folder, Green leaf hopper	50	500	500	21

Sugarcane	Termites	100	1000	500	300
Bifenthrin 02.50 % EC					
Pre and post construction: Bifenthrin 2.5% EC shall be applied at 0.05% a.i. conc. i.e. 20.0 ml formulated product diluted in 1 liter of water for the control of termites in building during pre and post construction. Treatment should be as per IS 6313 (Part 2):2001 for pre construction chemical treatment and IS 6313 (Part-3): 2001 for post construction treatment of the existing building.					
Recommendation for use of control of Wood borer (Powder Post Beetle) in plywood, veneer and wood					
Use	Method of application	Dosage (a.i.)	Dilution		
Plywood	Glue Line Poisoning	10 g/ meter ³ of wood	400 ml formulation per meter ³ of wood		
	Dipping	0.025% Solution	Mix 01 lit of formulation in 99 lit of water to make 0.025% Solution		
Veneer	Dipping	0.025% Solution	Mix 01 lit of formulation in 99 lit of water to make 0.025% Solution		
Wood	Dipping /Brushing	0.025% Solution	Mix 01 lit of formulation in 99 lit of water to make 0.025% Solution		
Brodifacoum 0.005 %w/w BB					
Pest		Dose rate	Manner of application /use pattern		
Field rats/Bandicootrats (<i>Bandoicota bengalensis</i> ; <i>B. indica</i>) Indian houserat / Black, Indian house rat/black rat/roof rat (<i>Rattus rattus</i> ; <i>R. meltade</i>),		One bait of 0.005% (a block of 20 gm each) per baiting station as a single feed	In and around premises (Residential, commercial, institutional, industrial public service premises, cold storage , Godowns, ware house, municipal locations, grain mandis, crop store rooms, burrow baiting, livestock rearing facilities, damp premises such as sewer etc.)		
House mouse/ Fieldmouse (<i>Mus musculus</i>)					
Broflanilide 300 g/l SC					
Chilli	Fruit borer (Helicoverpa armigera)	12.6- 18.6	42-62	500	1
	Thrips (Scirtothrips dorsalis)	18.6- 25.2	62-84	500	1
Brinjal	Shoot and fruit borer (Leucinodes orbonalis)	12.6- 18.6	42-62	500	1
	Thrips (Thrips tabaci)	18.5- 25.2	62-84	500	1
Cabbage	Diamond back moth (Plutella xylostella), tobacco leaf eating caterpillar (Spodoptera litura)	12.6-18.6	42-62	500	18
Tomato	Fruit borer(Helicoverpa armigera) &	18.6-25.2	62-84	500	1

	leaf miner (<i>Liriomyza trifolii</i>)				
Soybean	<i>Helicoverpa armigera</i> , <i>Spodoptera litura</i> , <i>Semilooper (Chrysodeixis acuta)</i>	12.6-18.6	42-62	500	37
Red gram	<i>Helicoverpa armigera</i> & <i>Maruca vitrata</i>	12.6-18.6	42-62	500	25
Broflanilide 20% SC					
Brinjal	Shoot and fruit borer (<i>Leucinodes orbonalis</i>), Thrips (<i>Thrips tabaci</i>) & Jassids (<i>Amrasca devastans</i>)	25	125	500	1
Cabbage	Diamond back moth (<i>Plutella xylostella</i>) & Tobacco caterpillar (<i>Spodoptera litura</i>)	25	125	500	1
Chilli	Fruit borer (<i>Helicoverpa armigera</i>), Tobacco caterpillar (<i>Spodoptera litura</i>), Thrips (<i>Thrips tabaci</i>) and Jassids (<i>Amrasca devastans</i>)	25	125	500	1
Okra	Fruit borer (<i>Helicoverpa armigera</i>), Thrips (<i>Thrips tabaci</i>) and Jassids (<i>Amrasca devastans</i>)	25	125	500	1
Bromadiolone 00.25 % CB					
Paddy (Rice)	Field Rat, Large Bandicota Indian house rat, Indian field mouse	0.005	-	-	-
Wheat , Gram	Field Rat, Indian house rat	0.005	-	-	-
Groundnut, Sugarcane	Field Rat, Large Bandicota	0.005	-	-	-
Coconut/ Bamboo	Indian house rat	0.005	-	-	-
Residentialpremises	Field Rat, Large Bandicota	0.005	-	-	-
Poultry Farm	Indian house rat, House mouse	0.005	-	-	-
Bromadiolone 00.005 % RB					
Paddy (Rice)	Field Rat, Large Bandicota, Indianhouse rat	0.005	-	-	-
Wheat	Indian Field mouse,Field Rat	0.005	-	-	-

Gram	Indian house rat, Field Rat, Indianhouse rat	0.005	-	-	-
Groundnut, Sugarcane	Field Rat, LargeBandicota	0.005	-	-	-
Coconut/ Bamboo	Indian house rat, Field Rat Large Bandicota	0.005	-	-	-
Residential premises	Indian House rat, House mouse	0.005	-	-	-
Poultry Farm	Indian house rat, House mouse, LargeBandicota	0.005	-	-	-
Buprofezin 25 % SC					
Cotton	Whitefly Aphids, Jassids, Thrips	250.0	1000	500 – 750	20
Chilies	Yellow Mite	75.0-150.0	300-600	500 – 750	05
Mango	Hoppers	0.025% - 0.05%	1-2 ml/liter of water	5-15 liter per tree	20
Grapes	Mealy bugs	250 – 375	1000 – 1500	500 – 1000	07
Rice	Brown plant hopper, Green leaf hopper, White Back Plant Hopper	200	800	400 – 500	20
Buprofezin 70 % DF					
Okra (Bhindi)	Jassids	200	286	500	05
Cotton	Jassids, Whitefly	250 – 300	357 – 429	500	20
Rice	Brown plant hopper	175	250	500	24
Carbofuran 03 % CG					
Barley	Aphid, Cystnematode	1000	33300	-	-
	Jassids	1250	41600	-	-
Bajra	Shoot fly	1500	50000	-	-
Sorghum	Shoot fly	1000	33300	-	-
	Stem borer	250	8300	-	-
Jute	Nematodes	1000	33300	-	-

Groundnut	Pod borer	1500	50000	-	-
	White grub	1000	33300	-	-
French bean	White grub	700	23300	-	-
Potato	Aphid	500	16600	-	-
	Jassids	1000	33300	-	-
Tomato	Whitefly fly	1200	40000	-	-
Apple	Woolly aphid	05/tree	166/tree	-	-
Citrus	Nematode	360	12000	-	-
	Leaf miner	1500	50000	-	-
Maize	Stem borer, Shootfly, Thrips	1000	33300	-	-
Paddy (Rice)	Brown plant hopperGall midge, Stem borer, Green leaf hopper, Hispa	750	25000	-	-
	Nematodes	1500	50000	-	-
Mustard	Mustard leaf miner	2000	66600	-	-
	Whitefly	1000	33300	-	-
Soybean	Root knot nematode	1500	50000	-	-
Sugarcane	Top borer	2000	66600	-	-
Bhindi (Okra)	Jassids	1000	33300	-	-
Chilli	Aphid , Thrips	1000	33300	-	-
Cabbage	Nematode	1000	50000	-	-
Wheat	Ear cockle nematode	3000	10000	-	-
	Cereal cyst nematode	2000	66600	-	-
Brinjal	Root knot nematode,Reni form nematode	2000	66600	-	-
Banana	Rhizome weevil	01 g/suckers	33 g/sucker	-	-
	Aphid	50 g/suckers	166 g/sucker	-	-
	Nematode	1.5 g/suckers	50 g/suckers	-	-
Peach	Leaf curl aphid	1000	33300	-	-

Mandarins	Soft greens scale	0.40 g/plant	13.30 g/plant	-	-
French bean	White grubs	750	23300	-	-
	Grey & Stem weevil	1000	33300	-	-
Pea	Shoot fly & Aphid	1000	-	-	-
Tea	Cock chafer grub	0.30 g/plant	33.10 g/plant	-	-
Carbosulfan 06 % Granules					
Rice (Paddy)	Stem borer, Gall midge, Green leaf hopper, Leaf folder	1000	16700	-	37
Carbosulfan 25% EC					
Rice (Paddy)	Green leaf hopper, White Back Plant Hopper, Brown plant hopper, Gall midge, Stem borer, leaf folder	200 – 250	800 – 1000	500 – 1000	14
Chilli	White aphid	200 – 250	800 – 1000	500 – 1000	08
Cumin	Aphid, Thrips	312.5	1250	500	17
Brinjal	Fruit and Shoot borer	312.5	1250	500	5
Cotton	Aphid, Thrips	312.5	1250	500	70
Carbosulfan 25 % DS					
Cotton	Jassid, Aphids, Thrips	15 gm/kg seed	50 gm/kg seed	Not required	-
Cartap Hydrochloride 04 % Granules					
Rice (Paddy)	Stem borer	750.0	18750	-	-
	Leaf folder, Whorlmaggot	750-1000	18750- 25000	-	-
Cartap Hydrochloride 50 % SP					
Rice (Paddy)	Stem borer, Leaf folder	500	1000	500 – 1000	-
Cartap Hydrochloride 75 % SG					

Rice	Yellow stem borer, Leaf folder	318.75 – 375	425 – 500	250 – 500	35-89
Chlorantraniliprole 18.50 % SC					
Rice	Stem borer, Leaf folder	30	150	500	47
Cabbage	Diamond back moth	10	50	500	03
Cotton	American bollworm, Spotted bollworm, Tobacco caterpillar	30	150	500	09
Sugarcane	Termite	100 – 125	500 – 625	1000	208
	Early shoot borer, Top borer	75	375	1000	208
Tomato	Fruit borer	30	150	500	03
Chilli	Fruit borer	30	150	500	03
Brinjal	Shoot & Fruit borer	40	200	500 – 750	22
Pigeon pea	Pod borer	30	150	500 – 750	29
Soybean	Green Semi looper, Stem fly, Girdle beetle	30	150	500 – 750	22
Bengal gram	Pod borers	25	125	500	11
Black gram	Pod borers	20	100	500	20
Bitter melon	Fruit borers & Caterpillars	20 – 25	100 – 125	500	07
Okra (Bhindi)	Fruit Borer	25	125	500	05
Chlorantraniliprole 00.40 % GR					
Rice (Paddy)	Yellow stem borer, Leaf folder	40	10000	-	53
Sugarcane	Early shoot borer, Top borer	75	18.75	-	147
Chlorantraniliprole 35 % WG					
Okra	Fruit borer (<i>Helicoverpa armigera</i> & <i>Earias vittella</i>)	25	71	500	05
Tomato	Fruit borer (<i>Helicoverpa</i>	30	86	500	03

	<i>armigera</i>)				
Chlorfenapyr 10 % SC					
Cabbage	Diamond back moth(<i>Plutella xylostella</i>)	75 – 100	750 –1000	500	07
Chilli	Mites (<i>Polyphagotarsonemus latus</i>)	75 – 100	750 –1000	500	05
Chlorfluazuron 05.40 % EC					
Cabbage	Diamond back moth,Tobacco leaf eating caterpillar	75	1500	500	07
Cotton	American bollworm,Tobacco leaf eating caterpillar	75 – 100	1500-2000	500	10
Chlorpyrifos 10 % Granules					
Rice (Paddy)	Stem borer, Leaf folder, Gall midge	1000	10000	-	30
Chlorpyrifos 75 % w/w WG					
Rice	Yellow stem borer (<i>Scirpophaga lincertulas</i>)	375 – 400	500 – 533	500 –1000	15
Chlorpyrifos 20 % EC					
Paddy (Rice)	Hispa	250	1250	500 –1000	-
	Leaf folder	375	1875	500 –1000	-
	Gall midge, Stem borer, Whorl maggot	250	1250	500 –1000	-
Beans	Pod borer, Black bug	600	3000	500 –1000	-
Gram	Cut worm	500	2500	500 –1000	-
Sugarcane	Black bug	150	750	500 –1000	-
	Early shoot & stalkborer	250 – 300	1250 –1500	500 –1000	-
	Pyrilla	300	1500	500 –1000	-

Cotton	Aphid, Bollworm, Whitefly	250	1250	500 –1000	-
	Cut worm	750	3750	500 –1000	-
Groundnut	Aphid	200	1000	500 –1000	-
	Root grub	225	1125	500 –1000	-
Mustard	Aphid	100	500	500 –1000	-
Brinjal	Shoot & fruit borer	200	1000	500 –1000	-
Cabbage	Diamond back moth	400	2000	500 –1000	-
Onion	Root grub	1000	5000	500 –1000	-
Apple	Aphid	0.05%	3750-5000	1500 –2000	-
Ber	Leaf hopper	0.03%	2250-3000	1500 –2000	-
Citrus	Black citrus, Aphid	0.02%	1500-2000	1500 –2000	-
Tobacco	Ground beetle	350	1750	500 – 1000	-
Termite control Non cropped area: Building (Pre & Post construction treatment @1.0% a.i.) Forestry @1.0% a.i. Cropped area: Wheat: 3-4 ml/kg seed Barley: 4-6 ml/kg seed Gram: 15-30 ml/kg seed Soil treatment: Wheat: 2-3 lit/ha. Sugarcane: 6.25 lit/ha.					
Chlorpyrifos 50 % EC					
Rice (Paddy)	Stem borer, Leaf folder	375-400	750-800	500-1000	15
Cotton	Bollworms	500-600	1000-1200	500-1000	30
For non- agricultural use: - For protecting building from termite attack at pre and posts construction stages, apply Chlorpyrifos 50% EC @ 0.5% and 1.0% concentration.					
Chlorpyrifos 01.50 % DP					

Paddy (Rice)	Stem borer, Green leaf hopper, Brownplant hopper, Leaf folder, Gall midge, Grass hopper	375	25000	-	07
Bengal gram	Pod borer (<i>Helicoverpa armigera</i>)	375	25000	-	07
Chromafenozone 80 % WP					
Paddy (Rice)	Leaf folder, Stem borer	75-100	94-125	500	32
Clothianidin 0.5 % GR					
Okra	Jassids & White fly	40 – 60	8 - 12	--	01
Clothianidin 50 % WDG					
Rice (Paddy)	Brown plant hopper	10 – 12	20 – 24	500	12
Cotton	Jassids	15 – 20	30 – 40	500	20
	Whitefly	20 – 25	40 – 50	500	20
Cotton (Soil drench)	Jassids, Aphids, Thrips, Whitefly	100 – 125	200 – 250	1000	76
Sugarcane (Soil drench)	Termite	125	250	1000	310
Tea	Mosquito Bug (<i>Helopeltis theiovora</i>)	60	120	500	05
Coumatetralyl 0.75 % w/w Gel					
Indoor or outdoor	Rats (<i>Rattus rattus</i> , <i>Rattus norvegicus</i> , <i>Bandicota bengalensis</i> , <i>Bandicota indica</i> ,	01 mg per spot	2.50 per spot	-	-
	<i>Tetra indica</i> , <i>Meriones hurrianae</i>)				
Indoor	Mice	01	2.50	-	-

Coumatetralyl 0.0375 % Bait					
Indoor or outdoor	Rats (<i>Rattus rattus</i> , <i>Rattus norvegicus</i> , <i>Bandicota bengalensis</i> , <i>Bandicota indica</i> , <i>Tetra indica</i> , <i>Meriones hurrianae</i>)	01 mg per spot	02.50 per spot	-	-
Indoor	Mice	01	02.50	-	-
Cyantraniliprole 10.26 % OD					
Grapes	Thrips (<i>Scirtothrips dorsalis</i>), Flea beetle (<i>Scelodonta strigicollis</i>)	70	700	1000	05
Pomegranate	Thrips (<i>Scirtothrips dorsalis</i>), Pomegranate butterfly (<i>Deudorixossypi15s</i>)	75 (0.0075%)	750 (0.075%)	1000	05
	Whitefly (<i>Siphoninus phillyreae</i>), Aphids (<i>Aphis punicae</i>)	90 (0.009%)	900 (0.09%)	1000	05
Cabbage	Cabbage Aphid (<i>Brevicoryne brassicae</i>), MustardAphid (<i>Lipaphis erysimi</i>), Diamond back moth (<i>Plutellaxylostella</i>), Tobaccocaterpillar (<i>Spodoptera litura</i>)	60	600	500	05
Chilli	Thrips (<i>Scirtothrips dorsalis</i>), Fruit borer (<i>Helicoverpa armigera</i>), Tobacco caterpillar (<i>Spodoptera litura</i>)	60	600	500	03

Tomato	Leaf miner (<i>Liriomyza trifolii</i>), Aphids (<i>Aphis ossypi</i>), Thrips (<i>Thrips tabaci</i>), Whitefly (<i>Bemesia tabaci</i>), Fruit borer (<i>Helicoverpa armigera</i>)	90	900	500	03
Gherkins	Leaf miner (<i>Liriomyza trifolii</i>), Red pumpkin beetle (<i>Aulacophora foveicollis</i>), Aphids (<i>Aphis 16ossypi</i>), Thrips (<i>Thrips palmi</i>), Whitefly (<i>Bemesia tabaci</i>), Pumpkin caterpillar (<i>Diaphania indica</i>), Fruit fly (<i>Bactrocera cucurbitae</i>)	90	900	500	05
Cyantraniliprole 16.9% + Lufenuron 16.9% SC					
Rice	Stem borer (<i>Scirpophaga incertulus</i>) & Leaf folder (<i>Cnaphalocrosis medinalis</i>)	20(10+10)	50	500	39
Cyfenopros 30 % SC					
Apple	Mite	60 – 90	200 – 300	1000	15
Chilli	Mite	60 – 90	200 – 300	400 – 600	07
Cyflumetofen 20 % SC					
Tea	Red spider mite	125 – 150	625 – 750	400 – 500	05
Cypermethrin 00.25% DP					
Brinjal	Fruit & shoot borer	50 – 60	20000 – 24000	-	03
Cypermethrin 10 % EC					

Cotton	Spotted bollworm, American bollworm, Pink bollworm	50 – 70	550 – 760	150 – 1000	07
Cabbage	Diamond back moth	60 – 70	650 – 760	100 – 400	07
Okra (Bhindi)	Fruit borer	50 – 70	550 – 760	150 – 400	03
Brinjal	Fruit & shoot borer	50 – 70	550 – 760	150 – 400	03
Wheat	Shoot fly	50	550.0	500 – 800	14
Sunflower	Bihar hairy caterpillar	60 – 70	650 – 760	500 – 700	14
Cypermethrin 25 % EC					
Cotton	Bollworms	40 – 70	160 – 280	400 – 800	-
	Jassids, Thrips	20 – 30	80 – 120	200 – 300	-
Bhindi (Okra)	Shoot & fruit borer,Jassids	37 – 50	150 – 200	500	03
Brinjal	Shoot & fruit borer,Jassids, <i>Epilachna</i> grub (Hadda beetle)	37 – 50	150 – 200	500	01
Dazomet					
Tobacco (Nursery)	Root knot nematode,Stunt nematode, Reni-form nematode	30 – 40	30 – 40	-	-
Tomato nursery	Root knot nematode	30 – 40	30 – 40	-	
Floriculture (Carnation &Gerbera)	Root-knot nematode	30 – 40	30 – 40		-
Deltamethrin 11% w/w EC					
Cotton	Bollworms	12.50	125	400 – 600	30
Rice (Paddy)	Stem borer, Leaf folder, Green leafhopper, Whorl maggot	15	150	500	13
Tea	Tea Thrips	10	100	400	15

Rice	Leaf folder	15 – 18.75	150 – 187.5	500	13
Tomato	Fruit borers	10 – 12.5	100 – 125	375 – 500	3
Okra	Fruit Borers	10-12.5	100-125	375 – 500	3
Chilli	Fruit borers	17.5	175	500	5
Onion	Thrips	15	150	500	5
Deltamethrin 25 % Tablet					
Cotton	Bollworms	12.50	50	400 – 600	30
Deltamethrin 01.80 % EC					
Cotton	Bollworms	12.50	781	400 – 600	30
	Sucking insects	10	625	400 – 600	30
Rice (Paddy)	Stem borer, Leaf folder	10 – 12.50	625 – 780	500	07
Deltamethrin 02.50 % WP					
Wheat & Rice (Grain & seed in stacks)	Rice weevil, Leasergrain borer, Khaprabeetle, Red flour beetle, Saw toothed grain beetle, Rice moth, Almond moth	30	1200	1 litre/30 m2	-
Walls, ceilings floors of Godowns	Rice weevil, Leaser grain borer, Khaprabeetle, Red flour beetle, Saw toothed grain beetle, Rice moth, Almond moth	30	1200	1.5-2.5 litre/50 m2	-
Public health	Mosquito	625 – 1250	25000 – 50000	-	-
Deltamethrin 02.80 % EC					
Cotton	Bollworm	12.50	500	400 – 600	-
	Sucking Insects	10	400	400 – 600	-
Tea	Thrips, Caterpillar	3-4	120 – 150	400 – 600	03

	Leaf folder	10	400	400 – 600	03
	Lopper	2.50 – 3.75	100 – 150	400 – 600	03
Bhindi (Okra)	Shoot & fruit borer	10 – 15	400 – 600	400 – 600	01
	Jassid	10	400.0	400 – 600	01
Groundnut	Leaf miner	12.50	500.0	400 – 600	03
Mango	Hoppers	0.03 – 0.05%	0.33-0.5 ml/lit	As per spray field requirement	01
Chilli	Fruit borer	10 – 12.5	400 – 500	400 – 600	05
Brinjal	Shoot & Fruit Borer	10 – 12.5	400 – 500	500	03
Red Gram (Arhar/Tur)	Pod Borer & Pod Fly	12.50	500.0	500	10
Dicofol 18.50 % EC					
Tea	Red spider mite, Scarlet mite, Pinkmite, Purple mite, Yellow mite	230	1250.0	250	15-20
Okra (Bhindi)	Red spider mite	250-500	1350 – 2700	500 – 1000	15-20
Citrus	Red spider mite	0.05%	2700 – 4050	1000 – 5000	15-20
Litchi	Red spider mite	0.05%	2700 – 4050	1000 – 5000	15-20
Cotton	Red spider mite	500 – 1000	2700 – 5400	500 – 1000	15-20
Brinjal	Yellow mite	500 – 1000	2700 – 5400	500 – 1000	15-20
Bottle & Bittergourd	Red spider mite	250 – 500	1350 – 2700	500 – 1000	15-20
Diafenthiuron 47.80 % SC					
Cotton	Whiteflies, Aphids, Thrips, Jassids	239	500	500	30
Diafenthiuron 50 % WP					

Cotton	Whiteflies, Aphids,Thrips, Jassids	300	600	500 – 1000	21
Cabbage	Diamond back moth	300	600	500 – 750	07
Chilli	Mites	300	600	500 – 750	03
Brinjal	Whitefly	300	600	500 – 750	03
Cardamom	Thrips, Capsule borer	400	800	1000	07
Citrus	Mites	1.0 g/l	2.0 g/l	2-3 liter/ha.	30
Cotton	Whiteflies, Aphids,Thrips, Jassids	239	500	500	30
watermelon	Whiteflies and Red spider mites	300	600	500	05
Okra	Whiteflies, Red Spider mites and Jassids	300	600	500	05
Tomato	Whiteflies and Redspider mites	300	600	500	05
Diflubenzuron 25 % WP					
Cotton	Tobacco Caterpillar	75 – 87.50	300 – 350	500 – 1000	-
	Bollworms	75	300	500 – 1000	-
Dimethoate 30 % EC					
Bajra	Milky weed bug	180-200	594-660	500 -1 000	-
Cotton	Aphis, Jassids, Thrips	200	660	500 - 1000	24
	Grey weevil	300	1000		
Apple	Stem borer	0.03%	1485-1980	1500 – 2000	In March April And June
Cabbage	Aphid	200	660	500 – 1000	-
Cauliflower	Painted bug, MustardAphid	200	660	500 – 1000	-
Chilli	Thrips	200	660	500 – 1000	-
	Mites	300	990	500 – 1000	-

Maize	Stem borer	200	660	500 – 1000	-
	Shoot fly	350	1155	500 – 1000	-
Sorghum	Midge	500	1650	500 – 1000	-
Castor	Jassids, Mites	250	825	500 – 1000	-
	Semi looper	350	1155	500 – 1000	-
Mustard	Leaf minor, Aphid, Sawfly	200	660	500 – 1000	-
Safflower	Aphid	200	660	500 – 1000	-
Onion	Thrips	200	660	500 – 1000	-
Potato	Thrips	200	660	500 – 1000	-
	Aphid	200	660	500 – 1000	-
Apricot	Aphid	0.03%	1485- 1980	1500 – 2000	Pre bloom
Banana	Aphid	0.03%	1485- 1980	1500 – 2000	At 3 mont hsold
	Lace wing bug	0.03%	1485- 1980	1500 – 2000	-
Citrus	Black citrus aphid	0.03%	1485- 1980	1500 – 2000	-
Bhindi (okra)	Aphid	700	2310	500 – 1000	-
	Leaf hopper, Jassids	600	1980	500 – 1000	-
Fig	Fig Jassid	0.03%	1485- 1980	1500 – 2000	-
Mango	Mealy bug	0.05%	2475- 3300	1500 – 2000	-
	Hopper	0.05%	2475- 3300	1500 – 2000	-
Tomato	Aphid, Whitefly	300	990	500 – 100	-
Brinjal	Jassids	600	1980	500 – 1000	-
	Shoot borer	200	660	500 – 1000	-
Rose	Scale	750	2475	500 – 1000	-

	Thrips	400	1320	500 – 1000	-
Dinotefuran 20 % SG					
Rice (Paddy)	Brown plant hopper	30 – 40	150 – 200	500	21
Cotton	Whitefly, Jassids, Aphids & Thrips	25 – 30	125 – 150	500	15
Emamectin benzoate 05 % SG					
Cotton	Boll worms	9.5 – 11.0	190 – 220	500	10
Okra (Bhindi)	Fruit & Shoot Borer	6.75 – 8.50	135 – 170	500	05
Cabbage	Diamond back moth	7.5 – 10	150 – 200	500	03
Chilli	Fruit borer, Thrips, Mites	10	200	500	03
Brinjal	Fruit and Shoot borer	10	200	500	03
Red gram (Arhar/Tur)	Pod borer	11	220	500 – 750	14
Chickpea	Pod borer	11	220	500	14
Grapes	Thrips	11	220	500 – 1000	05
Tea	Tea looper	10	200	500	01
Emamectin benzoate 01.90 % EC					
Cotton	Boll worms	11	580	500	15
Chilli	Fruit borer, Thrips	07.13	375	500	03
Chick pea	Pod borer	07.13	375	500	14
Paddy	Leaf folder & Hispa	8.08	425	500	48
Soybean	Green semi looper, pod borer, Girdle beetle & Tobacco caterpillar	8.08	425	500	20
Ethion 50 % EC					
Tea	Red spider mites, Purple mites, Yellowmite, Thrips, Scale	250	500	500 – 1000	03

Cotton	Whitefly	750–1000	1500 –2000	500 – 1000	-	
	Bollworms	1000	2000	500 – 1000	25	
Chilli	Mites & thrips	75 – 1000	1500 –2000	500 – 1000	05	
Gram	Pod borer	500 –750	1000 –1500	500 – 1000	21	
Pigeon pea orRedgram (Arhar/Tur)	Pod borer	500 – 750	1000 –1500	500 – 1000	21	
Soybean	Girdle beetle & stemfly	750	1500	500 – 1000	30	
Ethofenprox 10 % EC						
Rice	Brown plant hopper,Green leaf hopper, Stem borer, Leaf folder, Gall midge, Whorl maggot, White backed plant hopper	50 – 75	500 – 750	500	15	
Ethylene dichloride+Carbon tetrachloride (3:1)						
Crop	Common name of the pest	Cond.	Weight of volume	Exposure period	Conc. In air (ppm)	Aeratio n / Waitin g
Stored whole cereals MilletsPulses	Rice weevil, Lesser grain Borer, Khapra Beetle, Rust red flour beetle, Pulse beetle, Dried fruit Beetle	Air tight cover	300 –400 gm/m ³ (230 – 307 ml)	48 – 72 Hr. forcover fumigation	10 ppm	Partial aeration Forat least 1 hr. followed by24 hr. complete Aeration waiting period of 24hr.

Godown fumigation	Rice weevil, Lesser grain Borer, Khapra Beetle, Rust red flour beetle, Pulse beetle, Dried fruit Beetle	Air tight cover	150 gm/m ³	07 days	10 ppm	Partial aeration Forat least 1 hr. followed by 24 hr. complete Aeration waiting period of 24hr.
Etoxazole 10 % SC						
Brinjal	Red spider mite		40	400	400 – 500	05
Tea	Red spider mite		40	400	400	05
Fenazaquin 10 % EC						
Tea	Red spider mite, Pink Mite, Purple mite		100	1000	400 – 600	07
	Scarlet mite		125	1250	400 – 600	07
Chilli	Yellow mite		125	1250	400 – 600	10
Apple	Red spider mite, Twospotted mite		40	400	1000	30
Okra (Bhindi)	Red spider mite		125	1250	500	07
Brinjal	Red spider mite		125	1250	500	07
Tomato	Two spotted spider mite		125.0	1250	500	07
Fenazaquin 18.3 % SC						
Brinjal	Red spider mite		114.375	625	400 – 500	10
Fenobucarb (BPMC) 50 % EC						
Rice	Brown plant hopper, Green leaf hopper		250 – 750	500 – 1500	500	30

Fenpropathrin 10 % EC					
Cotton	Pink boll worm, Spotted boll worm, American boll worm	75 – 100	750 – 1000	750 – 1000	14
Fenpropathrin 30 % EC					
Cotton	Pink boll worm, Spotted boll worm, American boll worm, White fly	75-100	250 – 340	750 – 1000	14
Chilli	Thrips, Whitefly, Mites	75 – 100	250 – 340	750 – 1000	07
Brinjal	Whitefly, Shoot and Fruit borer, Mites	75 – 100	250 – 340	750 – 1000	10
Okra (Bhindi)	Whitefly, Shoot and Fruit borer, Mites	75 – 100	250 – 340	750 – 1000	07
Tea	Mites	50 – 60	165 – 200	400 – 500	07
Paddy (Rice)	Yellow stem borer, Leaf folder	100	333	500	30
Fenpyroximate 05 % EC					
Tea	Red spider mite, Pink Mite, Purple mite	15 – 30	300 – 600	400 – 500	07
Chilli	Yellow mite	15-30	300 – 600	300 – 500	07
Cotton	Jassids, Mites	37.50	750	500	15
Coconut	Eriophyid mites	0.50 gm/tree (Root feeding)	10ml/lit.	As required	-
	Eriophyid mites	0.056-0.075 gm/tree	0.75-01.0 ml/lit.	As required	-
Fenpyroximate 05 % SC					
Chilli	Yellow mite	15 – 30	300 – 600	500 – 750	03
Tea	Red spider mite, Pink mite, Purple mite	30 – 60	600 – 1200	400	07
Fenpropathrin 10% EW					
Rice	Stem borer (Scirpophaga incertulas) and leaf folder (Cnaphalocrocis medinalis)	100	1000	5000	58

Fenvalerate 20 % EC					
Cauliflower	Diamond back moth,American boll worm,Aphids, Jassids	60 -75	300 – 375	600 – 750	07
Cotton	Boll worm	75 -100	375 – 500	700 – 900	07
	Aphids, Jassids,Thrips	25 -40	125 – 200	250 – 400	07
Brinjal	Shoot & fruit borer,Aphids	75 – 100	375 – 500	600 – 800	05
Okra (Bhindi)	Shoot & fruit borer,Jassids	60 – 75	300 – 375	600 – 750	07
Fenvalerate 02 % Conc.					
Cotton	Spotted & Spiny, Pink American, Egyptian boll worm	80 – 100	4000 – 5000	-	-
Fenvalerate 00.40 % DP					
Cotton	Spotted Bollworm,Pink Bollworm	80 – 100	20000-25000	-	07
Fipronil 05 % SC					
Rice	Stem borer, Brown plant hopper, Green leaf hopper, Rice leafhopper, Rice Gall midge, Whorl maggot, White backed plant hopper	50 – 75	1000 – 1500	500	32
Cabbage	Diamond back moth	40 – 50	800 – 1000	500	07
Chilli	Thrips, Aphids, Fruitborers	40 – 50	800 – 1000	500	07
Sugarcane	Early shoot borer & Root borer	75 – 100	1500 – 2000	500	270
Cotton	Aphid, Jassid, Thrips, White fly	75 – 100	1500 – 2000	500	06
	Boll worms	100	2000	500	07
Fipronil 18.87 % w/w SC					
Cotton	Thrips	75	375	375 – 500	21

Chilli	Thrips, Aphids, <i>Helicoverpa armigera</i>	50	250	500	5
Rice	Stem Borer, Leaf Folder , Brown Plant Hopper	50	250	500	46
Fipronil 02.92 % EC					
Pre-construction (Building)	Termite	0.25%	100	01	IS:6313-2001 (Part-2)
Post-construction (Building)	Termite	0.25%	100	01	IS:6313-2001 (Part-3)
Fipronil 00.30 % GR					
Rice	Stem borer, Brown plant hopper, Green leaf hopper Rice leafhopper, Rice gall midge, Whorl maggot, White backed plant hopper	50 – 75	16670 –25000	-	32
Sugarcane	Early shoot borer,Root borer	75.0 – 100	25000 –33300		09
Wheat	Termites	0.06	20 kg	-	91
Fipronil 00.60 % w/w GR					
Rice	Stem borer & Leaffolder	60	10	65	-
Fipronil 80 % WG					
Rice	Stem borer, Leaffolder	40 – 50	50 – 62.50	375 – 500	19
Grapes	Thrips	40 – 50	50 – 62.5	750 – 1000	10
Onion	Thrips	60	75	500	15
Cabbage	Diamond back moth	75	93.75	500	15
Chilli	Thrips	40 – 50	50 – 62.5	500	5
Flocoumafen 0.005% Block Bait (Strom)					
Usage	<i>Common pest</i>	a.i. (mg)	Formulation (g)	How to apply	Waiting Period

For rodent control in field , storage and crops like rice, soybean and coconut)	<i>Rattus rattus</i> , <i>Bandicota bengalensis</i> , <i>Tatera indica</i> , <i>Mus musculus</i>	0.75-1.0	15-20	At an interval of 5-10m in bait station or active burrow. Repeat the application after 14 days if problem persists.	NA
Flonicamid 50 % WG					
Rice	Brown plant hopper, White backed plant hopper, Green leaf hopper	75	150	500	36
Cotton	Aphids, Jassids, Thrips & Whiteflies	75	150	500	25
Flubendiamide 20 % WG					
Rice	Stem borer, Leaf folder	25	125	500	30
Cotton	American bollworm	50	250	500	30
Pigeon pea (Tur/Arhar)	Pod borer	50	250	500	30
Cabbage	Diamond back moth	18.24	37.5 – 50	375 – 500	07
	Diamond back moth	12.5	62.5	500	07
Tomato	Fruit borer	48	100	375 – 500	05
	Fruit borer	50	250	500	05
Tea	Semilooper	30	150	400	07
Chilli	Fruit borer	50 – 60	250 – 300	500	05
Soybean	<i>Spodoptera litura</i> , Semilooper	50 – 60	250 – 300	500	29
Groundnut	<i>Spodoptera litura</i>	60	300	500	31
Black gram	<i>Spodoptera litura</i> , <i>Maruca</i> spp.	60	300	500	23
Bengal gram	Pod borer	50	250	500	15
Sugarcane	Early shoot borer	75	375	500 – 750	204

Flubendiamide 39.35 % w/w SC					
Rice	Stem borer, Leaf folder	24.0	50.0	375 – 500	40
Cotton	Bollworms (American & Spotted bollworm)	48 – 60	100 – 125	375 – 500	25
Pigeon pea	Pod borer	48	100	500	10
Black gram	Fruit borer	48	100	500	11
Chilli	Fruit borer	48 – 60	100 – 125	500	07
Tomato	Fruit borer	48	100	375 – 500	05
Cabbage	Diamond moth borer	18.24	37.5 – 50	375 – 500	07
Brinjal	Shoot and fruit borer	72 – 90	150 – 187.5	500	05
Bengal gram	Pod Borer (<i>Helicoverpa armigera</i> & <i>Spodoptera</i> spp.)	48	100	500	05
Okra	Shoot & fruit borer	48 – 60	100 – 125	500	03
Soybean	Defoliators (<i>Helicoverpa armigera</i> , <i>Spodoptera litura</i> and Semilooper)	72	150	500	17
Flubendiamide 00.70 % GR					
Paddy(Rice)	Stem borer	85 – 100	12.14-14.28	NA	25
Flufenoxuron 10 % DC					
Rose	Mites	50	500	500 – 1000	06
Flumite 20 % SC / Flufenzine 20 % SC					
Brinjal	Mite	80 – 100	400-500	500 – 1000	05
Tea	Pink mite, Purple mite	80 – 100	400-500	500 – 1000	07
	Red spider mite	100 – 120	500-600	500 – 1000	07
Fluopyram 34.48 % w/w SC					

Tomato	Root knot nematode (<i>Meloidogyne incognita</i>)	250 (2 application) or 500 (Single application)	625 (2 application) or 1250(Single application)	1000	05
Flupyradifurone 17.09 % w/w SL					
Okra (Bhindi)	Jassids, Whitefly	250	1250	500	03
Flupyrimin 2% GR					
Rice	Stem Borer, Brown Plant Hopper	100-150	5000-7500	NA	77
Fluvalinate 25 % EC					
Cotton	Aphids, Jassids, Redcotton bug	50 – 100	200 -400	500 –1000	07
	Bollworm	50 – 100	200 -400	500 – 1000	07
Hexythiazox 05.45 % w/w EC					
Tea	Scarlet mite (<i>Brevipalpus phoenicis</i>)Red spider mite (<i>Oligonychus coffeaeae</i>)	15-25	300 – 500	400/ha	05
Chilli	Yellow mites (<i>Polyphagotarsonemus latus</i>)	15 – 25	300 – 500	625/ha	03
Apple	European Red Mite (<i>Panonychus ulmi</i>)	0.002%	0.04%	10ltr./tree	15
Grapes	Red spider mite	25	500	1000	05
Rose	Red spider mite	20-25	400 – 500	500	05
Brinjal	Red spider mite	25	500	500	07
Okra	Red spider mite	25	500	500	07
Imidacloprid 70 % WG					
Cotton	Jassids, Aphids,Thrips	21 – 24.5	30 – 35	375 – 500	07
Rice (Paddy)	Brown plant hoppers,White backed plant hoppers	21 – 24.5	30 – 35	300 – 375	07
Okra (Bhindi)	Jassids, Aphids,Thrips	21 – 24.5	30 – 35	300 – 375	03

Cucumber	Aphids & Jassids	24.5	35.0	500	05
Tomato	Thrips & White fly	35	50	500	05
Potato	Aphids & White fly	63	90	500	30
Imidacloprid 48 % FS					
Cotton	Aphids, Whitefly, Jassids, Thrips	300 - 540	500 - 900	-	NR
Okra (Bhindi)	Jassid, Aphid	300 - 540	500 - 900	-	-
Sunflower	Jassid, Whitefly	300 - 540	500 - 900	-	-
Sorghum	Shoot fly	720	1200	-	-
Pearl millet	Shoot fly and termites	720	1200	-	-
Soybean	Jassids	75	125	-	-
Maize	Shoot fly	0.6	1.0	-	-
Potato	Aphid & Jassids	0.0105	0.0175	-	-
Rice	Thrips	0.15	0.25	-	-
Wheat	Aphids, Termite	0.21	0.35	-	-
Imidacloprid 70 % WS					
Cotton	Aphids, Whitefly, Jassids, Thrips	350 - 700	500 - 1000	-	NR
Okra (Bhindi)	Jassid, Aphid	350 - 700	500 - 1000	-	-
Chilli	Jassid, Aphid, Thrips	700 - 1050	1000 - 1500	-	-
Sunflower	Jassid, Whitefly	490	700	-	-
Sugarcane	Termite	70 - 105	100 - 150	-	-
Sorghum	Shoot fly	700	1000	-	-
Pearl millet	Termites and shootfly	700	1000	-	-
Mustard	Mustard sawfly, Painted bug	490	700	-	-
Imidacloprid 30.50 % m/m SC					

Cotton	Aphid, Jassids, Thrips	21 - 26.25	60 - 75	500 - 750	26
Rice (Paddy)	Brown plant hopper, White backed plant hopper	21 - 26.25	60 - 75	500 - 750	37
Chilli	Aphids, Thrips	43.75 – 52.5	125 - 150	500	5
For non- agricultural use:- For protecting building from termite attack at pre and post construction stages, apply Imidacloprid 30.5% m/m SC @ 0.075% a.i. concentration.					
Imidacloprid 17.80 % SL					
Cotton	Aphid, Whitefly, Jassid, Thrips	20 - 25	100 - 125	500 - 700	40
Paddy (Rice)	Brown plant hopper, White backed plant hopper, Green leaf hopper	20 - 25	100 - 125	500 - 700	40
Chilli	Jassid, Aphid, Thrips	25 - 50	125 - 250	500 - 700	40
Sugarcane	Termite	70	350	1875	45
Mango	Hopper	0.40-0.80g/tree	2-4ml/tree	10 litre	45
Sunflower	Whitefly, Jassid, Thrips,	20	100	500	30
Okra (Bhindi)	Aphid, Jassid, Thrips	20	100	500	03
Citrus	Leaf miner, Psylla	10	50	Depending on size of tree & Protection equipment used	15
Groundnut	Aphid , Jassid	20 - 25	100 - 125	500	40
Tomato	Whitefly	30 - 35	150 - 175	500	03
Grapes	Flea beetle	0.06 - 0.08	300 - 400	1000	32
Imidacloprid 00.30 % GR					
Paddy(Rice)	Stem borer	0.045	15.0 kg	-	26
Imidacloprid 17.1 % w/w SL					
Cotton	Aphid, Whitefly, Jassids, Thrips	50	250	500	50
Rice	Brown Plant Hopper, White Backed Plant Hopper and	60	300	500	39

	Green Leaf Hopper				
Indoxacarb 14.50 % SC					
Cotton	Bollworm	75	500.0	600 - 1000	16
Cabbage	Diamond back moth	30 - 40	200 - 266	400 - 750	07
Chilli	Fruit borer	50-60	333 - 400	300 - 600	05
Tomato	Fruit borer	60-75	400 - 500	300 - 600	05
Pigeon pea	Pod borer complex	50-60	353 - 400	500 - 1000	15
Indoxacarb 15.80 % EC					
Cotton	Bollworms (<i>Helicoverpa armigera</i>)	75	500	500 - 1000	14
Cabbage	Diamond back moth(<i>Plutella xylostella</i>)	40	266	500 - 1000	05
Pigeon pea	Pod borer complex(<i>Helicoverpa armigera</i>), Pod fly	50	333	500 - 700	12
Rice	Leaf folder (<i>Cnephalocrosis medinalis</i>), Green Semilooper, Stem fly	30	200	500	14
Soybean	Tobacco caterpillar (<i>Spodoptera litura</i>), Pod borer (<i>Heliothis armigera</i>), Green Semilooper (<i>Chrysodexis acuta</i>), stem fly (<i>Melanogromyza spp.</i>)	30	333	500	31
Chickpea	Pod borer (<i>Helicoverpa armigera</i>)	50	333	500	18
Lambda-cyhalothrin 04.90 % CS					
Cotton	Bollworms	25	500	500	21
Paddy (Rice)	Stem borer, Leaf folder	12.50	250	500	15
Brinjal	Shoot & fruit borer	15	300	500	05
Okra (Bhindi)	Fruit borer	15	300	500	05
Tomato	Fruit borer	15	300	500	05

Grapes	Thrips & Flea beetle	12.50	250	500 - 1000	07
Chilli	Thrips, Pod borer	25	500	500	05
Soybean	Stem fly, Semilooper	15	300	500	31
Pomegranate	Thrips & fruit borer	0.002	0.04	500-1000/as Per age of tree	5
Cardamom	Shoot and Capsule Borer and Thrips	20	400	1000	34
Lambda-cyhalothrin 02.50 % EC					
Cotton	Bollworms, Jassids, Thrips	15 - 25	600 - 1000	400 - 600	21
Rice (Paddy)	Leaf folder, Stem borer, Green leaf hopper, Gall midge, Hispa, Thrips	12.50	500	400 - 600	15
Lambda-cyhalothrin 05 % EC					
Cotton	Bollworms, Jassids, Thrips	15 - 25	300 - 500	400 - 600	21
Rice (Paddy)	Leaf folder, Stem borer, Green leaf hopper, Gall Midge, Rice hispa, Thrips	12.50	250	400 - 600	15
Brinjal	Shoot & fruit borer	15	300	400 - 600	04
Tomato	Fruit borer	15	300	400 - 600	04
Chilli	Thrips , mite, podborer	15	300	400 - 600	05
Pigeon pea	Pod borer, Pod fly	20 - 25	400-500	400 - 600	15
Onion	Thrips	15	300	300 - 400	05
Bhindi (Okra)	Jassids , Shoot borer	15	300	300 - 400	04
Chickpea	Pod borer	25	500	300 - 400	06
Groundnut	Thrips, Leaf hopper, Leaf miner	10 - 15	200 - 300	400 - 500	10
Mango	Hoppers	0.0025-0.005%	0.5-1.0 ml/l of water	-	07
Lufenuron 05.40 % EC					

Cabbage	Diamond back moth	30	600	500	14
Cauliflower	Diamond back moth	30	600	500	05
Pigeon pea	Pod borer, Pod fly	30	600	500 - 1000	65
Cotton	American bollworm	30	600	500 - 750	48
Black gram	Pod borer	30	600	500	10
Chilli	Fruit borer	30	600	500	05
Magnesium Phosphide Degesch plates recommended for fumigation of un-manufactured tobacco forexport, as per importing country requirement.					
Malathion 05 % DP					
Paddy (Rice)	Rice Hispa	1250	25000	-	-
Sorghum	Earhead midge	1000	20000	-	At 90% emergence of ear head
Malathion 50.00% EC					
Paddy (Rice)	Rice Hispa	575	1150	500- 1000	-
Sorghum	Earhead midge	500	1000	500 - 1000	-
Pea	Pod borer	750	1500	500 - 1000	-
Soybean	Leaf weevil	750	1500	500 - 1000	-
Castor	Jassids	750	1500	500 - 1000	-
	Semi looper	1000	2000	500 - 1000	-
Sunflower	White fly	500	1000	500 - 1000	-
Bhindi (Okra)	Aphid	500	1000	500 - 1000	-
	Jassids	625	1250	500 - 1000	-
	Spotted Bollworm	750	1500	500 - 1000	-
Brinjal	Mites	750	1500	500 - 1000	-

Cabbage	Mustard aphid	750	1500	500 - 1000	-
Cauliflower	Head borer	750	1500	500 - 1000	-
Radish	Stem borer	750	1500	500 - 1000	-
Turnip	Tobacco caterpillar	600	1200	500 - 1000	-
Tomato	White fly	750	1500	500 - 1000	-
Apple	Sanjose scale, Woolyaphid	0.05%	1500-2000	1500 - 2000	-
Mango	Mealy scale, Mangohoppers	0.075%	2250-3000	1500 - 2000	-
Grape	Beetle	500	1000	1500 - 2000	-
Metaflumizone 22 % SC					
Cabbage	Diamond back moth	165 - 220	750 - 1000	500	03
Metaldehyde 2.5% DP					
Citrus, Rubber, Paddy (Rice), Tea, Vegetables	Snails, Slugs, Giant, African snails	Available in ready to use 2.5% Dust			
Methomyl 40 % SP					
Cotton	Bollworms	300 - 450	750 – 1125	500 - 1000	10
Pigeon Pea	Pod borers	300 - 450	750 - 1125	500 - 1000	07
Tomato	Pod borers	300 - 450	750 - 1125	500 - 1000	5/6
Chilli	Pod borers & Thrips	300 - 400	750 - 1125	500 - 1000	05-06
Groundnut	<i>Spodoptera litura</i>	300 - 350	750 - 850	500	07
Grapes	Mealy bug	500.0	1250	500 - 1000	10
Methoxyfenozide 21.8 % w/w SC					
Groundnut	Leaf eating caterpillar (<i>Spodopotera litura</i>)	210	875	500	26
	Groundnut leaf minor (<i>Aproaerema modicella</i>)	210	875	500	
	Pod borer (<i>Helicoverpaarmigera</i>)	210	875	500	

Sugarcane	Early shoot borer (<i>Chilo infuscatellus</i>)	120-150	500-625 (depending upon stage of crop)	500	161
Methyl Bromide 98 % w/w					
Stored Whole Cereals and Seed, Millet, Pulses	Rice Weevil, Lesser Grain Bore, Khapra Beetle, Rust Red Flour Beetle, Saw Drug Store Beetle	Air tight cover	24 gm/m ³	6-8 hours waiting Period 24 hrs.	As when residues not to exceed 25 ppm
Milled Products: Flour	Khapra Beetle, Rust Red Flour Beetle, Lesser grain borer	Air tight cover	24 -32 gm/m ³	12-24 hrs waiting Period 72 hrs	As when residues not to exceed 25 ppm
Dry Fruits, Nuts Spices & Oil Seeds	Rust Red Flour Beetle	Air tight cover	24 -32 gm/m ³	24 hrs waiting Period 72 hrs	As when residues not to exceed 25 ppm
Milbemectin 01 % EC					
Rose	Two spotted, Spider mite	04.50	450	1000	05
Chilli	Yellow , White mite	03.25	325	500	07
Monocrotophos 15 % SG					
Cotton	Aphids, Jassids, Thrips, Whiteflies	200	1333	500 - 1000	58
Monocrotophos 36 % SL					
Paddy (Rice)	Brown plant hopper, Yellow stem borer	500	1250	500 - 1000	-
	Green leaf hopper, Leaf roller/folder	250	625	500 - 1000	-
Maize	Shoot fly	250	625	500 - 1000	-
Black gram	Pod borer	250	625	500 - 1000	-
Green gram	Pod borer	175	437	500 - 1000	-
Pea	Leaf minor	400	1000	500 - 1000	-

Red gram	Plume mouth, Podfly	250	625	500 - 1000	-
	Pod borer	500	1250	500 - 1000	-
Sugarcane	Shoot borer	600-800	1500-2250	500 - 1000	-
	Mealy bug	600.0	1500	500 - 1000	-
	Pyrilla	200	500	500 - 1000	-
	Scale Insect	600	1500	500 - 1000	-
	Stalk borer	750	1875	500 - 1000	-
Cotton	Bollworms	450 - 800	1125 -2250	500 - 1000	-
	Aphid, Leaf Hopper,Thrips	175	437	500 - 1000	-
	Grey weevil	500	1250	500 - 1000	-
	White fly	150	375	500 - 1000	-
Citrus	Black aphids	0.040%	1500 - 2000	500 - 2000	10 lit./trees
	Mite	0.025%	937 - 1250	500 - 2000	10 lit./trees
Mango	Bug mite	0.040%	1500 - 2000	500 - 2000	10 lit./trees
	Gall maker, Hopper,Mealy bug, Shoot borer	0.04%	1500 - 2000	500 - 2000	20 lit./trees
Coconut	Black headed Caterpillar	03.50-07.00 gm per tree	08.75-17.50 ml per tree	Lower dose to be applied on plants below 09 years & higher or more than 09 years of age.	-
Coffee	Green bug	625	1562	500 - 1000	-
Cardamom	Thrips	375	937	500 - 1000	-
Novaluron 10 % EC					
Cotton	American Bollworm	100	1000	500 - 1000	40

Cabbage	Diamond back moth	75	750	500 - 1000	05
Tomato	Fruit borer	75	750	500 - 1000	1-3
Chilli	Fruit borer, Tobacco Caterpillar	33.50	375	500	03
Bengal gram	Pod borer	75	750	500	07
Novaluron 08.80 % SC					
Cotton	American boll worm, Tobacco caterpillar	100	1000	500 - 1000	20
Oxydemeton-methyl 25 % EC					
Paddy (Rice)	Blue leaf hopper	125	500	500 - 1000	-
	White leaf hopper	250	1000	500 - 1000	-
Maize	Shoot fly	250	1000	500 - 1000	-
Sorghum	Shoot fly	250	1000	500 - 1000	-
Cotton	Aphid, Jassid (leafhopper)	300	1200	500 - 1000	-
Ground nut	Aphid, Leaf minor	250	1000	500 - 1000	-
Mustard	Aphid	250	1000	500 - 1000	-
Sesamum	Leaf hopper	300	1200	500 - 1000	-
Bhindi (Okra)	White fly	250	1000	500 - 1000	-
	Jassid, Leaf beetle	400	1600	500 - 1000	-
Chilli	Aphid	400	1600	500 - 1000	-
	Mites	500	2000	500 - 1000	-
	Thrips	250	1000	500 - 1000	-
Onion	Thrips	300	1200	500 - 1000	-
Tomato	White fly	250	1000	500 - 1000	-
Potato	Aphids	250	1000	500 - 1000	-
Apple	Sanjose scale	0.07%	4200- 5600	1500 - 2000	-
	Wooly Aphid	0.025%	1500-2000	1500- 2000	-

Banana	Tingid bug	0.025%	1500-2000	1500- 2000	-
	Aphids	0.05%	3000-4000	1500- 2000	-
Mango	Hoppers	0.025%	1500-2000	1500- 2000	-
Peaches	Leaf curl aphids	0.025%	1500-2000	1500- 2000	-
Coffee	Green bug	625	2500	500-1000	-
	Leaf minor	1000	4000	500-1000	-
Tobacco	White fly, Aphids	250	1000	500-1000	-
Permethrin 25 % EC					
Cotton	Bollworms	100 - 125	400 - 500	500 - 1000	-
Phenthoate 02 % DP					
Sorghum	Red spider mite, Pinkmite, Purple mite, Scarlet mite	400	20000	-	90% Emergence of earhead
Safflower	Aphid	400	20000	-	-
Phenthoate 50 % EC					
Paddy (Rice)	Rice case worm	500	1000	500 -1000	-
Ground nut	Leaf Webber	500	1000	500 -1000	-
Phosalone 35 % EC					
Barely	Aphid	500	1428	500 - 1000	-
Sorghum	Ear head midge	400	1143	500 - 1000	-
Jute	Red spider mite	350	1000	500 - 1000	-
Brinjal	Fruit borer	500	1428	500 - 1000	-
Cabbage	Aphid	500	1428	500 - 1000	-
Tomato	Fruit borer	450	1285	500 - 1000	-
Tea	Aphid, Pink mite,Purple mite	360	1028	500 - 1000	-
Phosalone 04 % DP					
Sorghum	Earhead midge	1000	25000	-	-

Profenofos 50 % EC					
Cotton	Bollworm	750 - 1000	1500 - 2000	500 - 1000	15
	Jassids, Aphids, Thrips, Whiteflies	500	1000	500 - 1000	15
Soybean	Semi looper & Girdle beetle	500	1000	500	40
Propargite 57 % EC					
Tea	Red spider mite, Pinkmite, Purple mite, Scarlet mite	430-612	750-1250	400	0 7
Chilli	Mite	850	1500	500 - 625	07
Apple	European red mite, Two spotted mite	2.85-5.7/tree	5-10 ml/tree	10 lit/tree	09
Brinjal	Two spotted spidermite	570	1000	400	06
Pymetrozine 50 % WG					
Paddy (Rice)	Brown plant hopper	150	300	500	19
Pyrifluinazon 20% WG					
Cotton	White fly (Bemisia tabaci)	100	375-500	500	30
Pyriproxyfen 10 % EC					
Brinjal	White fly & Jassids	50	500	300	07
Cotton	Whitefly	100	1000	500	31
Cotton	Whitefly	50-60	500-700	500	50
Chilli	Whitefly, Aphids	50	500	300	07
Okra	White fly & Jassids	50	500	300	07
Pyriproxyfen 10% EW					
Cotton	Whitefly (Bemisiatabaci), Jassid (Amrascadevastans) and thrips (Thrips tabaci)	100-125	1000-2500	500	38
Pyridaben 20 % w/w WP					

Tea	Red spider mite	100	500	500	07
Cotton	White fly	100	500	500	28
Chilli	Yellow mite	75 - 100	375 - 500	500	5
Pyridalyl 10 % EC					
Cotton	Bollworms	75 - 100	750 - 1000	500 - 750	07
Okra	Fruit & shoot borer	50 - 75	500 - 750	500 - 750	03
Cabbage	Diamond back moth	50 - 75	500 - 750	500 - 750	03
Quinalphos 25 % Gel					
Chilli	Aphid	250	1000	500 - 1000	-
Paddy (Rice)	Brown plant hopper, Leaf folder, Stem borer, Hispa	250	1000	500 - 1000	-
Quinalphos 05 % Granules					
Sorghum	Stem borer	750	15000	-	-
Paddy (Rice)	Gall midge, Stemborer	250	5000	-	-
Quinalphos 20 % AF					
Rice (Paddy)	Brown plant hopper, Green leaf hopper, Leaf folder, Stem borer	250 - 300	1250 - 1500	750 - 1000	40
Okra (Bhindi)	Shoot /Fruit borer	250 - 300	1250 - 1500	750 - 1000	07
Cotton	American bollworm, Pink Bollworm, Spotted bollworm	350 - 500	1750 - 2500	750 - 1000	07
Tomato	Fruit borer	300 - 350	1500 - 1750	750 - 1000	07
Tea	Hopper caterpillar	0.05%	1000	400	07
Pigeon pea	Pod borer	500.	2500	750 - 1000	30
Groundnut	Spodoptera	250 - 375	1250 - 1775	750 - 1000	30
Quinalphos 25 % EC					
Paddy (Rice)	Brown plant hopper	375	1500	500 - 1000	40

	Hispa/blue beetle	500	2000	500 - 1000	40
	Leaf folder	250	1000	500 - 1000	40
	Stem borer	325	1300	500 - 1000	40
Sorghum	Mite, Shoot fly	375	1500	500 - 1000	-
Wheat	Aphid	250	1000	500 - 1000	-
	Ear head Caterpillar,Mite	400	1600	500 - 1000	-
Bengal gram	Pod borer	250	1000	500 - 1000	-
Black gram	Bihar hairy caterpillar	375	1500	500 - 1000	-
French bean	Stem fly	250	1000	500 - 1000	-
Red gram	Pod borer, Pod fly	350	1400	500 - 1000	30
Soybean	Leaf weevil	250	1000	500 - 1000	-
Jute	Leaf roller, Semi looper, Yellow mite	375	1500	500 - 1000	-
Groundnut	Leaf Hopper, Thrips	350	1400	500 - 1000	30
	Leaf miner	250	1000	500 - 1000	30
Mustard	Sawfly	300	1200	500 - 1000	-
Sesamum	Leaf Webber, Jassids	500	2000	500 - 1000	-
Bhindi (Okra)	Fruit borer	200	800	500-1000	-
	Leaf hopper, Mite	250	1000	500-1000	-
Cauliflower	Stem borer	500	2000	500 - 1000	-
Chilli	Aphid	250	1000	500 - 1000	-
	Mite	375	1500	500 - 1000	-
Tomato	Fruit borer	250	1000	500 - 1000	-
Apple	Wooly Aphid	0.05%	3000 - 4000	500 - 1000	-
Banana	Tingid bug	0.05%	3000 - 4000	500 - 1000	-

Citrus	Scale	0.07%	4200 - 5600	500 - 1000	-
	Citrus butterfly	0.025%	1500 - 2000	500 - 1000	-
Pomegranate	Scales	0.08%	4800 - 6400	500 - 1000	-
Cardamom	Thrips	0.03%	600 - 1200	500 - 1000	30
Tea	Thrips	190	760	500 - 1000	07
Quinalphos 01.50 % DP					
Sorghum	Earhead bug	375	25000	At milk stage	
	Earhead midge	400	26600	At milk stage	
Paddy (Rice)	Brown plant hopper	300	20000	-	40
Gram	Pod borer	350	23300	At pod formation	
Red gram	Pod borer	350	23300	-	30
Soybean	Leaf weevil	250	16600	-	-
French bean	Stem fly	30	20000	-	-
Cotton	Aphid, Jassids, Thrips	300	20000	From square formation onwards	
	Bollworms	450	30000	From square formation onwards	
Ground nut	Thrips, Jassids	350	23300	-	30
	Red hairy caterpillar	375	25000	-	30
Safflower	Aphid	300	20000	-	-
Chilli	Aphid	300	20000	-	-
Spinetoram 11.70 % SC					
Cotton	Thrips	50	420	500 - 1000	30
	Tobacco caterpillar	50-56	420 - 470	500 - 1000	30
	Spotted boll worm				
Soybean	Tobacco caterpillar	54	450	500 - 625	30

Chilli	Thrips, Fruit borer,Tobacco caterpillar	56-60	470-500	400 - 500	07
Spinosad 45 % SC					
Cotton	American bollworm	75-100	165-220	500	10
Chilli	Fruit borer, Thrips	73	160	500	03
Chilli	Fruit borer (<i>H.armigera</i>) (<i>Scirtothripsdorsalis</i>)	56-73	124-162	500	03
Red gram	Pod borer	56 - 73	125 - 162	800 - 1000	47
Brinjal	Fruit & Shoot borer	73 - 84	162 - 187	500	03
Grapes	Thrips	25 ml/100 lit	250	1000	15
Spinosad 02.50 % SC					
Cabbage & Cauliflower	Diamond back moth	15 - 17.50	600 - 700	500	03
Spiromesifen 22.90 % SC					
Brinjal	Red spider mite	96	400	500	05
Cotton	White fly & mite	144	600	500	10
Apple	European Red Mite& Red spider mite	72 (0.03%)	300	1000	30
Chilli	Chilli Yellow Mite	96	400	500 - 750	07
Tea	Red spider mite	96	400	400	07
Okra (Bhindi)	Red spider mite	96 - 120	400 - 500	500	03
Tomato	Whiteflies & Mites	150	625	500	03
Cotton	White fly & mite	144	600	500	10
Spirotetramat 15.31 % w/w OD					
Chilli	Thrips & Aphids	60	400	500	05
Okra	Aphid, Whitefly, Mites	90	600	500	03
Grapes	Mealy bug, Mites	105	700	500 - 1000	60

Tetraniliprole 18.18 SC					
Rice	Yellow stem borer (<i>Scripophaga incertulus</i>) Leaf folder (<i>Cnaphalocrocis medinalis</i>)	50 - 60	250 - 300	500	43
Soybean	Girdle beetle (<i>Oberea brevis</i>) <i>Spodoptera spp.</i> Semilooper (<i>Chrysodeixis acuta</i>)	50 - 60	250 - 300	500	35
Tetraniliprole 40.34% FS					
Rice	Stem borer and leaf folder	4.8-6.0	10.0-12.5	NA	NA
Maize	Stem borer	2.4-3.6	5.0-7.5	NA	NA
Thiacloprid 21.70 % SC					
Cotton	Aphid, Thrips, Jassid	24 - 30	100 - 125	500	52
	Whitefly	120-144	500 - 600	500	52
Paddy (Rice)	Stem borer	120	500	500	30
Chilli	Thrips	54 - 72	225 - 300	500	05
Tea	Mosquito bug	90	375	400	07
Brinjal	Shoot & fruit borer	180	750	500	05
Soybean	Girdle beetle	180	750	500	17
Apple	Thrips	0.01-0.012%	0.04-0.05%	As per size of tree	30
Thiocyclam Hydrogen Oxalate 50% SP					
Rice	Stem borer, Leaffolder	500	1000	500	30
Thiodicarb 75 % WP					
Cabbage	Diamond back moth	750 - 1000	1000 - 1330	500	07
Cotton	Bollworms	750	1000	500	30
Brinjal	Shoot & Fruit borer	470 - 750	625 - 1000	500	06

Chilli	Fruit borer	470 - 750	626 - 1000	500	06
Black gram	Pod borer (<i>Maruca</i> spp.) & (<i>Helicoverpaspp.</i>)	468 - 562	625 - 750	375 - 500	17
Pigeon Pea	Pod Borer	470 - 750	625 - 1000	500	30
Thiamethoxam 30 % FS					
Cotton	Aphid, whiteflies,Jassids	03	10	This is used as seed dresser	
Sorghum	Shoot fly	03	10	This is used as seed dresser	
Wheat	Termites	01	3.3	This is used as seed dresser	
Soybean	Shoot fly	03	10	This is used as seed dresser	
Chilli	Thrips	02.1	7.0	This is used as seed dresser	
Okra (Bhindi)	Jassids	01.7	5.7	This is used as seed dresser	
Maize	Stem Fly	02.4	8	This is used as seed dresser	
Sunflower	Jassids, Thrips	03	10	This is used as seed dresser	
Thiamethoxam 70 % WS					
Cotton	Aphid, Thrips, Whitefly, Jassids	300	430	Use as seed dresser at the time of sowing	
Okra (Bhindi)	Aphids, Jassids	200	286	Use as seed dresser at the time of sowing	
Tomato	Aphids, Thrips	420	600	Use as seed dresser at the time of sowing	
Sunflower	Jassids, Thrips	280	400	Use as seed dresser at the time of sowing	
Wheat	Termite, Aphids	121	175	Use as seed dresser at the time of sowing	
Maize	Shoot fly, Aphids	245	350	Use as seed dresser at the time of sowing	

Rice (Paddy)	Thrips, Green leafhopper	105	150	Use as seed dresser at the time of sowing	
Thiamethoxam 75 % w/w SG					
Groundnut	Termite	94	125	500 - 1000	57
Sugarcane	Termite, Early shootborer	120	160	500 - 1000	230
Rice (Paddy)	Green leaf hopper, Brown plant hopper	113	150	Dissolve in500 ml water and mix with 20 kg sand/ha.	60
Cotton	Jassids & Thrips	94	125	50 - 100 ml/plant	109
Thiamethoxam 25 % WG					
Rice (Paddy)	Stem borer, Gall midge, Leaf folder, White backed plant hopper, Brown planthopper, Green leaf hopper, Thrips	25	100	500 - 750	14
Cotton	Jassid, Aphid,Thrips	25	100	500 - 750	21
	Whitefly	50	200	500 - 750	21
Okra (Bhindi)	Jassid, Aphid,Whitefly	25	100	500 - 1000	05
Mango	Hoppers	25	100	1000	30
Wheat	Aphid	12.5	50	500	21
Mustard	Aphid	12.5 - 25	50-100	500 - 1000	21
Tomato	Whitefly	50	200	500	05
Foliar application	(Apply first spray during initial appearance of pest and repeat 2 – 3 sprays at 10 – 15 days interval depending on the level of pest intensity)				
Brinjal	Whitefly	50	200	500	03
Foliar application	(Apply first spray during initial appearance of pest and repeat 2 – 3 sprays at 15 – 21 days interval depending on the level of pest intensity)				

Tea	Mosquito bug	25	100	400 - 500	07
Potato	Aphids:				
	→ Foliar Application	25	100	500	77
	Soil drench	50	200	400 - 500	77
Citrus	Psylla	25	100	1000	20
	(Apply first spray during initial appearance of pest and repeat 2 – 3 sprays at 15 – 21 days interval depending on the level of pest intensity)				
Rice-Nursery (SoilDrenching)	Green leaf hopper, Thrips, Whorl Maggot	500	2000	250 ml/sq.mtr	86
Tomato Soil drench	White flies	100	400	500	05
	(Apply root zone after transplanting as soil drench once during crop season.)				
Cumin	Aphids	25	100	500	05
Tolfenpyrad 15 % EC					
Cabbage	Diamond back moth, Aphids	150	1000	500	05
Okra (Bhindi)	Aphids, Jassids, Thrips, Whitefly	150	1000	500	03
Cotton	Aphids, Jassids, Thrips, Whitefly	150	1000	500	26
Cumin	Aphids, Thrips	150	1000	500	29
Chilli	Aphids, Thrips	150	1000	500	7
Mango	Hoppers, Thrips	150.0	1000	500	7
Onion	Thrips	150.0	1000	500	10

Zinc Phosphide 80 % Powder					
Crop	Pest organism		Dosage	Technical	
For rodent control in field and residential premises(to be used under the supervision of trained personal)	<i>Rattus rattus</i> , <i>Bandicota bengalensis</i> , <i>Rattus meltade</i> , <i>Tatera indica</i> , <i>Meriones hurrianae</i> , <i>Mus platythrix</i> , <i>Mus musculus</i> , <i>Rattus norvegicus</i> , <i>Musbooduga</i> , <i>Suncus caeruleus</i>		1.5-2.5% active ingredient inbait	Mix 10 g of Zinc phosphide with 10g of edible oil and then mix with 380g of food material. Keep 10g of poisoned bait at each points.	
Combination Product					
Acephate 50 % + Bifenthrin 10 % WDG					
Cotton	Leaf hopper, Thrips,Bollworms	400 + 80.	800	500 - 750	20
Acephate 45 % + Cypermethrin 5 % DF					
Cotton	Aphid, Jassids, Thrips& White fly.	425	850	500 - 600	22
Acephate 25 % + Fenvalerate 03 % w/w EC					
Cotton	American bollworm,Sucking pest	500 + 60.	2000	500	15
Acephate 50 % + Fipronil 5% WDG					
Paddy	Stem borer, Leaf folder, Brown Plant Hopper	500 + 50	1000	500	27
Acephate 50 % + Imidacloprid 01.80 % SP					
Cotton	Aphid, Jassids, Thrips, Whitefly, Bollworms	518	1000	500	40

Paddy (Rice)	Brown Plant Hopper, Green Leaf Hopper, Stem borer & Leaf folder	518	1000	500	--
Acetamiprid 00.40 % + Chlorpyrifos 20 % EC					
Paddy (Rice)	Stem borer, Brown plant hopper, Whitebacked plant hopper	10 + 500	2.50	500 - 800	10
Acetamiprid 01.10 % + Cypermethrin 05.50 % EC					
Cotton	Aphids, Jassids, Thrips, Bollworms	10 + 50	1000	400 - 1000	30
Azoxysrobin 1.3% + Tebuconazole 0.22% + Thiamethoxam 25.9% FS					
Okra (seed treatment)	Aphids and Jassids	0.9+0.15+18.0	60	NA	NA
Beta-cyfluthrin 08.49 % + Imidacloprid 19.81 % w/w OD					
Brinjal	Aphids, Jassids, Shoot & fruit borer	15.75 + 36.75-18 + 42	175 – 200	500	07
Soybean	Girdle beetle Semilooper	31.5 + 73.5	350	500	17
Cotton	Jassid Whitefly	18 + 42	200	500	21
Bifenthrin 03 % + Chlorpyrifos 30 % w/w EC					
Paddy (Rice)	Stem borer, Leaf folder	24 + 240-30 + 300	800 - 1000	500	21
Bifenthrin 8% + Clothianidin 10% SC					
Ground nut	White grub, thrips and aphids	80+100	1000	1000	83

Cotton	Grey weevil, mealy bug, jassids, whitefly, aphids and thrips	80+100	1000	1000	73
Sugarcane	Termites and early shoot borer	80+100	1000	1000	300
Buprofezin 09 % + Acephate 24 % w/w WP					
Rice (Paddy)	Brown plant hopper	54 + 144	600	500	20
Buprofezin 15 % + Acephate 35 % w/w WP					
Cotton	Jassids, Thrips & White fly	187.5 + 437.5	1250	500	--
Okra	Jassids & White fly	112.5 + 262.5	750	500	07
Paddy (Rice)	Brown plant hopper, White backed plant hopper	187.5 + 437.5	1250	500	20
Buprofezin 20 % + Acephate 50 % w/w WP					
Paddy (Rice)	Stem Borer, Leaf folder, Brown planthopper	200 + 500	1000	500	20
Cotton	Thrips, Jassids, Mealy bug	250 + 625	1250	500	15
Buprofezin 20 % + Acetamiprid 2% w/w WP					
Rice	Brown plant hopper, White backed plant hopper, Leaf Folder, Green Leaf Hopper, Stem Borer	176	800	400	15
Buprofezin 22 0% + Fipronil 3 % SC					
Rice (Paddy)	Brown plant hopper	110 + 15	500	400 – 500	32

Buprofezin 23.10 % + Fipronil 03.85 % w/w SC					
Rice	Brown plant hopper	173.25 + 28.88	750	500	30
Cartap Hydrochloride 50 % + Buprofezin 10 % w/w WP					
Rice	Yellow stem borer, Brown plant hopper, Leaf folder, Green leaf hopper, White backed plant hopper	480	800	500	20
Cartap Hydrochloride 7.5 % w/w + Emamectin benzoate 0.25 %w/w GR					
Rice	Yellow stem borer (<i>Scirpophaga incertulus</i>)	18.75 + 562.5	7.5	-	35
Cartap Hydrochloride 04 % + Fipronil 00.50 % CG					
Paddy (Rice)	Stem borer, Leaffolder	675 - 900	15 - 20	-	27
Cypermethrin 10 % + Indoxacarb 10 % w/w SC					
Cotton	Jassids, Thrips, Bollworms	50 +50	500	400 - 1000	07
Rice	Yellow stem Borer	25 + 25	250	500	37
	Leaf Folder	37.5+37.5	375		
Cypermethrin 3 % + Quinalphos 20 % EC					
Brinjal	Shoot & Fruit borer	-	350 - 400	500 - 600	07
Cotton	American bollworm, Spotted bollworm, Jassids	-	1000 - 1250	500 - 600	15
Chlorpyrifos 50 % + Cypermethrin 05 % EC					

Cotton	Aphid, Jassids, Thrips, Whitefly, <i>Spodoptera litura</i> , Spotted bollworm, Pink bollworm, American bollworm	500 + 50	1000	500 - 1000	15
Rice (Paddy)	Stem borer, Leaf folder	312 + 32- 375 + 38	625 - 750	500 - 700	15
Brinjal	Shoot & Fruit Borer	500+50	1000	500	7
Cabbage	Diamond Back Moth	375+37.5	750	500	5
Chlorpyrifos 16 % + Alphacypermethrin 01 % EC					
Cotton	Spotted bollworm, Pink bollworm, American bollworm	425	2500	500 - 750	15
Deltamethrin 00.72 % + Buprofezin 05.65 % w/w EC					
Rice (Paddy)	Brown plant hopper, Leaf folder	0.78 + 62.50- 0.94 + 75.00	1250 + 1500	500	30
Diafenthiuron 47 % + Bifenthrin 09.40 % w/w SC					
Cotton	Thrips (<i>Thrips tabaci</i>), Leaf hopper (<i>Amrasca devastans</i>), Whitefly (<i>Bemisia tabaci</i>), Aphid (<i>Aphis gossypii</i>)	293.75 + 58.7	625	500	30
Chilli	Thrips (<i>Scirtothrips dorsalis</i>), Aphids (<i>Aphis gossypii</i>)	293.75 + 58.7	625	500	07
Dinotefuran 4 % + Acephate 50% w/w/ SG					

Rice	Brown Plant Hopper & whiteBacked Plant Hopper	35 + 400	500	500	28
Cotton	Aphids, Jassids, Thrips & Whiteflies.	22 + 275	880	500	10
Dinotefuran 15 % + Pymetrozine 45% WG					
Rice	Brown Plant Hopper, white Backed Plant Hopper, Green Leaf Hopper, Rice Ear Head Bug	200	333	500	24
Emamectin Benzoate 01.50 % + Fipronil 03.50 % SC					
Chilli	Thrips, Fruit borer	07.5 + 17.5- 11.25 + 26.25	500 - 750	500	03 (day) or 48 (Hrs) Re- entry period after each application
Emamectin benzoate 5 % w/w + Lufenuron 40 % w/w WG					
Cauliflower	Diamond Back Moth (<i>Plutella xylostella</i>) Fruit borer (<i>Spodoptera litura</i> & <i>Helicoverpa armigera</i>)	27(Emamectin benzoate 3.0 + Lufenuron 24.0)	60	500	03
Chilli	Fruit borer (<i>Spodoptera litura</i> & <i>Helicoverpa armigera</i>)	27(Emamectin benzoate 3.0 + Lufenuron 24.0)	60	500	03

	Thrips (<i>Scirtothrips dorsalis</i>)				
	Mites (<i>Polypagotarsonne muslatus</i>)				
Emamectin Benzoate 1.5% + Profenofos 35% w/w WDG					
Cotton	Whiteflies, Jassids, Thrips, Aphids and Pink Boll Worm	10.5 + 245	700	500	15
Ethion 40 % + Cypermethrin 05 % w/w EC					
Cotton	American bollworm	400 + 50	1000	500	15
Ethiprole 40% + Imidacloprid 40 % WG					
Rice (Paddy)	Brown plant hopper	37.50 + 37.50	93.75	375	15
	White backed planthopper	50 + 50	125	375	15
Fenobucarb 20 % + Buprofezin 05 % w/w SE					
Paddy (Rice)	Brown plant hopper, Green leaf hopper	400 + 100	2000	500	30
Fipronil 5% + Buprofezin 20% SC					
Chilli	Thrips	37.5+150	750	500	5
	Fruit Borer	50+200	1000		
Cotton	Jassids, Thrips. Aphid & Whitefly	50+200	1000	500	6
Rice	Brown Plant Hopper	25 + 100	500	500	20
	Yellow Stem Borer, Leaf Folder	50 + 200	1000	500	

Flubendiamide 04 % + Buprofezin 20 % w/w SC					
Paddy (Rice)	Yellow stem borer, Leaf folder, Brown plant hopper	35 + 175	175 + 700	500	30
Flubendiamide 8.33 % + Deltamethrin 5.56 % w/w SC					
Chickpea	Pod borer	22.50 + 15	250	500	07
Cucumber	Cucumber beetle, Fruit fly	18 + 12- 22.50 + 15	200 - 250	500	05
Flubendiamide 03.50 % + Hexaconazole 05 % w/w WG					
Paddy (Rice)	Stem borer, Leaf folder	35 + 50	1000	500	20
Groundnut	<i>Spodoptera litura</i>	52.5 + 75	1500	500	31
Chilli	<i>Spodoptera litura</i> <i>Helicoverpa armigera</i>	52.5 + 75	1500	500	10
Flubendiamide 07.5 % + Kresoxim Methyl 37.5 % w/w SC					
Rice	Stem borer & Leaf folder	50 + 250	667	500	30
Tomato	Fruit borer (<i>Helicoverpa armigera</i>) Leaf eating caterpillar/Fruit borer (<i>Spodoptera litura</i>)	50 + 250	667	500	07
Flubendiamide 19.92 % + Thiacloprid 19.92 % w/w SC					
Chilli	Thrips, Fruit borer	48 + 48- 60 + 60	200 – 250	500	05

Rice	Yellow stem borerLeaf folder	60 + 60	250	500	33
Fipronil 40 % + Imidacloprid 40 % WG					
Sugarcane	White grub (<i>Holotrichia consanguinea</i>)	175 + 175- 200 + 200	437.5-500	1000 - 250	296
Groundnut	White Grubs (<i>Holotrichia serrata</i>)	100 + 100 to 120 + 120	250 - 300	1000	106
Fipronil 04 % + Acetamiprid 04 % w/w SC					
Cotton	Aphid, Jassids, Whitefly	40 + 40	1000	500	30
Fipronil 04 % + Thiamethoxam 04 % w/w SC					
Rice	Brown Plant Hopper,Green Leaf Hopper & White Backed Plant Hopper	44 + 44	1100	500	45
Fipronil 07 % + Hexythiazox 02 % w/w SC					
Chilli	Mites and Thrips	70 + 20	1000	500	07
Fipronil 15% + Flonicamid 15% WDG					
Cotton	Aphid, Jassid, thrip, whitefly, mealy bug and bollworm	60 + 60	400	500	33
Paddy	Brown plant hopper, green leaf hopper, stem borer and leaf folder	60 + 60	400	500	33
Hexythiazox 3.5% + Diafenthiuron 42% WDG					
Chilli	Mites, Thrips, Jassids, Aphids & White fly	22.75 + 273	650	500	07
Imidacloprid 18.50 % + Hexaconazole 01.50 % FS					

Groundnut	Termites, Thrips, Jassids, Root grubs, Collar rot, Stem rot, Tikka leaf spot & Rust	37 + 3	200	Not applicable	This is used as seed dresser
Wheat	Termites, Aphids, Smut, Rust	37 + 3	200	Not applicable	This is used as seed dresser
Imidacloprid 06 % + Lambda-cyhalothrin 04 % SL					
Paddy (Rice)	Stem borer, Hispa, Plant hopper, Gundhibug	18 + 12	300	500	10
Indoxacarb 14.50 % + Acetamiprid 07.70 % w/w SC					
Cotton	Jassids, Whitefly, Bollworms	88.8 - 111	400 - 500	500	30
Chilli	Thrips, Fruit borer	88.8 - 111	400 - 500	500	05
Novaluron 05.25 % + Indoxacarb 04.50 % SC					
Tomato	Fruit borer (<i>Helicoverpa armigera</i>) & Leaf eating caterpillar (<i>Spodoptera litura</i>)	43.31 + 37.13-45.94 + 39.38	825 - 875	500	05
Chickpea	Gram pod borer (<i>Helicoverpa armigera</i>)	43.31 + 37.13-45.94 + 39.38	825 - 875	500	9
Soybean	<i>Spodoptera</i> spp., <i>Helicoverpa armigera</i> and <i>Semilooper</i>	43.31 + 37.13-45.94 + 39.38	825 - 875	500	14
Pigeon pea (Red)	Pod borer complex	43.31 + 37.13-	825 - 875	500	25

Gram/Arhar/Tur)	(<i>Helicoverpa armigera</i> & <i>Maruca</i> <i>ossyp</i>)	45.94 + 39.38			
Chilli	Fruit borer complex (<i>Helicoverpa armigera</i> , <i>Spodoptera litura</i>)	43.31 + 37.13- 45.94 + 39.38	825 - 875	500	7
Black gram	Black gram pod borer complex (<i>Etiella zinckenella</i> , <i>Spodoptera litura</i> and <i>Maruca vitrata</i>)	43.31 + 37.13- 45.94 + 39.38	825 - 875	500	14
Rice (Paddy)	Rice leaf folder (<i>Cnaphalocrossi</i> <i>smedinalis</i>)	22.97 + 19.69	437.5	500	40
Groundnut	<i>Helicoverpa armigera</i> & <i>Spodoptera litura</i>	45.94 + 39.38	875	500	34
Phenthoate 45% + Cypermethrin 6% EC					
Paddy	Yellow Stem Borer, Leaf Folder and Brown Plant Hopper	450+60	1000	500	At the end of the Harvest
Profenofos 40 % + Cypermethrin 04 % EC					
Cotton	Bollworm complex	440 - 660	1000 - 1500	500 - 1000	14
Profenofos 40 % + Fenpyroximate 02.50 % w/w EC					
Chilli	Thrips, Mites, Fruitborer	0.4 + 0.025	1000	500	07
Propargite 50 % + Bifenthrin 5 % w/w SE					
Okra	Mite , White fly &	594 + 59.4 –	1100 – 1150	500	05
	Jassids	621 + 62.1			

Tomato	Mite , White fly & Jassids	594 + 59.4 – 621 + 62.1	1100 – 1150	500	05
Propargite 42 % + Hexythiazox 2 %EC					
Tea	Red spider Mites	525 + 25	1250	400 - 500	07
Pyriproxyfen 05 % + Fenpropathrin 15 % EC					
Cotton	Bollworms	25 + 75- 37.5 + 112.5	500-750	500-750	14
	Whitefly	60 + 60	600	500	19
Brinjal	Whitefly, Shoot &	25 + 75-	500 -750	500 - 750	07

	fruit borer	37.5 + 112.5			
Okra (Bhindi)	Whitefly, Fruit borer	25 + 75- 37.5 + 112.5	500 - 750	500 - 750	07
Chilli	Whitefly, Fruit borer	25 + 75- 37.5 + 112.5	500 - 750	500 - 750	07
Pyriproxyfen 05 % + Diafenthiuron 25 % SE					
Cotton	Whitefly (<i>Bemisia tabaci</i>), Thrips (<i>Thrips tabaci</i>), Jassid (<i>Amrasca biguttula biguttula</i>), Aphid (<i>Aphis ossypi</i>)	250 + 50- 312.5 + 62.50	1000 – 1250	500	35
Pyriproxyfen 10 % + Bifenthrin 10 % w/w EC					
Cotton	Whitefly	60 + 60	600	500	19
Spirotetramat 11.01 % + Imidacloprid 11.01 % w/w SC					
Okra (Bhindi)	Red spider mites	60 + 60	500	500	03
Brinjal	Whitefly, Red spider mites	60 + 60	500	500	05
Mango	Mealy bug	0.018%	0.075%	Spray fluid as required depending upon size of tree.	15
Thiamethoxam 12.60 % + Lambda-cyhalothrin 09.50 % ZC					
Cotton	Jassids, Aphids, Thrips, Bollworms	44	200	500	26
Maize	Aphid, Shoot fly, Stem borer	27.50	125	500	42

Groundnut	Leaf hopper, Leaf-eating caterpillar	27.5	150	500	28
Soybean	Stem fly, Semilooper, Girdle beetle	27.50	125	500	48
Chilli	Thrips, Fruit borer	33	150	500	03
Tea	Tea mosquito bug, Thrips, Semilooper	33	150	400	01
Tomato	Thrips, Whiteflies & Fruit borer	27.5	125	500	05
Acetamiprid 00.40 % + Chlorpyrifos 20 % EC					
Paddy (Rice)	Stem Borer, Brown plant hopper & White backed plant hopper	10 + 500	2.5	500 - 800	10
Cypermethrin 10 % + Indoxacarb 10 % SC					
Cotton	Jassids, Thrips, Bollworms	50 + 50	500	400 - 1000	07
Chlorantraniliprole 09.30 % + Lambda-cyhalothrin 04.60 % ZC					
Pigeon pea	Pod borer	30	200	500	18
Cotton	Bollworms complex	37.50	250	500	20
Brinjal	Shoot and fruit borer, Jassids	28	200	500	05
Okra	Shoot and fruit borer, Jassids	28	200	500	03
Rice	Stem borer, Leaf folder & Green leafhopper	28 – 35	200 – 250	500	53
Soybean	Leaf worm, Girdle beetle, Semilooper, Stem	28	200	500	41

	fly				
Chlorantraniliprole 00.50 % + Thiamethoxam 01 % w/w GR					
Rice	Stem borer, Leaf folder, Brown plant hopper, Green leafhopper	30.0 + 60.0	6 kg/ha	-	60
Chlorantraniliprole 08.80 % + Thiamethoxam 17.50 % w/w SC					
Tomato	Leaf Miner, Whitefly, Fruit borer	150	500 Application method-Soil drench (Single application), Application time-8-10 days after transplanting	50-100 ml/plant	36
Thiamethoxam 00.90 % + Fipronil 00.20 % w/w GR					
Ground nut	White grub, Termite	108 + 24-135 + 30	12.15	106	48
Public Health Use					
Pest	Habitat	a.i. (mg/m ²)	Formulation (gm)	Dilution (Ltr.)	
Alphacypermethrin 05 % WP					
Adult Mosquito	-	25 (2 cycles application to repeat after 3 month)	Dilute 250 gm of Alphacypermethrin5% WP in 10 litres of water tocover 500 sq m area.	250	
	-	40 (single cycle application)	Dilute 250 gm of Alphacypermethrin 5% WP in 10 litres of water tocover 500 sq m area.	400	

Alphacypermethrin Impregnated long lasting nets 00.667 % w/w (200 mg/m ²) (For Import only)					
Ready to use Impregnated Bed Net		To control mosquitoes under Public Health			
Bifenthrin 10.00%WP					
Adult Mosquito	-	25 (2 rounds of spraying 3 months apart	125	Dilute 125 gm of Bifenthrin in 10% WP in 10 liters of water to cover 500m ² areas.	-
Chlorpyriphos Methyl 40 % EC					
-	Used to control of adult vector mosquitoes				
Cyfluthrin 10 % WP					
Under Public Health Programme (Adult Mosquitoes)	-	25 (2 cycles application to be Repeated after 3 months.	250	Dilute 250 gm of Cyfluthrin 10% WP in 10litres of water to cover 500 m ² areas.	
	-	40 (single cycles application)	400	Dilute 400 gm of Cyfluthrin 10% WP in 10litres of water to cover 500 m ² areas.	
DDT 50 % WP					
Adult mosquitoes	-	1-2gm	-	-	-
Deltamethrin 00.15 % + Piperonyl 00.55 % EC					
Adult mosquitoes	-	Mosquitoes control under Public Health	-	-	-
Deltamethrin 01.25 % w/w or 01.00 % w/v EC					
Insect	Method of	Dosage/ha.			

	Application	a.i. (gm)	Formulation (ml)	Dilution in diesel Oil(Litre)
Adult Mosquitoes	Thermal fogging	0.50	50	10
	Ultra low volume application	0.50	50	0.50
Deltamethrin 02.50 % WP				
Adult Mosquitoes	For public healthpurpose only	625-1250 mg/50 m ²	25-50 g/50 m ²	1.5-2.5 Ltr./50 m ²
Deltamethrin impregnated Bed Net 55 mg/m ² (For Import only)				
Ready to use insecticide Impregnated Bed net			Mosquitoes control under Public Health	
Diflubenzuron 02 % GR				
Name of the insectpest	Habitat	Dosage/ha (Kg.)	-	Waiting period
Mosquitolarvae	Water bodies (Cess pits, Drains, Disusedwells and Pools)	1.25-3.0	-	-
Fenitrothion 40 % WP				
Common name ofpest	a.i. (gm)	Formulation	-	Dilution in water(litres)
Mosquitoes & flies	400	1000	-	80
Lambda-cyhalothrin 10 % WP				
Pest	Use	Dosage 500 m ³ floor area		Dilution in water (Litre)
		a.i. (gm)	Formulation (gm)	
Mosquitoes	public healthonly	7.50 - 15	75 - 150	10

Mosquito, housefly,cockroach	For household use	10	100	10	
Malathion 25 % WP					
Crop	Common name of the pest	Dosage/m ²			Waiting Period (days)
		a.i. (gm)	Formulation (gm)	Dilution in water (Liter)	
-	Adult mosquitoes	02/m ²	08/m ²	100	Repeat after 6-8 weeks
Novaluron 10 % EC					
Place of Application	Insect	Dosages		Waiting Period	
		a.i. (gm)	Formulation (ml)		
Clean surface water	<i>Anopheles stephensi</i> , <i>Aedes aegypti</i>	30	0.03 ml/m ²	-	
Polluted surface water	<i>Culex quinquefasciatus</i> , <i>Anopheles subpictus</i>	60	0.06 ml/m ²	-	
Pyriproxyfen 00.50 % GR					
Breeding habitats		Dosage/ha		Interval between	
		a.i. (gm)	Formulation (Kg.)	application	
Clean water/Domestic containers		10 (0.01ppm)	2	08 weeks	
Polluted/ Peri-domestic breeding habitat		20 (0.02ppm)	4	08 weeks	
Pirimiphos methyl 50 % EC					
Location	Name of the pest	Dosage	-	Waiting period	

Mosquito breedingsurface	Mosquito larvae	25 ml/ha	-	-	
Sulfoxaflor 21.8 % w/w SC					
Crop	Target pest	Dosage/ha		Water (l/ha)	Waiting period
		a.i. (gm/ha)	Formulation (ml/ha)		
Rice	Brown Plant Hopper (<i>Nilaparvatha Lugens</i>)	90	375	500	14
	White backed planthopper (<i>Sogatella furcifera</i>)	90	375	500	
Cotton	Jassids (<i>Amarasca bigutella</i>),	75	313	500	
	Aphid (<i>Aphis gossypi</i>)	75	313	500	
	Whitefly (<i>Bemmissiatabaci</i>)	90	375	500	
	Cotton mealy bug (<i>Phenococcus spp.</i>)	90	375	500	
Temephos 50 % EC					
Regime of applicatio n	Common name ofpest	Dosage/ha		Waiting period (days)	
		a.i. (g)	rmulation (ml)		
Mosquito larval treatment area, ponds, swamps, drainage, ditches,canals and other, Breeding areas.	Mosquitoes larvae	37.5 - 125	75 - 250	200	
Household Insecticides					

Alphacypermethrin 0.1 % w/w (RTU)			
Common name of pest	Dose/m ² (a.i./mg)	Formulation (ml)	
Cockroaches, Adult mosquitoes, Adulthouseflies	25 - 50	25 - 50	
Alphacypermethrin 00.50 % Chalk			
Ready to use household insecticides	To control cockroaches		
Allethrin 00.50 % Coil			
Ready to use household insecticides	d to control of house hold flying insectlike houseflies and mosquitoes		
Allethrin 00.50 % Mosquito Coil			
Ready to use household insecticides	To control of adult mosquitoes		
Allethrin 00.20 % Coil Adult Mosquitoes			
Ready to use household insecticide	To control of mosquito		
Allethrin 00.50 % Coil Adult Mosquitoes			
Ready to use household insecticide	To control of mosquito		
Allethrin 04 % Mat Adult Mosquitoes			
Ready to use household insecticide	To control of mosquito		
Allethrin 05 % Aerosol			
Ready to use household insecticide	To control of mosquito		
Allethrin 03.60 % LV			
Ready to use household insecticide	To control of mosquito		
Bifenthrin 00.05 % Mosquito coil (8 hours Min.)			
Ready to use household insecticide	Used to control adult mosquitoes		
Cyfluthrin 10 % WP			
Common name of pest	Dosage		Use
	a.i. in mg/m ²	Formulation (gm/m ²)	

Adult mosquitoes, Cockroaches, Houseflies & Mosquitoes in house	25	250 for each spray	100 gm of Cyfluthrin 10% WP to be diluted in 8 liters of potable water 40 gm of Cyfluthrin 10% WP to be diluted in 10% litres water.
	20	200 for each spray	100 gm of Cyfluthrin 10% WP to be diluted in 8 liters of potable water 40 gm of Cyfluthrin 10%WP to be diluted in 10% litres water.
Cyfluthrin 10 % WP			
For house hold use Cockroach HouseflyMosquitoes	25-40	250 - 400	Dilute 250-400 gm of Cyfluthrin 10% WP in 10 litres of water to cover 500 m ² areas.
Chlorpyriphos 02 % w/w EC			
Ready to use household insecticides		Used for protecting wood from the attack of termites & borers.	
Chlorpyriphos Methyl 40 % EC			
Used to control adult mosquitoes			
Cyphenothrin 07.20 % VP w/w (For use by pest control operator only)			
American Cockroaches & German Cockroaches		To control of American Cockroaches & German Cockroaches (In house)	
Cypermethrin 03 % Smoke Generator			
Ready to use household insecticide.		To control Cockroaches in house, hotels & warehouse.	
Cypermethrin 01.00% Dust			
Ready to use household insecticide.		To control Cockroaches in house.	
Cypermethrin 01 % Chalk			

Ready to use household insecticide.			To control Cockroaches in house.		
Cyfluthrin 05 % EW					
Ready to use	Cockroaches, Houseflies, mosquitoes, in-house. Bed net impregnation	8.0 ml	1.0	50 ml diluted solution/m ²	
Cyfluthrin 00.025 % + Transfluthrin 00.04 % Aerosol					
Ready to use			Used for controlling /repelling Mosquitoes.		
			Houseflies & cockroaches in homes.		
Transfluthrin 1 % w/w + Cypermethrin 0.2 % w/w Spray					
Ready to use house hold			Mosquitoes (Culex quinquefasciatus, Aedesaegypti, Houseflies (Musca domestica), Cockroaches (Periplaneta americana, Blatella germanica) and Ants(Red ants)		
Deltamethrin 02.50 % Flow					
Name of insectpest	Type of use	Dosage /m ² area of bed net		-	-
		a.i.	Formulation		
Adult Mosquitoes	For impregnation of polyester , nylon and cotton bed net	25 mg	1 ml	-	-
Deltamethrin 02.50 % WP					
Name of insectpest	Habitate	Dosage /m ² area of bed net			-
		a.i.	Formulation	Dilution in water (Liter)	

Lesser grain borerRice moth, Saw toothed grain beetle, Red flour beetle, Khapra beetle, Almond moth	Grain and seeds instacks	30 mg/m ²	1.2 g/m ²	1 Liter for 30 m ²	-
Rice weevil	Grain and seeds instacks	30 mg/m ²	1.2 g/m ²	1 Liter for 30 m ²	-
	Walls, Ceilings &Floor	30 mg/m ²	1.2 g/m ²	1 Liter for 30 m ²	-
Diflubenzuron 02 % Tablets					
Name of pest	Habitat	Dosage		Dilution in water	
Mosquitoes larvae	Unused Coolers	0.5-1.0 ppm		0.5-1.0 tablet in 40 liter water	
Diflubenzuron 20 % + Deltamethrin 02% SC					
Name of the insectpest	Habitat	Dosage/ha (kg.)		Waiting period	
House fly maggot	Poultry Manure & kitchen garbage	2.00 ml/liter water (5 litreof water /10 m ²		-	
Diflubenzuron 25 % WP					
Name of pest	Habitat	Dosage		Dilution in water	
Mosquitoes larvae	Clean surface water	25 - 50 g a.i./ha		-	
	Polluted surfacewater	50 - 100 g a.i./ha		-	
	Sewage pits, Soak pits, Latrines, Septictanks	01.0 mg a.i./liter		-	
House fly maggotscontrol	In poultry manuregarbage, filth & dumping areas	5.0 gm/10 m ²		ers water/10 _m 2	

Dinotefuran 0.5% RB Gel		
Ready to use house hold	Used for controlling American cockroach (<i>Periplaneta americana</i>) and German Cockroach (<i>Blattella germanica</i>)	
Deltamethrin 00.05 % + Allethrin 00.04 % w/w EC		
Common name of house hold insect	Dosage/ha	
	g a.i.	Formulation (ml)
Cockroaches, House flies, Mosquitoes	12.5 - 25.0	25 - 50
Deltamethrin 02.50 % + D-trans allethrin 02 % w/w EC		
Insects	Dosage/m ²	
	a.i. (mg)	ity of solution(ml)
Cockroach, Houseflies, Mosquitoes	12.5 - 25.0 + 10 - 20	25 - 50
Deltamethrin 00.02 % + Allethrin 00.13 % w/w		
Ready to use	To control cockroaches, mosquitoes andflies	
Deltamethrin 00.50 % w/w Chalk		
Ready to use household insecticide	To control Cockroaches, ants and bedbugs	
D-Trans Allethrin 00.10 % + Permethrin 00.03 % + Imiprothrin 00.02 % Aerosol w/w (all InsectKiller Aerosol)		
Ready to use	ockroaches, mosquitoes andhouse flies	
Deltamethrin 01 % RTU		
Ready to use household insecticide	To control Cockroaches in house. One litre of insect control of paints sufficient for an area of 22 sq. meters. Two coats of insect control paint are recommended giving 18 hours of drying between the coats.	
D-Trans Allethrin 02% Mosquito Mat		

Ready to use household insecticide.		To control Adult Mosquitoes in house.	
D-Trans Allethrin 00.10 % w/w Mosquito Coil			
Ready to use household insecticide.		To control and repel of Adult Mosquitoes in the house.	
D-Allethrin 21.97 % w/w Mosquito Mat.			
Used to control Adult Mosquitoes		Area like Park, Garden and FarmHouses etc. only.	
Benzoate 00.10 % w/w Gel			
Name of Insect/Pest	Dose (g a.i.)	Formulation Dose	Application Usages
American Cockroach (<i>Periplaneta americana</i>)	0.001 g a.i./m ²	1.0 gm of Gel Bait/m ² (2-5 spots)	Place “Ready to Use Gel Bait” (RB) for use as spot or cracks and crevices treatment in residential institutional, commercial and industrial areas e.g. application at or near harborage or aggregation areas, such as corners, areas where cockroaches forage or crack and crevices, holes, hidden surfaces, any other places where cockroaches are typically known to hide etc. for the control of cockroaches.
German Cockroach (<i>Blattella germanica</i>)	0.001 g a.i./m ²	1.0 gm of Gel Bait/m ² (1-2 spots)	Place “Ready to Use Gel Bait” (RB) for use as spot or cracks and crevices treatment in residential institutional, commercial and industrial areas e.g. application at or near harborage or aggregation areas, such as corners, areas where cockroaches forage or crack and crevices, holes, hidden surfaces, any other places where cockroaches are typically known to hide etc. for the control of cockroaches.
Fenitrothion 20 % OL			

Name of Pest	Dose (g a.i.)	Formulation (ml)	Instruction for use
Bedbug (<i>Cimex</i> spp.)	2	10	Take 10 ml of BILFOL 20 and dilute in 200 ml of kerosene. Apply spot spray thoroughly in all bed bug infested areas like charpoy furniture etc. taking care that the spray is the directed into cracks and crevices where bedbugs are hiding. 200 ml of spray wash will approx cover 10 m ² it can also be applied with a brush wherever bedbugs occur.
Fipronil 00.03 % & 0.5 % Gel			
Ready to use household insecticide		Control of German & American Cockroaches.	
Fipronil 00.05 % GEL			
House hold	Common name of the pest		Dosage/m ²
House hold	American Cockroach (<i>Periplanata americana</i>), German cockroach (<i>Blattella germanica</i>)		0.03 g (in a bait gun), 3-4 spot/m ²
House hold	German cockroach (<i>Blattella germanica</i>)		(100 mg spot= approx 5 mm diameter) Low Density – 1 spot / M ² High Density – 2 spots / M ²
	American Cockroach (<i>Periplanata americana</i>)		Low Density – 2 spots / M ² High Density – 3 spots / M ²

Imiprothrin 00.10 % + Cyphenothrin 00.13 % w/w	
Ready to use	Used for controlling cockroaches in homes.
Imiprothrin 00.70 % + Cypermethrin 00.20 % w/w Aerosol	
Ready to use household insecticides	Used against Cockroaches.
Imiprothrin 00.05 % + Cypermethrin 01 % CL	
Ready to use	Used for controlling cockroaches in houses.
Imidacloprid 00.03 % w/w Gel	
Species	Recommended Dose
Pharaoh ant (<i>Monomorium pharaonis</i>), Small black ant (<i>Monomorium indicum</i>), Crazy ant (<i>Paratrechina longicomis</i>), Ghost ant (<i>Tapinoma melanocephalum</i>)	Low infestation level (one spot of 200 mg/m ² of infested area). Moderate to high infestation level (one spot of 300 mg/m ² of infested area).

Scoring of ant activity will be done based on the following:			
Low activity=1-50 ants passing from a given point in the time period of one minute.			
Medium activity=51-200 ants passing from a given point in the time period of one minute.			
High activity= 201 ants passing from a given point in the time period of one minute.			
Imidacloprid 02.15 % w/w Gel			
Ready to use household insecticide		Control of German & American Cockroaches	
Imidacloprid 21 % + Beta-cyfluthrin 10.50 % w/w SC			
Name of Insect pests	Places	Dosage	
American Cockroaches, German Cockroaches	Private Houses, Factories, Offices, Market places, Restaurants, Hotels, Shops, Ships, Hospital etc.	Diluter 04 ml of Imidacloprid 21.0% w/w + Beta-cyfluthrin 10.5% w/w SC with 01L of water. Apply 50 ml of this solution to spray per square meter area or apply 01 L of this solution to cover 20 square meter area	
Lambda-cyhalothrin 00.50 % Chalk			
Ready to use household insecticides		Used to control Cockroaches.	
Lambda-cyhalothrin 02.43 % CS			
Purpose and target pest	Dosage/m ² of netting		
	a.i. (mg)	Concentration of spray fluid	Quantity of spray fluid(ml)
Impregnation of bed nets to prevent attack from mosquitoes	10.0	0.05%	1000 (depending on the type of the net)
Lambda-cyhalothrin 02.43 % CS			
Common Name of pest	Dosage		
Adult mosquitoes, Adult house flies, Cockroaches	20 - 30 mg/m ²	10-15 ml/litres of water to cover 50 m ² area	
Lambda-cyhalothrin 02.43 % CS			

Target insect		Dosage		
	Mg a.i./m ²	Method of application		
Non-porous surfaces – Mosquitoes, Houseflies & Cockroaches	12.50	Mix 20 ml of product in 1 liter of water & spray the solution uniformly @ 25 ml/m ² on non porous & @ 50 ml/m ² on porous surfaces.		
Porous surfaces – Mosquitoes House flies& Cockroaches	25	Mix 20 ml of product in 1 liter of water & spray the solution uniformly @ 25 ml/m ² on non porous & @ 50 ml/m ² on porous surfaces.		
Lambda-cyhalothrin 02.43 % CS				
Name of pest	Dosage/m ²			
	a.i. (mg)	Formulation (ml)	Dilution in water	
Cockroaches	50	1	Dissolve 500 ml of formulated material in 10 litre water to cover 500 square meter area.	
Housefly, Adult mosquitoes	0.2	0.004	Dissolve 4 ml of formulated material in 20 litre water to cover 1000 square meter area.	
Indoor				
Anopheles stephensi, Culex quinquefasciatus, Aedes aegypti	0.5	0.01	Dissolve 5 ml of formulated material in kerosene to cover 500 square meter area.	
Outdoor				
Anopheles stephensi, Culex quinquefasciatus, Aedes aegypti	3.5	70	Dissolve 70 ml Formulation inkerosene to cover 1 hectare area.	
Target Pest	Active Ingredient Dose (g a.i.)	Formulation Dose (ml)	Method of application (water volume)	Application Usage

Houseflies (<i>Musca domestica</i>)	0.375 – 0.5 g a.	15 – 20 per	For Low Pest	For use as
Mosquito (<i>Anopheles</i> spp.)	i. per Litre water	litre water	Infestation (Maintenance Rate) Mix 15 ml of the product in one litre of water and spray the solution uniformly @40 ml per square meter. For High Rate Infestation (Cleanout Rate) Mix 20 ml of the product in one litre of water and spray the solution uniformly @ 40 ml per square meter.	indoor or outdoor as a surface crack and crevice or spot spray treatment in residential, institutional, commercial and industrial areas / establishments etc.
American Cockroaches (<i>Periplaneta Americana</i>)	(15 – 20 mg. a. i. per square meter)			
German Cockroaches (<i>Blattella germanica</i>)				
<i>Anopheles stephensi</i> , <i>Culex quinquefasciatus</i> , <i>Aedes aegypti</i>	0.5	0.01	Dissolve 5 ml of formulated material in kerosene to cover 500 square meter area.	
Outdoor				
<i>Anopheles stephensi</i> , <i>Culex quinquefasciatus</i> , <i>Aedes aegypti</i>	3.5	70	Dissolve 70 ml Formulation in kerosene to cover 1 hectare area.	
Malathion 02 % House Hold Spray				
Ready to use		To control of Bed, Bugs, Flies, Ants, Gnats, Mosquitoes, Moths and Cockroaches in houses.		
Metofluthrin 00.005 % (Mosquito Coil)-Min. 07 Hrs. Burning time				
Ready to use household insecticide.		To control of mosquitoes in houses.		

Metofluthrin 00.005 % (Mosquito Coil)-Min.12 Hrs.			
Ready to use household insecticide.		To control of mosquitoes in houses.	
Metofluthrin 0.32 % Liquid Vaporizer			
House hold		for Mosquitoes	
Permethrin 02.00% (Olyset@ Net) w/w for Import only			
Ready to use household insecticides		For control of mosquitoes both indoors and outdoors. After unpacking and before using the new bed net, keep it in and open place for 12 hrs away from the sunlight.	
Propetamphos 01 % Spray			
Ready to use household insecticide		To control of Cockroaches, Bed bugs, Flies, fleas, Mosquitoes & Silverfish.	
Propoxur 00.75 % + Cyfluthrin 00.025 % Aerosol			
Ready to use household insecticide		Cockroaches, Mosquitoes & Houseflies	
Propoxur 20 % EC			
Common name of pest	Dose (g a.i.)	Formulation (ml)	Dilution in water (litres)
Flying insect- Mosquitoes, Flies, Cockroaches , Bed bugs, Flash, Ticks crickets , Woodlice , Mite, Silver fish, Spider, Ants etc.	200	1000	40
Pirimiphos-methyl 01 % Spray			
Location	Pest	Dosage	Pre period (min.hrs.)
Spot spray in houses	Cockroaches , bed bugs, flea etc.	100 ml/1 m ²	01
Space spray in houses	Mosquitoes, houseflies	50 ml/100 m ³	01
Pyrethrin 00.05 % + Malathion 01 %			

Insects	Used to control of Cockroaches, Mosquitoes and Flies
Propoxur 02 % Bait	
Ready to use household insecticides	Control of Cockroaches and Flies
Pyrethrin 00.20 % Spray	
Ready to use household insecticide	Control of Cockroaches, Houseflies, Mosquito and bugs
Propoxur 01 % Spray	
Ready to use household insecticide	Control of Cockroaches, Houseflies and Adult Mosquitoes
Prallethrin 01 % w/w Red Mosquitoes Mat	
Ready to use household insecticide.	Used to control of adult mosquitoes
Prallethrin 00.04 % Coils (Min.11Hrs.)	
Ready to use household insecticide	Used to control mosquitoes in Houses
Prallethrin 00.04 % Coils (Min.6 Hrs.)	
Ready to use household insecticide	Used to control mosquitoes in Houses
Prallethrin 00.80 % w/w Red Mosquitoes Mat	
Ready to use household insecticide.	Used to control of Mosquitoes.
Prallethrin 00.50 % w/w Mosquitoes Coil	
Ready to use household insecticide.	Used to control of adult mosquitoes.
Prallethrin 01.20 % Mat	
Ready to use household insecticide.	Used to control of adult mosquitoes.
Prallethrin 00.04 % w/w Mosquito Coil	
Ready to use household insecticide.	Used to control of adult mosquitoes.
Prallethrin 19 % w/w VP	
Ready to use household insecticide.	Used to control of adult mosquitoes.
Prallethrin 02.40 % w/w Liquid Vaporizer	

Ready to use household insecticide.		Used to control of Mosquitoes.	
S-Bioallethrin 02.40 % Mosquitoes Mat			
Ready to use household insecticide.		Used to control of adult mosquitoes.	
Thiamethoxam 00.01 % w/w Gel Bait			
Common Name of the Insect/Pest	Dose (g a.i.)	Formulation Dose	Application/Usage
Black Carpenter Ants (<i>Camponotus</i> spp.)	0.0001 g.a.i. per spot (2-4 spots per square meter)	1.0 gm of gel bait per spot (2-4 spots per square meter)	Locate the ant trails or location where ants are most active. Place” Ready to Use Gel Bait” (RB) for controlling ants for use as spot or cracks and crevices treatment in residential, Institutional, commercial and industrial areas e.g. application at or near harborage or aggregation areas, such as corners areas where ants forage or crack and crevices, holes, hidden surfaces any other places where ants are typically known to hide.
Transfluthrin 0.08 % w/w Aerosol			
Ready to use household insecticide		Used to control in household Mosquitoes(<i>Aedes aegypti</i> , <i>Culex quinquefasciatus</i>) and Housefly (<i>Musca domestica</i>).	
Transfluthrin 00.88 % & 01.60 % Liquid Vaporizer			
Ready to use household insecticide.		Used to control of Adult Mosquitoes and House fly.	
Transfluthrin 01.60 % Liquid Vaporizer (For 30 Nights (25 ml)			
Ready to use household insecticide.		Used to control of Adult Mosquitoes.	

Transfluthrin 20 % w/w MV Gel	
Ready to use household insecticide.	Used to control of Mosquitoes in the house.
Transfluthrin 00.03 % w/w Mosquito Coil	
Ready to use household insecticide	Used for controlling/repelling of Mosquitoes in the house
Transfluthrin 01 % EU (Smoke generator)	
Use / recommendation	It is used for controlling/repelling adult mosquitoes in the houses (Effective for 6 hrs.)
Transfluthrin 01.20 % Liquid Vaporizer (For 60 Nights (45 ml) & 90 nights (67 ml.))	
Ready to use household insecticide	Used to control of adult mosquitoes
Transfluthrin 12 % AE	
Ready to use household insecticide.	Used to controlling/ repelling of adult mosquitoes in the houses (effective for 12 hours)
Zinc Phosphide 01 % bait (Household Product)	
To be ready to use household insecticide	To control Rats

Ad-hoc approval of molecules for Fall Army Worm (FAW) up to 31.12.2021

Sr. No.	Molecule	Dose/ha (ml/g a.i.)
1	Chlorantraniliprole 9.3 % + Lambda-cyhalothrin 4.6 %ZC	35 (23.42 + 11.58) g.a.i/ha
2	Cyantraniliprole 19.8 % + Thiamethoxam 19.8 % FS	2.38 g.a.i/kg seed (1.19+1.19)

3	Spinetoram 11.7 % w/w SC	30 g.a.i/ha
4	Chlorantraniliprole 18.5 % SC	40 g.a.i/ha
5	Emamectin benzoate 5 % SG	200 g a.i./ha
6	Emamectin benzoate 5 % + Lufenuron 40% WG	36 g.a.i/ha
7	Thiodicarb 75 % WP	750 g.a.i/ha
8	Novaluron 5.25 % + Emamectin benzoate 0.9 % w/wSC	78.75+13.5 g.a.i/ha
9	Bio-pesticide as below <i>Metarhizium anisopliae</i> , <i>Metarhizium rileyi</i> (<i>Nomuraea rileyi</i>), <i>Beauveria bassiana</i> , <i>Verticilliumlecanii</i>	1 × 10 ⁸ CFU/g @ 5 g/litre whorl application. Repeat after 10 days if required.
10	<i>Bacillus thuringiensis</i> ver. <i>Kurstaki</i> , NPV	@ 2 g/l (or) 400 g/acre.

Recommended chemicals by FAO for Locust Control

Sr. No.	Chemical	Dose (gram activeingredient per ha.)	
		Hoppers	Adults
1	Chlorpyriphos 20 % & 50 % EC	240	240
2	Deltamethrin 2.8 % EC & 1.25 % ULV	12.5	12.5
3	Diflubenzuron 25 % WP	60	NA
4	Fipronil 5 % SC & 2.92 % EC	6.25	6.25
5	Lambdacyhalothrin 5 % EC & 10% WP	20	20
6	Malathion 50 % EC & 25 % WP & 96 %ULV	925	925
7	Fenitrothion is also recommended for the control of locust but only in scheduled desert area and public health but banned in agriculture.(refer copy of Gazette of India, S.O.706 (E) dated 03 rd May, 2007)		
8	Powder formulations are approved (RC-413) for control of desertlocust in Scheduled Desert Area: - 1. Fenvalerate 0.4 % DP 2. Malathion 5 % DP 3. Quinalphos 1.5 % DP		

**Ad-hoc approval of molecules for Pink Stem Borer/Army worm in Wheat
for (N – W India) Punjab state only
(Valid up to 13.10.2022)**

Sr. No.	Name of Chemical	Dose
01	Chlorpyriphos 20% EC	2.5l/ha.
02	Chlorantraniliprole 18.5% SC	125ml/ha.
03	Fipronil 0.3% GR	17.5kg/ha. Mixed with 125kg. of sand / soil & apply (broadcast) in moist wheat field



Government of India
Ministry of Agriculture & Farmers Welfare
Department of Agriculture & Farmers Welfare
Directorate of Plant Protection, Quarantine & Storage
Central Insecticide Board & Registration Committee N.H.-IV,
Faridabad-121 001 (Haryana)

MAJOR USES OF PESTICIDES
(Registered under the Insecticides Act, 1968)

(UPTO - 31/05/2022)

(Based on certificate issued)

Disclaimer: The document has been compiled on the basis of available information for guidance and not for legal purposes.

FUNGICIDES

1. Fungicides single product formulations use (Page No. – 02 to 32).
2. Fungicides combination uses (Page No. – 33 to 50)

1. Fungicides single product formulations use					
Crop	Common name of the disease	Dosage per ha			Waiting period from last application to harvest (in days)
		a. i. (g)	Formulation (g/ml)/%	Dilution in water (L)	
Amisulbrom 20% SC					
Potato	Late blight (<i>Phytophthora infestans</i>)	100	500	375-500	19
Grape	Downy mildew (<i>Plasmopara viticola</i>)	75	375	400-1000	59
Azoxystrobin 23% SC					
Grapes	Downy mildew, Powdery mildew	125 gm	500 ml	500-750	7
Chilli	Fruit rot, Powdery mildew	125 gm	500 ml	500-750	5
Mango	Anthrachnose, Powdery mildew	0.025%	0.1%	100 ml/ 100 Ltr. (depending upon size of tree)	5
Tomato	Early & Late blight	125 gm	500 ml	500	3
Potato	Late Blight	0.025% (125) gm	500 ml	500	12
Cucumber	Downy mildew, Powdery mildew	125 gm	500	500	5
Cumin	Blight & Powdery mildew	115 gm	500	500	28
Pomegranate	Leaf & Fruit spot	0.023%	0.1%	500 L/ha (or depending on size of tree)	5
Aureofungin 46.15% w/v SP					

Paddy(Rice)	Blast, Brown leaf spot	-	0.005%	500	30
Grapes	Downy mildew	-	0.005%	750	15
	Anthraco nose	-	0.05%	750	
Citrus	Gummosis	-	1.0%	750 (Soil drench)	30
Apple	Powdery mildew	-	0.005%	10 lit./tree	30
	White root rot	-	0.2%	5-10 injection 2 gm/tree	
Potato	Early blight	-	0.005%	750	30
Bitertanol 25% WP					
Groundnut	Rust	250 gm	1000 gm	500	30
	Tikka	250 gm	1000 gm	500	30
Wheat	Karnal bunt	560 gm	2240 gm	750	-
Bupirimate 26.7% w/w EC					
Rose	Powdery mildew	1000	4000	1000	5
Captan 50% WG					
Chillies	Fruit rot (Anthraco nose)	750 gm	1500 gm	500	5
Potato	Early blight & Late blight	750 gm	1500 gm	500	21
Captan 50% WP					
Apple	Scab	1250 gm	2.5 kg	750-1000	-
Cherry	Brown rot	1250 gm	2.5 kg	750-1000	-
Grapes	Downey mildew	1250 gm	2.5 kg	750-1000	-
Potato	Early blight	1250 gm	2.5 kg	750-1000	-
	Late blight	1250 gm	2.5 kg	750-1000	-
Tomato	Early blight	1250 gm	2.5 kg	750-1000	-

	Late blight	1250 gm	2.5 kg	750-1000	-
Captan 75% WP					
Apple*	Scab, Fly speck & Bitter rot	0.12%**	1667 gm	15-20**	8
Cherry	Brown rot	0.12%**	1667 gm	15-20**	NA
Grape	Downy mildew	1250 gm	1667 gm	1000	8
Cabbage/ Cauliflower, Tomato, Brinjal, Chillies, Beans, Ornamental	Damping off (Nursery)	0.25%	2500 gm	1000 Soil drench in the nursery	NA
Potato	Early blight	1250 gm	1667 gm	1000	8
	Late blight	1250 gm	1667 gm	1000	8
Tomato	Early blight	1250 gm	1667 gm	1000	6
	Late blight	1250 gm	1667 gm	1000	6
Chillies	Early blight	1250 gm	1667 gm	1000	8
	Fruit rot	1500 gm	2000 gm	1000	8
Citrus	Brown rot	0.25**	2500 gm	15-20**	NA
	Scab	0.12**	1667 gm	15-20**	NA
Rose	Black spot	1250 gm	1667 gm	1000	NA
Paddy(Rice)	Leaf spot	750 gm	1000 gm	750	NA
Captan 75% WS					
Chillies (soil drench)	Damping off (soil drench)	15-25 gm per kg seed	20-30 gm per kg seed	1	
Cabbage	Damping off (soil drench)	15-25 gm per kg seed	20-30 gm per kg seed	1	
Tomato	Damping off (soil drench)	15-25 gm per kg seed	20-30 gm per kg seed	1	
Tobacco	Damping off (soil drench)	15-25 gm per kg seed	20-30gm per kg seed	1	
Carbendazim 5% GR					
Paddy (Rice)	Brown leaf spot	0.62 kg	12.5 kg	-	
Carbendazim 46.27% SC					

Grape	Powdery mildew	0.046 % or 46 g /100 lit. water	0.1% or 100 ml/100 lit. Water	As required	30
Mango	Powdery mildew	0.046% or 46 g/100 lit. water	0.1% or 100 ml/100 lit. Water	As required	15
Carbendazim 50% WP					
Paddy (Rice)	Blast	125-250 gm	250-500gm	750	(wet slurry treatment)
	Sheath blight	1gm/ kg seed	2 gm/ kg seed	1Lit./10 kg seed	(wet slurry treatment)
	Aerial phase	125-250 gm	250-500gm	750	(wet slurry treatment)
Wheat	Loose smut	1gm/kg seed	2 gm/kg seed	1Lit./10 kg seed	(wet slurry treatment)
Barley	Loose smut	1 gm/kg seed	2 gm/kg seed	1Lit./10 kg seed	(wet slurry treatment)
Tapioca	Set rot	0.5gm	1	1	-
Cotton	Leaf spot	125	250	750	-
Jute	Seedling blight	1 gm / kg seed	2 gm/kg seed	1Lit./10 kg seed	(wet slurry treatment)
Groundnut	Tikka leaf spot	112.5 gm	225 gm	750	-
Sugar beet	Leaf spot	100 gm	200 gm	400	-
	Powdery mildew	100 gm	200 gm	400	-
Peas	Powdery mildew	125 gm	250 gm	600	-
Cluster Beans	Powdery mildew	175 gm	350 gm	750	-
Cucurbits	Powdery mildew	150 gm	300 gm	600	-
	Anthrachnose	150 gm	300 gm	600	-
Brinjal	Leaf spot	150 gm	300 gm	600	-
	Fruit rot	150 gm	300 gm	600	-
Apples	Scab	1.25 gm	2.5 gm	10Lit./tree	-
Grapes	Anthrachnose	150 gm	300 gm	600	-
Walnut	Downy leaf spot	1.5 gm	3 gm	10 Lit./tree	-

Rose	Powdery mildew	0.5 gm	1 gm	2	-
Ber	Powdery mildew	5 gm	10 gm	10 Lit./tree	-
Chillies	Damping Off	1 gm/kg seed	2 gm/kg seed	1 Lit./tree	(wet slurry treatment)
Moong	Powdery mildew	250	500	750	-
	Leaf spot & Web blight	125-250	250-500	750	-
Cow Pea	Leaf Spot	150	300	600	-
	Collar rot	150	300	600	-
	Anthravnose	150	300	600	-
	Powdery Mildew	150	300	600	-
Tobaco	Frog eye spot	112.5	225	750	-
	Anthravnose	112.5	225	750	-
Carboxin 75% WP					
Wheat	Flag smut	1.5 -1.875 gm/ kg seed	2-2.5 gm/ kg seed	N/A	Only one time seed treatment required
	Loose smut	1.5 - 1.875 gm/ kg seed	2-2.5gm/kg seed	N/A	Only one time seed treatment required
	Bunt	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kg seed	N/A	Only one time seed treatment required
Barley	Loose smut	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kg seed	N/A	Only one time seed treatment required
	Covered smut	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kg seed	N/A	required
Cotton	Angular Leaf spot	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kg seed	N/A	Only one time seed treatment
Carpropamid 27.8% SC					
Rice (Paddy)	Blast	0.03%	0.1%	300-500 depending upon crop stage	-
Chlorothalonil 75% WP					

Groundnut	Tikka leaf spot	0.66 - 0.863	0.88-1.150	600-800	14
	Rust	0.66 - 0.863	0.88-1.150	600-800	14
Potato	Early & Late blight	0.66 - 0.937	0.875-1.250	600-800	14
Apple	Scab	0.150% (150gm/10 Ltr. water)	0.200% (200gm/100 water)	10 Ltr. water per tree	45
Grapes	Anthrachnose and Downy mildew	0.15%(150 gm/100 Ltr. water)	0.2%(200gm/ 100L water)	100	60
Chilli	Fruit rot	600	800	750	10
Cauliflower	Leaf spot	1.5 g a.i./Ltr.	2.0 g/Ltr.	500	3
Watermelon	Downy mildew and Leaf spot	1.5 g a.i./Ltr.	2.0 g/Ltr.	500	3
Copper Oxychloride 50% WG					
Grape	Downy mildew	0.12% or 120 g/100Ltr. water	0.24% or 240g/100 Ltr. water	As required depending upon PP equipment used	30
Mango	Anthrachnose	0.12% or 120g/100 Ltr. water	0.24% or 240g/100 Ltr. water	As required depending upon PP equipment used	10
Copper oxychloride 50% WP					
Citrus	Leaf spot	1.25	2.5	750-1000	-
	Canker	1.25	2.5	750-1000	-
Chillies	Leaf spot	1.25	2.5	750-1000	-
	Fruit rot	1.25	2.5	750-1000	-
Betel	Foot rot	1.25	2.5	750-1000	-
	Leaf spot	1.25	2.5	750-1000	-
Banana	Fruit rot	1.25	2.5	750-1000	-
	Leaf spot	1.25	2.5	750-1000	-
Coffee	Black rot	1.87-3.75	3.75-5.5	750-1000	-
	Rust	1.87-3.75	3.75-5.5	750-1000	-
Potato	Early blight	1.25	2.5	750-1000	-

	Late blight	1.25	2.5	750-1000	-
Tobacco	Downy mildew	1.25	2.5	750-1000	-
	Black Sank	1.25	2.5	750-1000	-
	Frog eye leaf	1.25	2.5	750-1000	-
Tomato	Early blight	1.25	2.5	750-1000	-
	Late blight	1.25	2.5	750-1000	-
	Leaf spot	1.25	2.5	750-1000	-
Grapes	Downy mildew	1.25	2.5	750-1000	-
Coconut	Bud rot	1.25	2.5	750-1000	-
Cardamom	Clump rot	1.87-3.75	3.75-5.5	750-1000	-
	Leaf spot	1.25	2.5	750-1000	-
Copper Hydroxide 53.8% DF					
Potato	Late blight	525	1500	500	22
Grape	Downy mildew	525	1500	1000	12
Chilli	Anthraxnose	350	1000	500	5
Rice (Paddy)	False smut, Bacterial leaf blight	525	1500	500	10
Copper Hydroxide 77% WP					
Rice (Paddy)	False smut	1000 gm	2000 gm	750	-
Copper Sulphate 2.62% SC					
Tomato	Early blight and Late blight	-	1 litre	500	3 days
Potato	Early blight and Late blight	-	1 litre	500	3 days
Chilli	Fruit rot (anthracnose)	-	1 litre	500	3 days
Grape	Downy mildew	-	1 litre	500	3 days
Cyflufenamid 5% EW					
Chilli	Powdery mildew (<i>Leveillula taurica</i>)	15	300	375-500	5
Grapes	Powdery mildew (<i>Uncinula necator</i>)	25	500	400-1000	25

Cymoxanil 50% WP					
Grapes	Downey mildew	0.12%	0.24% or 240 gm/100 ltr. water	As required depending upon the crop stage and equipment used	15
Cyazofamid 34.5% SC					
Potato	Late blight	80 g	200 ml	500	27
Tomato	Late blight	80 g	200 ml	500	3-5
Grapes	Downy mildew	80 g	200 ml	500	7
Difenoconazole 3% WS					
Wheat	Loose smut	6.0	200	This is used as seed dresser	This is used as seed dresser
Difenoconazole 25% EC					
Apple	Scab	0.004% or 4 g/100 ltr. water	0.015% or 15ml/100 ltr. water	As required depending upon the size of the plant and plant protection equipment used	14
Paddy (Rice)	Sheath blight	0.0125% or 12.5g/100 ltr. water	0.05% or 50 ml/100 ltr. water	500	25
Chilli	Die-back, Fruit rot	0.0125% or 12.5g/100 ltr. water	0.05% or 50 ml/100 ltr. water	500-1000 (as per the size of plant)	15
Cumin	Blight, Powdery mildew	0.0125% or 12.5 g/100 ltr.. water	0.05% or 50 ml/100 ltr.. water.	500	15
Onion	Purple blotch	0.025% or 25 g/100 ltr. water	0.1% or 100 ml/100 ltr.. water.	500	20
Pomegranate	Fruit rot	0.025% or 25g/100ltr. water	0.1% or 100 ml/100 ltr. water.	500	7
Grape	Anthraco nose, Powdery mildew	0.0075% or 7.5 g/100 ltr. water	0.03% or 30ml/100 ltr. of water	500	10

Groundnut	Leaf spot, rust	0.025% or 25g/100 ltr. water	0.1% or 100 ml/100 ltr..water.	As required depending upon the size of the plant and plant protection equipment used	34
Dimethomorph 50% WP					
Grapes	Downy mildew	500 gm	1000 gm	750 L	25
Potato	Late blight	500 gm	1000 gm	750 L	16
Dinocap 48% EC					
Mango	Powdery mildew	2.4 gm	5gm	10	-
Rose	Powdery mildew	0.96 gm	2ml	10 lit. water	-
Dithianon 75% WP					
Apple	Scab	1350 gm	1800 gms	2400 L	14-21
Dodine 40% SC					
Apple	Alternaria leaf blight/Blotch	0.05	0.075	10 ltr. / tree	21
	Premature leaf fall	0.05	0.075	10 ltr./ tree	21
Dodine 65%WP					
Apple	Scab	0.05%	0.075%	10	21
Ediphenphos 50% EC					
Paddy (Rice)	Blast	250-300	500-600	750-1000	21
	Brown leaf spot	250-300	500-600	750-1000	21
Flusilazole 40% EC					
Rice (Paddy)	Sheath blight	120g a.i./ha	300 ml/ha	500	24
Chilli	Powdery mildew	40-60 g a.i/ha	100-150 ml/ha	500	5
Fluxapyroxad 333 g/l FS					
Sorghum	Anthrachnose	0.33	1.0 ml/kg seed	Sufficient to coat the seeds uniformly	N.A(Seed Dresser)
Soybean	Rhizoctonia root rot,	0.33	1.0 ml/kg seed	Sufficient to coat the seeds	N.A (Seed Dresser)

	Cotyledonary spot			uniformly	
Cotton	Seedling Disease	0.49	1.5 ml/kg seed	Sufficient to coat the seeds uniformly	N.A (Seed Dresser)
Fosetyl-AL 80% WP					
Grapes	Downey mildew	1120- 1600 gm	1400- 2000 gm	750-1000	30
Cardamom	Azukhal Disease and Damping off	1800-2400 gm	2250-3000 gm	750-1000	90
Hexaconazole 0.5% GR					
Rice	Sheath blight & Sheath rot	50 gm	10 kg	Not applicable	38
Hexaconazole 2% SC					
Chillies	Powdery mildew & Fruit rot	60 gm	3.0 L	500	7
Potato	Early blight & Late blight	60 gm	3.0 L	500	21
Grapes	Powdery mildew	30-60 gm	1.5-3.0 L	500-750 depending upon crop canopy	14
Hexaconazole 5% EC					
Apple	Scab	0.0025%	0.05% (50ml/100lt)	As required	30
Rice (Paddy)	Blast, Sheath blight	50gm	1000 ml	500	40
Groundnut	Tikka leaf spot	75gm	1500 ml	500	30
Mango	Powdery mildew	0.005% (5g/100 lit)	0.1% (100ml/100 lt)	As required	30
Soybean	Rust	0.005% (5g/100 lit)	0.1% or (100ml/100 lit)	As required	30
Tea	Blister blight	10 gm	200 ml	70-90 with power sprayers, 175-200 with knap Sack sprayer	7
Grapes	Powdery mildew	25-50 gm	500-1000 ml	500	14
Hexaconazole 5% SC					

Mango	Powdery mildew	0.01% (10 g/100 lt. water)	0.2% or (200 ml/100 lt. water)	As required depending on size of tree and plant protection equipment used.	27
Rice (Paddy)	Sheath blight	0.01% (10 g/100lt. water)	0.2% or (200 ml/100 lt. water)	As required depending on size of tree and plant protection equipment used.	40
Grapes	Powdery mildew	25-50 gm	500-1000	500	14
Hexaconazole 75% WG					
Paddy (Rice)	Sheath blight & Sheath rot	50	66.7	500	30
Groundnut	Tikka leaf spot, rust	50	66.7	500	31
Chilli	Leaf spot, anthracnose, Powdery mildew	50	66.7	500	7
Iprodione 50% WP					
Rapeseed/ Mustard	Alternaria blight	1.125Kg -1.5 kg	2.25kg-3kg	750-1000	50
Rice (Paddy)	Sheath blight	1.125kg	2.25kg	750	35
Tomato	Early blight	0.75kg	1.5kg	500	15
Grapes	Anthracnose	0.5-1.0 kg	1.0–2.0kg	500	20
Isoprothiolane 40% EC					
Rice (Paddy)	Blast	300	750	500-1000	60
Kasugamycin 3% SL					
Rice (Paddy)	Blast	30-50 gm 0.030% 0.050%	1000-1500 ml	750-1000	30
Tomato	Early blight	30-37.5 0.03- 0.0375%	1000-1250 ml	500-600	03
Kitazin 17% GR					
Rice (Paddy)	Blast	0.5 kg	3 kg	Not applicable	15 days
Kitazin 48% EC					

Rice (Paddy)	Blast, Sheath blight	0.10% or 100 gram in 100 ltr. of water	0.20% or 200 ml in 200 lit.of water	As required depending upon crop stage and plant protection equipment used	15
Chilly	Fruit rot /die- back	0.10% or 100 gram in 100lit. of water	0.20% or 200 ml in 200 lit. of water	As required depending upon crop stage and plant protection equipment used	3
Tomato	Early blight	0.10% or 100 gram in 100lit. of water	0.20% or 200 ml in 200 lt. of water	As required depending upon crop stage and plant protection equipment used	5
Potato	Early blight	0.10% or 100 gram in 100 lit. of water	0.20% or 200 ml in 200 lit. of water	As required depending upon crop stage and plant protection equipment used	48
Onion	Purple blotch	0.10% or 100 gram in 100lit. of water	0.20%or 200 ml in 200 lt. of water	As required depending upon crop stage and plant protection equipment used	63
Pomegranate	Anthrachnose	0.10% or 100 gram in 100lit. of water	0.20% or 200 ml in 200 lt. of water	As required depending upon crop stage and plant protection equipment used	10
Grape	Anthrachnose	0.10% or 100 gram in 100 lit. of water	0.20% or 200 ml in 200 lit.of water	As required depending upon crop stage and plant protection equipment used	15
Kresoxim-methyl 44.3% SC					
Paddy (Rice)	Blast, Sheath blight	250gm	500 ml	500	30

Grapes	Powdery mildew, Downey mildew	300-350 gm	600-700ml	500	7
Chillies	Powdery mildew, Fruit rot , die back, twig blight	250	500	500	25
Soybean	Rust	250	500	500	25
Potato	Early blight & late blight	250	500	500	25
Cotton	Leaf spot, Grey mildew	250	500	500	25
Wheat	Rust, Leaf blight	250	500	500	25
Maize	Turcicum leaf blight, Rust	250	500	500	25
Lime Sulphur 22% SC					
Apple	Scale, Powdery mildew	0.22%	The liquid is used at 1% in conventional sprayers.		2% pre & 1% post blossom
Cherry	Leaf spot	0.44-1.10/ha	2-5 lit/hectare		3 applications after petal fall , 2 weeks later & after harvest
Grapes	Powdery mildew	0.44-1.10/ha	2-5 lit/hectare		February followed by 2 dusting in summer
Pear	Black spot	0.44-1.10/ha	2-5 lit/hectare		At whit bud, Petal fall
Plum	Black spot	0.44-1.10/ha	2-5 lit/hectare		Delayed dormant spray
Rose	Powdery mildew	0.44-1.10/ha	2-5 lit/hectare		Delayed dormant spray
Bean	Rust	0.22%	The liquid is used at 1% in conventional sprayers.		2% pre & 1% post blossom
Peach	Powdery mildew	0.44-1.10/ha	2-5 lit/hectare		Only one

					application before the buds swell, 3 pre harvest application
Mancozeb 35% SC					
Tomato	Early blight & Late blight	0.175% or 175 gm/100 Lt. water	0.5% or 500 gm/100 lt. water	500 Lt. Water or as required depending upon crop stage and equipment used	10
Potato	Early blight & Late blight	0.175% or 175 gm/100 Ltr. water	0.5% or 500 gm/100 lt. water	500 Lt Water or as required depending upon crop stage and equipment used	35
Mancozeb 75% WG					
Tomato	Early blight	750 gm	1000 gm	500 Ltr.	5-6
Potato	Late blight	750gm	1000gm	500 Ltr.	3-5
Apple	Scab, Pre-mature leaf fall, Alternaria spot/blight, sooty blotch	18.75-22.5/tree	25-30/tree	10 L/tree	40
Mancozeb 75% WP					
Wheat	Brown& black rust, Blight	1.125-1.5 kg	1.5-2kg	750 Ltr..	-
Maize	Leaf blight, Downy mildew	1.125-1.5 kg	1.5-2kg	750 Ltr.	-
Paddy (Rice)	Blast	1.125-1.5 kg	1.5-2kg	750 Ltr.	-
Jowar	Leaf spot	1.125-1.5 kg	1.5-2kg	750 Ltr.	-
Potato	Late blight, Early blight	1.125-1.5 kg	1.5-2kg	750 Ltr.	-
Tomato	Late blight, Buck eye rot, Leaf spot	1.125-1.5 kg	1.5-2kg	750 Ltr.	-
Chilies	Damping off	2.25 g	3 g (soil drench)	1000 Ltr.	-
	Fruit rot, Ripe rot, Leaf spot	1.125-1.5 kg	1.5-2 kg	750 Ltr.	-

Cauliflower	Collar rot	2.25 gm	3gm	1000 Ltr.	-
	Leaf spot	1.125-1.5 kg	1.5-2 kg	750 Ltr.	-
Groundnut	Tikka disease & rust	1.125-1.5 kg	1.5-2 kg	750 Ltr.	-
	Collar rot, Leaf spot	18.75 to 22.50/ 10 kg seed	25 to 30/ 10 kg seed	0.1 (water slurry)	-
Grapes	Angular leaf spot, Downy mildew, Anthracnose	1.125-1.5 kg	1.5-2 kg	750 Ltr.	-
Guava	Fruit rot	15 g/tree	20 g/tree	10 Ltr.	-
Banana	Cigar end rot, Tip rot, Sigatoka leaf spot	1.125-1.5 kg	1.5-2kg	750 Ltr.	-
Apple	Scab & sooty blotch	22.5 g /tree	30 gm/tree	10 Ltr.	-
Cumin	Blight	1.125-1.5 kg	1.5-2 kg	500 Ltr.	-
Mandipropamid 23.4% SC					
Grapes	Downy mildew	0.2 ml/Ltr.	0.8 ml/Ltr.	500-1000	5
Potato	Late blight	0.2 ml/Ltr.	0.8 ml/Ltr.	500-750	40
Tomato	Late blight	0.02% or 0.2 ml/Ltr.	0.08% or 0.8ml/Ltr.	500	5
Meptyl Dinocap 35.7% EC					
Grapes	Powdery mildew	108-120	308.6-342.8	750-1000	30
Chillies	Powdery mildew	108-120	308.6-342.8	500-750	7
Mango	Powdery mildew	108-120	308.6-342.8	1000	7
Pea	Powdery mildew	108-120	308.6-342.8	500	7
Metalaxyl-M 31.8% ES					
Maize	Downey mildew	0.76	2.4		3.5-4 months
Chilli	Damping Off	0.64	2.0		used as seed dresser

Tomato	Damping Off	0.64	2.0		used as seed dresser
Pearl millet	Downey mildew	0.64	2.0		76
Sorghum	Downey mildew	0.64	2.0		114
Sunflower	Downey mildew	0.64	2.0		90
Mustard	Downey mildew and White rust	1.11	3.5		used as seed dresser
Metalaxyl 35% WS					
Maize	Sorghum Downy mildew, Sugarcane downy mildew, Phillippine Downy mildew, Brown stripe downy mildew	Slurry seed treatment with 240g/100 kg seed	700g/100 Kg seed	0.75-1.0/100 Kg seed	3½-4 months Depending on the variety
Bajra	Downy mildew	Slurry seed treatment with 200g/100 Kg seed	600g/100 Kg seed	0.75-1.0/100kg seed	3-3½ months Depending on the variety
Sorghum	Downy mildew	Slurry seed treatment with 200g/100 Kg seed	600g/100 Kg seed	0.75-1.0/100kg seed	3½-4months Depending on the variety
Sunflower	Downy mildew	Slurry seed treatment with 200g/100 Kg seed	600g/100 Kg seed	0.75-1.0/100kg seed	3½-4months Depending on the variety
Mustard	White rust	Slurry seed treatment with 200g/100 Kg seed	600gm/100 Kg seed	0.75-1.0/100kg seed	3½-4months Depending on the variety
Metiram 70% WG					
Tomato	Alternaria blight	1750gm	2500gm	500-750 Lt.	6

Groundnut	Tikka	1400gm	2000gm	500-750 Lt.	16
Potato	Late blight, Early Blight	1400 gm	2000 gm	500-750 Lt	17
Grape	Downey mildew	1400 gm	2000 gm	500-750 Lt	07
Rice (Paddy)	Blast and Brown spot	1050-1400	1500-2000	500	51
Metrafenone 500 g/l SC					
Grape	Powdery mildew	125	250	750	22
Mango	Powdery mildew	200	0.2ml/l	1000	35
Apple	Powdery mildew	187.5	0.15ml/l	2500	42
Cucumber	Powdery mildew	125	250	500	35
Myclobutanil 10% WP					
Apple	Scab	0.004%	0.04%	10 lit/ tree	21
Grape	Powdery mildew	0.004%	0.04%	500 lit/ha	15
Chilies	Powdery mildew, Leaf spot, Die-back	0.004%	0.04%	500 lit/ha	03
Oxathiapiprolin 10.1% OD					
Potato	Late blight	20	200	500	22 days
Grapes	Downey mildew	40	400	1000	5 days
Penconazole 10% EC					
Grapes	Powdery mildew	0.005% or 5 gm/100 Ltr. water	50ml/100 Ltr. water	Depending upon the requirement	30
Apple	Scab	0.005% or 5 gm /100 Ltr. water	50ml/100 Ltr. water	10 Ltr. Water per tree	30
Mango	Powdery mildew	0.005% or 5 gm/100 Ltr. water	50ml/100 Ltr. water	10 Ltr. Water per tree	30

Pulses (Black gram /Green gram)	Powdery mildew	0.005% or 5 gm/100 Ltr. water	50ml/100 Ltr. water	500 Ltr./ha	30
Penflufen 22.43% FS					
Potato	Black Scurf	0.02	0.083	83	800 kg seed tubers of potato are dipped in the solutions of fungicide for 10 minutes. Tubers after treatment are dried in shade and then sown.
Pencycuron 22.9% SC					
Rice (Paddy)	Sheath blight	150-187.5 gm	600-750 ml	500	69
Potato tuber	Black scurf	0.0625- 0.125	0.25-0.50	-	78
Picoxystrobin 22.52% w/w SC					
Rice (Paddy)	Rice blast	150	600	500	12
Grape	Downey mildew, Powdery mildew	100	400	750-1000	7
Soybean	Rust(<i>Phakopsora pachyrhizi</i>) Leaf spot (<i>Cercospora kikuchii</i> & <i>Alternaria alternata</i>)	100	400	500	25
Cumin	Cumin blight (<i>Alternaria burnsii</i>)	100	400	500	20
Polyoxin D Zinc Salt 5% SC					
Grape	Powdery Mildew	30 gm	600 gm	500 - 1000	0
Rice	Sheath Blight	30 gm	600 gm	500	0
Prochloraz 39.6% w/w EC					

Rice	Blast	450	1000	500	26
Propiconazole 25% EC					
Wheat	Karnal bunt (<i>Neovossia indica</i>)	125gm	500gm	750	30
	Leaf rust / Brown Rust (<i>Puccinia recondite F.sp. tritici</i>)	125gm	500gm	750	30
	Stemrust (<i>B.graminisf.sp . tritici</i>)	125gm	500gm	750	30
	Stripe rust /Yellow Rust (<i>P. striiformis</i>)	125gm	500gm	750	30
Rice (Paddy)	Sheath blight (<i>Rhizoctoniasol ani f.sesakii</i>)	125gm	500gm	750	30
Groundnut	Earlyleaf spot (<i>Cercospora arachidicola</i>)	125gm	500gm	750	15
	Lateleaf spot (<i>C. personata</i>)	125gm	500gm	750	15
	Rust (<i>Puccinia arachidis</i>)	125gm	500gm	750	15
Tea	Blister blight	31.25-62.50gm	125-250gm	175-250	7
Soyabean	Rust(<i>Phakopsoa pachyrrhizi</i>)	125gm	500gm	500	26
Cotton	Alternaria leaf spot	125gm	500gm	500	23
Propineb 70% WP					
Apple	Scab	0.21% or 210 g/100 Ltr. water	0.30% or 300 gram/100 Ltr. water	As required depending upon size of the tree and plant protection equipment used	30

Pomegranate	Leaf and Fruit spots	0.21% or 210 g/100 Ltr. water	0.30% or 300 gram/100 Ltr. water	As required depending upon size of the tree and plant protection equipment used	10
Potato	Early & Late blight	0.21% or 210g/100 Ltr. water	0.30% or 300 gram/100 Ltr. water	As required depending upon crop stage and plant protection equipment used	15
Chilli	Die-back	0.21% or 210 g/100 Ltr. water	0.5% or 500 gram/100 Ltr. water	As required depending upon crop stage and plant protection equipment used	10
Tomato	Buck eye rot	0.21% or 210 g/100 Ltr. water	0.30% or 300 gram/100 Ltr. water	As required depending upon crop stage and plant protection equipment used	10
Grapes	Downy mildew	0.21% or 210 g/100 Ltr. water	0.30% or 300 gram/100 Ltr. water	As required depending upon crop stage and plant protection equipment used	40
Rice (Paddy)	Brown leaf spot and Narrow leaf spot	1050 to 1400 g	1500 to 2000 g	Use 500 Litre spray volume/hectare	-
Cotton	Alternaria leaf spot	875-1050	1250-1500	500 Ltr./ha	27
Pyraclostrobin 20% WG					
Tomato	Early blight	75-100 gm	375-500gm	500	3
Soybean	Frog eye leaf spot (Cercospora) & Alternaria leaf	75-100	375-500	500	26

	spot				
Cotton	Alternaria Leaf blight	100	500	500	14
Groundnut	Tikka disease	100	500	500	29
Corn	Turcicum leaf blight	100	500	500	40
Banana	Sigatoka leaf spot	150	750	500	103
Chilli	Anthravnose	100	500	500	3
Pyraclostrobin 100 g/l CS					
Paddy (Rice)	Blast Disease	100	1000	500	18
(Streptomycin Sulphate 90% + Tetracylin Hydrochloride 10%) SP					
Apple	Fire blight	-	Spray Streptocycline 25 to 50 ppm solution at 20 to 30% bloom. It is advisable to spray trees every 3 to 4 days during blossom time.	-	-
Beans	Halo blight	-	Spray Streptocycline 100 to 150 ppm solution thrice at interval of 7 days. For prevention apply first spray 10 days after emergence of leaf.	-	-
Citrus	Citrus canker	-	Spray Streptocycline 50 to 100 ppm solution repeatedly at an interval of 15 to 20 days after the	-	-

			appearance of new growth. Cover the foliage and young fruits fully.		
Potato	Blackleg And soft rot, bacterial brown wilt or ring or The bangle Disease of potato	-	Seeds treatment: Prior to planting soak potato seed tubers in streptocycline 40 to 100 ppm solution for half an hour. Spray: Two to three sprays of 40 to 50 ppm Solution at an interval of 20 days. First spray 30 days after planting.	-	-
Tobacco	Wildfire	-	Spray Streptocycline 40 to 100 ppm solution at two leaf stage of the plant. Repeated application at an interval of 7 days is necessary till the plants get established in the field.	-	-
Tomato	Bacterial Leaf spot	-	Spray seedlings with streptocycline	-	-

			40 to100 ppm solution in seed beds and fields after the appearance of first true leaves two sprays of streptocycline, one before transplanting and another after are effective for controlling the disease.		
Paddy (Rice)	Bacterial Leaf blight	-	Seeds treatment: Prepare streptocycline 40 ppm solution and soak seeds for 12hours at room temperature before sowing. Seedling treatment: Dip the seedling in streptocycline 40 to100 ppm solution. The antibiotic will be absorbed through the injured roots and penetrate the vascular bundles insides the seedlings. Spray: Spray streptocycline 100 to 150 ppm solution	-	-

			at early root stage. Second spray, if necessary before grain set.		
Tea	Blister Blight	-	It is fungal Disease and can be controlled by spraying 40gms with 350 to 420 gms copper oxychloride (50% Wettable powder) in 67 liters of water per hectare with air blast sprayer, covering two rows on either side.	-	-
Sulphur 40% SC					
Beans	Powdery mildew	2.25-3.00 Kg	5.65-7.50 Kg	750-1000	-
Cumin	Powdery mildew	1.40 g	3.50 Kg	1000	-
Grapes	Powdery mildew	1.22 Kg	3.00 Kg	1000	-
Groundnut	Tikka leaf spot	2.25-3.00 Kg	5.65-7.50 Kg	750-1000	-
Mango	Powdery mildew	1.50-2.00 Kg	3.75-5.00 Kg	1000	-
Opium	Powdery mildew	1.16 Kg	3.00 Kg	1000	-
Peas	Powdery mildew	2.25-3.00 Kg	5.65-7.50 Kg	750-1000	-
Roses	Powdery mildew	1.50-2.00 Kg	3.75-5.00 Kg	1000	-
Sulphur 52% Flowable					
Pea	Powdery mildew	1.04 Kg	2.00 Ltr.	400	-

Chilli	Powdery mildew	1.04 Kg	2.00 Ltr.	400	-
Sulphur 55.16% SC					
Grapes	Powdery mildew	0.165% or 165 g/10 Ltr. water	0.30% or 300 ml/100 Ltr. water	As required	10
Mango	Powdery mildew	0.165% or 165g/10 Ltr. water	0.30% or 300 ml/100 Ltr. water	As required	10
Sulphur 80% WP					
Apple	Powdery mildew	2-4 kg	2.5-5.0 Kg	750-1000	-
Grapes	Powdery mildew	2-4 kg	2.5-5.0 Kg	750-1000	-
Groundnut	Tikka leaf spot	2-4 kg	2.5-5.0 Kg	750-1000	-
Cowpea, Moong/Urid	Powdery mildew	2.5 kg	3.13 Kg	750-1000	-
Pea	Rust	2.5 kg	3.13 Kg	750-1000	-
Sorghum	Grain smut	2.4-3.2 g/kg seed	3-4g/Kg seed	1Lt/10 kg seed	-
Chillies & Okra	Powdery mildew	2.5 kg	3.13 Kg	750-1000	-
Mango	Powdery mildew	2.5 kg	3.13 Kg	750-1000	-
Citrus	Powdery mildew	2.5 kg	3.13 Kg	750-1000	-
Sulphur 80% WDG					
Grapes	Powdery mildew	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-
Cowpea, Guar, Pea	Powdery mildew	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-
Cumin	Powdery mildew	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-
Apple	Scab	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-
Mango	Powdery mildew	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-
Wheat	Powdery mildew	2000	2500	500	24
Sulphur 85% DP					
Grape	Powdery mildew	12.75-17 kg	15-20 kg	-	-
Groundnut	Tikka leaf spot	12.75-17 kg	15-20 kg	-	-

Beans (Cowpea, moong, Urd)	Powdery mildew, Rust	12.75-17 kg	15-20 kg	-	-
Pea	Powdery mildew	12.75-17 kg	15-20 kg	-	-
Rubber	Powdery mildew	31.875 kg	37.50 kg	-	-
Cumin & Coriander	Powdery mildew	12.75-17 kg	15-20 kg	-	-
Tobacco (on ground)	Powdery mildew	85 kg	100 kg	-	-
Sorghum	Grain smut	2.55-3.40 g/kg of seed	3-4 g/kg of seed	-	-
Tebuconazole 2% DS					
Wheat	Loose smut, Flag smut	0.2 kg/10 kg seed	10 Lt/10 kg seed		
Groundnut	Collar rot, Root rot, Stem rot	0.2 to 0.25 kg/10kg seed	10 to 12.5Lt/10 kg seed		
Tebuconazole 5.36% FS					
Wheat	Loose smut	0.2	3.33/10 kg of seed	-	-
Tebuconazole 5.4% w/w FS					
Groundnut	Collar rot, Stem rot, Wilt	0.24 g/10 Kg of seed		-	Seed dresser
Chickpea	Root rot, Wilt	0.24 g/10 Kg of seed	4.0 ml/10 Kg of seed	-	Seed dresser
Wheat	Loose smut & flag smut	0.18 g/10 Kg of seed	3.0 ml/10 Kg of seed		Seed dresser
Tebuconazole 25.9% EC					
Chilli	Fruit rot, Powdery mildew	0.125- 0.1875 kg	0.500-0.750 lit	500	5
Groundnut	Tikka & rust	0.125- 0.1875 kg	0.500-0.750 lit	500	49
Rice (Paddy)	Blast, Sheath blight	0.1875 kg	0.750 lit	500	10
Onion	Purple blotch	0.1563- 0.1875	0.625-0.750	500	21

Soybean	Anthrachnose (pod blight)	0.1563	0.625	500	14
Black gram	Leaf spot, Anthrachnose	187.5	750	500	17
Tebuconazole 25% WG					
Chilli	Powdery mildew, fruit rot	0.125-0.1875	0.500-0.750	500	5
Groundnut	Tikka leaf spot, rust	0.125-0.1875	0.500-0.750	500	22
Rice (Paddy)	Blast	0.1875	750	500	10
Wheat	Yellow rust	0.1875	0.750	500	41
Onion	Purple blotch	0.1875	0.1875	500	10
Cumin	Alternaria blight & Powdery mildew	0.1875	0.750	500	28
Tebuconazole 38.39% w/w SC					
Wheat	Leaf blight	258	600	375-500	5
Cabbage	Alternaria leaf spot	258	600	375-500	5
Tetraconazole 3.8% w/w EW					
Grape	powdery mildew	25-30	625-750	500-1000	30
Mango	powdery mildew	50	1250	1000	24
Watermelon	powdery mildew	40	1000	500	12
Tea	Blister Blight	19	500	175	7
Tetraconazole 11.6% w/w (12.5% w/v) SL					
Cotton	Root rot (<i>Rhizoctonia</i>)	15	120	Sufficient to coat the seed	NA (Seed dresser)

	<i>solani</i>)			uniformly	
Thifluzamide 24% SC					
Rice (Paddy)	Sheath blight, (<i>Rhizoctonia solani</i>)	90gm	375 gm	500	28
Tomato	Early blight	120	500	500	7
Potato	Black Scurf	0.6g a.i./10 kg potato tuber	2.5ml/10 kg potato tuber	-	Used as seed treatment
Thiophanate Methyl 70% WP					
Papaya	Powdery mildew	500gm	715gm	750-1000	4-8
Apple	Scab	500gm	715gm	750-1000	3
Tomato	Ring rot	500gm	715gm	750-1000	7
Bottle gourd	Anthracnose	1000gm	1430gm	750-1000	1
Grapes	Powdery mildew, Anthracnose, Rust	500 500 500	715 715 715	750-1000 750-1000 750-1000	7
Thiophanate methyl 70% WG					
Bottle gourd	Anthracnose	750-1000	1070-1430	750-1000	1
Thiram 40% FS					
Maize	Seedling blight	9.6gm/10 kg seeds	24ml/10 kg seeds	100 ml	Seed dresser
Thiram 75% WS					
Groundnut	Collar rot	37.5gm	50gm	1	7-10
Wheat	Flag smut	18.8-22.5 gm	25-30gm	1	7-10
	Karnal bunt	18.8-22.5 gm	25-30gm	1	7-10
Barley	Leaf stripe	18.8-22.5 gm	25-30gm	1	7-10
Maize	Seedling blight	18.8-22.5 gm	25-30gm	1	7-10
Sorghum	Loose smut	18.8-22.5 gm	25-30gm	1	7-10
	Seedling blight	18.8-22.5 gm	25-30gm	1	7-10

Potato	Scab	18.8-22.5 gm	25-30gm	1	7-10
Rice (Paddy) & cotton	Seed born disease	18.8-22.5 gm	25-30gm	1	7-10
Triadimefon 25% WP					
Wheat	Bunt of Wheat	0.025%	0.500 kg	750	25
	Powdery mildew	65-135 gm	0.260-0.520	750	25
	Brown rust, Yellow rust, Black rust	250	1.0	750	25
Pea	Rust, Powdery mildew	0.025%	0.100%	750	25
Grapes	Powdery mildew	0.0025%	0.010%	750	25
Tricyclazole 75% WP					
Paddy (Rice)	Blast	225-300 gm	300-400 gm	500	30
Validamycin 3% L					
Rice (Paddy)	Sheath Blight	60 gm	2000 gm	750	There should be no residues on grains and straw of paddy 14 days before the harvest.
Zineb 75% WP					
Jowar	Red leaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Leaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	

	Leaf blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Paddy (Rice)	Blast	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Wheat	Rust, blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Maize	Leaf blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Ragi (Bajra)	Blast	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Tobacco	Leaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Onion	Downy mildew	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Blight	1.125-1.5 KG	1.5-2KG	750-1000 Lt	
Potato	Early blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Late blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Tomato	Early blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Late blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Grey leaf mould	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Chillies	Fruit rot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Leaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Brinjal	Blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Cucurbits	Downy mildew	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Anthraxnose	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Leaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Cauliflower	Leaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Cumin	Early blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Apple	Scab	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Black rot	1.125-1.5KG	1.5-2KG	750-1000 Lt	

Citrus	Greasy spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Cherries	Leaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Grapes	Downy mildew	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Guava	Fruit rot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Ziram 80% WP					
Grape	Downy mildew	1.2-1.6 kg	1.5-2.0kg	750-1000	--
	Anthracnose	1.2-1.6 kg	1.5-2.0kg	750-1000	--
Apple	scab	1.2-1.6 kg	1.5-2.0kg	750-1000	21
Potato	Early blight	1.2-1.6 kg	1.5-2.0kg	750-1000	3
Tomato	Early blight	1.2-1.6 kg	1.5-2.0kg	750-1000	3

2. Fungicides Combination Uses

Crop	Common name of the disease	Dosage/ha (a.i.)	Dosage/ha (Formulation)	Dilution	Waiting Period
Azoxystrobin 4.8% w/w + Chlorothalonil 40% w/w SC					
Watermelon	Leaf spot, downy mildew and powdery mildew	1.344 (0.144+1.2)	3.0	500	5
Cucumber	Leaf spot, downy mildew and powdery mildew	1.344 (0.144+1.2)	3.0	500	3
Cauliflower	Leaf spot, downy mildew	1.344 (0.144+1.2)	3.0	500	3
Azoxystrobin 18.2% w/w + Cyproconazole 7.3% w/w SC					
Wheat	Rust, Powdery mildew	0.26	1	500	50
Maize	Downy mildew, Turicum leaf blight, Rust	0.26	1	500	52
Ametoctradin 27% + Dimethomorph 20.27% w/w SC					
Grape	Downey mildew	420-525	800-1000 ml	750	34
Cucumber	Downey mildew	420-525	800-1000 ml	500	07
Potato	Late Blight	420-525	800-1000 ml	500	32
Tomato	Late Blight	420-525	800-1000 ml	500	03
Azoxystrobin 18.2% + Difenconazole 11.4% w/w SC					
Chilli	Anthrachnose & Powdery Mildew	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	5
Tomato	Early blight & Late blight	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	5
Paddy (Rice)	Blast & sheath blight	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	31
Maize	Blight & Downey Mildew	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	26
Wheat	Rust & Powdery mildew	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	35

Cotton	Leaf spot and Grey mildew	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	12
Turmeric	Leaf blotch, leaf spot and Rhizome rot	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	60
Onion	Purple blotch, Stemphylium blight and Downy mildew	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	500	7
Sugarcane	Red rot, Smut and Rust	0.03% or 0.3 g/l	0.1% or 1 ml / Litre water	400	265
Azoxystrobin 8.3% + Mancozeb 66.7% WG					
Grape	Powdery mildew , Downy mildew, Anthracnose	124.5+1000	1500	500-750(in water) depending on crop canopy	21
Chilli	Powdery mildew, Leaf spot, Anthracnose	124.5+1000	1500	500	7
Azoxystrobin 11.5% + Mancozeb 30% WP					
Tomato	Early blight and late blight	(86.5+225) to (100.62+ 262.50)	750-875	500	3
Azoxystrobin 7.1% + Propiconazole 11.9% w/w SE					
Rice	Sheath Blight	37.5+62.5	500	500	43
Wheat	Yellow rust (<i>Puccinia striiformis</i> f.sp. <i>Tritici</i>)	56.25+93.75	750	500	45
Azoxystrobin 11% + Tebuconazole 18.3% w/w SC					
Chilli	Fruit rot, Powdery mildew, Die-back	72+120	600	500-750	5
Rice (Paddy)	Sheath Blight	82.5+137.25	750	800	-
Onion	Purple blotch	82.5+137.25	750	800	7
Apple	Scab, powdery mildew & premature leaf fall	0.11+0.183	1.0	8 – 12	10

Wheat	Yellow Rust	82.5+137.25	750	500	-
Tomato	Early blight	82.5+137.25	750	500	7
Potato	Early blight, Late blight	82.5+137.25	750	500	-
Grape	Downy mildew, Powdery mildew	82.5+137.25	750	500	10
Azoxystrobin 12.5% + Tebuconazole 12.5% SC					
Chilli	Powdery mildew & fruit rot	0.1+0.1 (0.2)	0.800	500	5
Azoxystrobin 120 g/L + Tebuconazole 240 g/L SC					
Rice	Blast and Sheath blight	249 g	830 ml	500 Lit	24 days
Chilli	Fruit rot, Dieback & Powdery mildew	249 g	830 ml	500 Lit	7 days
Azoxystrobin 5.1%w/w +Tebuconazole 9.1% w/w+ Prochloraz 18.2 % w/w EC					
Rice	Blast (<i>Pyricularia oryzae</i>) & Sheath Blight (<i>Rhizoctonia solani</i>)	98.0 + 175.0 + 350.0	1750	500	40
Chilli	Anthraxnose Leaf Spot, Die Back, Fruit rot, (<i>Colletotrichum capsici</i>) and Powdery Mildew (<i>Leveillula taurica</i>)	70.0 + 125.0 + 250.0	1250	500	10
Black Gram	Leaf Spot (<i>Cercospora canescens</i>) & Powdery Mildew (<i>Erysiphe polygoni</i>)	70.0 + 125.0 + 250.0	1250	500	35
Azoxystrobin 1.3% + Tebuconazole 0.22% + Thiamethoxam 25.9% FS					
Okra	Damping off (<i>Rhizoctonia spp.</i> & <i>Pythium spp.</i>)	0.9+0.15+18.0	60	NA	NA
Azoxystrobin 2.5% + Thiophanate Methyl 11.25% + Thiamethoxam 25% FS					
Soybean	<i>Fusarium</i> root rot, <i>Phytophthora</i> root rot, <i>Rhizoctonia</i> seedling blight, <i>Pythium</i> seedling	38.75 g/10 kg seeds	100 ml/10 kg seeds	Not applicable	-

	blight				
Azoxystrobin 16.7% + Tricyclazole 33.30% SC					
Rice	Sheath blight, Blast, Brown spot	83.5 + 166.5	500	500	24
Benalaxyl-M 4% + Mancozeb 65% WP					
Grape	Downey mildew	1897.5	2750	750-1000	48
Benalaxyl 8% + Mancozeb 65% WP					
Cucumber	Downy mildew	200+1625	2500	500	5
Boscalid 25.2% +Pyraclostrobin 12.8% WG					
Grape	Downey Mildew& Powdery mildew	190-228	500-600	750-1000	34
Chilli	Powdery mildew	228	600	500	10
Apple	Powdery mildew	285	750	2500	41
Onion	Purple blotch,	190	500	500	24
Tomato	Early blight	190	500	500	10
Captan 70% + Hexaconazole 5% WP					
Chillies	Fruit rot (Anthracnose)	375-750	500-1000	500	5
Potato	Early blight & Late blight	375-750	500-1000	500	21
Black gram	Powdery mildew, Rust	562.5	750	500	20
Cumin	Alternaria blight	562.5	750	500	17
Tomato	Early blight, Powdery Mildew, Leaf Spot and fruit rot	562.5	750	500	7
Carbendazim 1.92% + Mancozeb 10.08% GR					
Paddy (Rice)	Blast, sheath blight	240+1260	12.5	Broadcasting	46
Carbendazim 12%+ Mancozeb 63% WP					

Groundnut	Leaf spot	375gm	500gm	500lt.	72
Paddy (Rice)	Blast	563gm	750gm	750lt.	57
Potato	Early blight , late blight , black scruff	1312.5	1750	500	47
Tea	Blister blight , grey blight , red rust , die-back , black rot	937.5	1250	250-500	7
Grape	Downey mildew, powdery mildew, anthracnose	0.11%	0.15%	As required depending on crop canopy	7
Mango	Powdery mildew and anthracnose	0.11%	0.15%	As required depending on crop canopy	7
Chilli	Leaf Spot, Fruit rot, and Powdery mildew	563	750	500	3
Maize	Downy mildew and Leaf blight	120+630	1000	500	37
Apple	Fruit scab & Powdery mildew	0.19%	0.25	As required depending upon crop canopy	20
Groundnut (Seed Treatment)	Tikka leaf spot, Collar rot and dry root rot	1.88	2.5	-	Seed treatment
Carbendazim 25%+ Mancozeb 50% WS					
Groundnut	Collar rot, Dry root rot, Tikka leaf spot	(7.5+15.0) to (8.75+17.5) (for 10 kg seed)	30-35/10 kg seed	0.1	-
Potato	Late blight, Black scurf	(1.5 + 3.0) to (1.75 + 3.5) (for 10 kg seed)	6 – 7/10 kg seed	2	-
Paddy (Rice)	Brown Spot, Blast , Sheath Blight	(7.5+15) to (8.75+17.5)	30-35	0.1	-
Wheat	Loose smut	(7.5+15) to (8.75+17.5)	30-35	0.1	-

Black gram	Root rot, Collar rot	7.5+15	30	0.1	-
Bengal gram	Dry Root rot, Collar rot	7.5+15	30	0.1	-
Soybean	Root rot, Collar rot	7.5+15	30	0.1	-
Onion	Damping-off	7.5+15	30	10	-
Maize	Seed rot, Seedling blight	7.5+15	30	0.1	-
Carbendazim 25 % + Flusilazole 12.5% SE					
Paddy (Rice)	Sheath blight	300-360	800-960	500	54
Groundnut	Stem rot, Early leaf spot, Late leaf spot	240-300	640-800	500	72
Chilli	Powdery mildew, Fruit rot, Die-Back	375	1000	375-500	05
Apple	Alternaria blotch and Premature leaf fall	0.03%	0.08%	650-1000	09
Carboxin 17.5% + Thiram 17.5% FF					
Wheat	Loose smut	8.75 to 10.5 gm	25 to 30 gm	100 ml	Seed treatment
Carboxin 37.5% + Thiram 37.5% WS					
Wheat	Loose smut and other seed borne and early soil borne diseases	2.25gm/Kg seed	3.0 gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required
Soybean	Collar rot, Charcoal rot and other seedling diseases	2.25gm/Kg seed	3.0 gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required
Cotton	Root rot, Bacterial bight	2.5gm/Kg seed	3.5gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required

Groundnut	Collar rot, Seed rot, Root rot, Stem rot	2.25gm/Kg seed	3.0gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required
Pigeon pea	Seed rot, Root rot, Stem rot, Fusarium wilt	3gm/Kg seed	4.0gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required
Potato	Black scurf	1.87gm/Kg seed	2.5gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required
Chlorothalonil 40.0% w/w + Difenconazole 4.0 w/w SC					
Tomato	Early blight, Late blight	440 [^] (400+40)	1000	500	7
Chilli	Powdery mildew, Anthracnose, Fruit rot	440 [^] (400+40)	1000	500	7
[^] Calculated as 550 (500=50) gm a.i./ha on w/v basis					
Copper Sulphate 47.15% + Mancozeb 30% WDG					
Grape	Anthracnose, Powdery Mildew & Downy mildew	2357.5+1500	5000	750-1000 Depending on crop canopy	10
Cymoxanil 8%+ Mancozeb 64% WP					
Grapes	Downy mildew	1080-1440 gm	1500–2000 gm	500-1000	10 days
Potato	Late blight	1080 gm	1500 gm	500-750	10 days
Tomato	Late blight	1080 gm	1500 gm	500-750	10days
Cucumber	Downy mildew	1080 gm	1500 gm	500-600	10days
Citrus	Gemmosis (Foot Rot) (<i>Phytophthora</i>	180 g/100L of water + 18 g/l of	250 g/100L of water + 25 g/l	10 l/tree; 50 ml	82 days

	<i>palmivora</i>)	water of linseed oil	of water of linseed oil	(linseed oil) tree	
Difenoconazole 10 % + Mancozeb 50% WDG					
Paddy	Blast & Sheath Blight	62.5 + 312.5	625 gm	500	33
Chilli	Powdery mildew, Die-Back & Fruit rot	62.5 + 312.5	625 g gm	500	13
Dimethomorph 12% + Pyraclostrobin 6.7% WG					
Grape	Downy mildew	280.5	1500	750-1000	34
Cucumber	Downy mildew	280.5	1500	500	10
Potato	Late blight	183.75	1250	500	26
Famoxadone 16.6%+ Cymoxanil 22.1% SC					
Grapes	Downy mildew	210	500	500-750	27
Potato	Late blight	210	500	500	40
Tomato	Early and Late blight	210	500	500	3
Gherkin	Downy mildew	210	500	500-750	3
Fenamidone 4.44% + Fosetyl-AL 66.7% WDG					
Grape	Downy mildew	88.8+ 1334 - 111.0+ 1667.5 gm	2000-2500 gm	500-750 lt.	90 days
Fenamidone 10% + Mancozeb 50% WG					
Potato	Late blight	125+625-150+750gm	1250-1500 gm	500 lt.	30
Grapes	Downy mildew	150+750 gm	1500 gm	500-750	85
Gherkin	Downy mildew	150+750 gm	1500 gm	375-500	5
Flubendamide 3.5% + Hexaconazole 5% WG					
Paddy (Rice)	Sheath blight, Sheath rot	Flubendamide-35 & Hexaconazole-50	1000	500	30
Groundnut	Tikka Leaf spot & Rust	Flubendamide-52.5 & Hexaconazole-75	1500	500	31
Chilli	Leaf spot, Powdery mildew & Anthracnose	Flubendamide-52.5 & Hexaconazole-75	1500	500	10
Flubendiamide 7.5% + Kresoxim-Methyl 37.5% SC					

Rice	Leaf & neck blast, Sheath blight	50 + 250	667	500	30
Tomato	Early and Late blight	50 + 250	667	500	7
Fluopicolide 4.44% + Fosetyl aluminium 66.67% WG					
Grape	Downy mildew	(99.9 + 1500) to (111+ 1667)	2.25-2.5	750 ltr.	32
Fluopyram 17.7% w/w + Tebuconazole 17.7% w/w SC					
Grape	Powdery mildew and Anthraconase	Fluopyram112.5 +Tebconazole112.5	562.5	750-1000	10
Chilli	Powdery mildew and Anthracnose	Fluopyram100 +Tebconazole 100	500	500	5
Rice (Paddy)	False smut, Dirty panicle	Fluopyram110 +Tebconazole 110	550 g/ha	500	22
Fluxapyroxad 75 g/l + Difenconazole 50 g/l SC					
Grape	Powdery mildew	100	800	1000	32
Apple	Scab and Powdery mildew	125	1000	2500	33
Fluxapyroxad 62.5 g/l + Epoxiconazole 62.5 g/L EC					
Rice (Paddy)	Sheath blight	78.12-93.75	625-750	500	33
Fluxapyroxad 250 g/l + Pyraclostrobin 250 g/l SC					
Grape	Powdery Mildew	100	200	1000	10
Apple	Premature leaf fall & Alternaria leaf spot	187.5	15 ml formulation/ 100 lit water	2500	29
Mango	Powdery mildew	75-100	150-200	1000	38
Cucumber	Powdery mildew	100-125	200-250	500	10
Chilli	Powdery mildew, Anthracnose	100-125	200-250	500	7
Tomato	Early blight, Septoria leaf spot	100-125	200-250	500	10

Fluxapyroxad 167 g/l + Pyraclostrobin 333 g/l SC					
Cotton	Alternaria leaf	150	300	500	27
Groundnut	Tikka	150	300	500	20
Soybean	Frog eye leaf spot	150	300	500	45
Hexaconazole 4% + Carbendazim 16% SC					
Paddy (Rice)	Sheath blight, and Blast	(30+120)	750	400 - 500	40
Hexaconazole 5.00% + Validamycin 2.50% SC					
Paddy (Rice)	Blast & Sheath blight	50+25	1000	500	22
Hexaconazole 4% + Zineb 68% WP					
Paddy (Rice)	Sheath Blight, Brown Spot, Blast , Grain discoloration	720-900	1000-1250	500	34
Tea	Black Rot , Grey blight, Blister Blight	25+425 gm	625	250-500	7
Apple	Scab, Premature leaf fall, Alternaria leaf spot/blight, Powdery mildew, Core rot	200+3400	0.25% or 25 gm/10 lit. water	10 litre/tree	30
Imidacloprid 18.5% + Hexaconazole 1.5% FS					
Groundnut	Collar rot, Stem rot, Tikka leaf spot, Rust	37:3	200	NA	This is used as seed dresser
Wheat	Smut, Rust, Termites, Aphids	37:3	200	NA	This is used as seed dresser.
Iprodione 25% + Carbendazim 25% WP					
Rice (Paddy)	Sheath blight,	250 gm	500 gm	500 lt.	30

	Blast				
Kasugamycin 5% + copper oxychloride 45% WP					
Grapes	Anthrachnose, Bacterial leaf spot	375	750	400 – 1000	37 days
Rice (Paddy)	Leaf blast, Neck blast	350	700	375	26 days
Pomegranate	Bacterial blight, leaf spot, Fruit rot and Anthracnose	0.05%	0.1%	500-1000	10 days
Kasugamycin 6 % + Thifluzamide 26% SC w/v					
Paddy	Blast & Sheath blight	18 + 78 -- 20.70 + 89.70	300 - 345	500	17
Kresoxim-methyl 40% + Hexaconazole 8% WG					
Rice (Paddy)	Sheath blight, Leaf blast, Neck blast	Kresoxim-methyl- 200 & Hexaconazole - 40	500	500	22
Kresoxim-methyl 15% + Chlorothalonil 56% WG					
Chilli	Powdery mildew, Leaf spot, Anthracnose	Kresoxim-methyl- 150 & Chlorothalonil- 560	1000	500	5
Potato	Early blight and Late blight	Kresoxim-methyl- 150 & Chlorothalonil- 560	1000	500	23
Kresoxim-methyl 18% + Mancozeb 54% WP					
Grapes	Powdery mildew, Downy mildew, Anthracnose	270+810	1500	750-1000	5
Tomato	Early blight, Late blight, Fruit rot	250+750	1388	500	7
Mandipropamid 5% w/w + Mancozeb 60 % w/w WG					
Cucumber	Leaf spot, Downy mildew	1.63	2.5	500	5
Mancozeb 63% + Carbendazim 12% WS					

Groundnut	Tikka leaf spot, collar rot, dry root rot	1.88	2.5	----	----
Mancozeb 40% + Azoxystrobin 7% OS					
Tomato	Early Blight & light blight	600g+105g	1500 g	500 L	5
Mancozeb 50% + Thiophanate methyl 25% WG					
Rice (Paddy)	Sheath blight and Brown leaf spot	750 + 375	1500	500	34
Mefentrifluconazole 133 g/l + Fluxapyroxad 89 g/l + Pyraclostrobin 178 g/l SC					
Groundnut	Rust & Tikka leaf spot	250	625	500	37
Metalaxyl M 4% + Mancozeb 64% WP					
Grapes	Downy mildew	0.17% or 1700 gm	0.25% or 2500 gm	500-1000	8
Potato	Late blight	0.17% or 1700 gm	0.25% or 2500 gm	500-1000	24
Black pepper	<i>Phytophthora</i> foot rot	0.17% or 1700 gm	0.25% or 2500 gm	2 L/vine as foliar spray and 3 L/vine as soil drench	Not less than 21 weeks
Mustard	Downy mildew, White rust	0.17% or 1700 gm	0.25% or 2500gm	1000	60
Chilli- nursery (soil drenching)	Damping off	0.20% or 2 g a.i./L water	0.30% or 3 g /L water	2.0 L/m ²	53
Pomegranate	Leaf spot & Fruit spot	0.17% or 1.7 g a.i./L water	0.25% or 2.5 g /L water	500 (or depending upon age of tree)	5
Metalaxyl M 3.3% + Chlorothalonil 33.1% SC					
Potato	Late blight	0.073%	0.2%	500	34
Tomato	Early blight, Late blight	0.073%	0.2%	500	5
Metalaxyl 8% + Mancozeb 64% WP					

Grapes	Downy mildew	2000 g or 0.4%	2500 g or 0.5%	500 lt.	Not less than 7 weeks
Tobacco Nursery	Damping off	3600 g or 0.072%	5000 g or 0.1%	1000 lt.	Not less than 7 weeks
	Leaf blight/ Black Shank (Soil drench at sowing and spray at 30 days after sowing)	1440 g or 0.14%	2000 g or 0.2%	1000 lt.	Not less than 7 weeks
Potato	Late blight	1800 gm or 0.18%	2500 gm or 0.25%	1000 lt.	Not less than 7 weeks
Mustard	White rust and Alternaria blight	1800 gm or 0.18%	2500 gm or 0.25%	1000 lt.	Not less than 8 weeks
Black Pepper	Phytophthora foot rot	1.8 g a.i./vine or 0.09%	2.5 gm/vine or 0.125%	2lt./vine (spraying) 5lt./vine (soil drenching)	Not less than 21 weeks
Pearl millet	Downy mildew	1440 gm or 0.28%	2000 gm or 0.4%	500lt.	Not less than 7 weeks
Metiram 44% + Dimethomorph 9% WG					
Grapes	Downy mildew	1325	2500	1000	10
Metiram 55% + Pyraclostrobin 5% WG					
Tomato	Early blight	900-1050	1500-1750	500	5
Potato	Late blight	900-1050	1500-1750	500	15
Grape	Downy mildew	900-1050	1500-1750	750	34
Chilli	Anthracnose	900-1050	1500-1750	5	5
Onion	Purple blotch	900-1050	1500-1750	16	16
Cotton	Alternaria leaf spot	900-1050	1500-1750	45	45
Apple	Premature leaf fall disease & Alternaria leaf spot and blight	1750g/ha	100g/100L	1750	12
Pomegranate	Fruit spot	900-1050	1500-1750	500	67
Black gram	Leaf spot disease	900-1050	1500-1750	500	32
Cumin	Alternaria blight & Powdery mildew	900-1050	1500-1750	500	20

Greengram	Cercospora leaf spot	900-1050	1500-1750	500	18
Groundnut	Tikka disease	900-1050	1500-1750	500	42
Banana	Sigatoka leaf spot disease	900-1050	1500-1750	500	85
Cucumber	Downy mildew disease	900-1050	1500-1750	500	5
Bitter gourd	Downy mildew disease	900-1050	1500-1750	500	5
Penflufen 13.28% w/w + Trifloxystrobin 13.28% w/w FS					
Groundnut	Seed and Seedling rot disease	12.32+12.32-15.4+15.4	80 – 100		
Soybean	Seed and Seedling rot disease	12.32+12.32-15.4+15.4	80 – 100		
Picoxystrobin 7.05% + Propiconazole 11.7% SC					
Paddy (Rice)	Sheath blight, (<i>Rhizoctonia solani</i>) False smut, (<i>Ustilaginoidea virens</i>) Dirty Panicle	200	1000	500	24
Wheat	Yellow Rust (<i>Puccinia striiformis sp. tritici</i>)	200	1000	500	52
Picoxystrobin 6.78% + Tricyclazole 20.33 %w/w SC					
Paddy (Rice)	Leaf Blast & Neck Blast	300	1000	500	29
Chilli	Anthrachnose, Wet rot, Powdery mildew	300	1000	500	3

Prochloraz 34.8% + Propiconazole 7.8% w/w EC					
Rice	Grain discoloration (Fungal complex i.e <i>Curvularia</i> sp., <i>Sarocladium oryzae</i> , <i>Phoma</i> sp., <i>Microdochium</i> sp., <i>Nigrospora</i> sp., <i>Fusarium</i> sp., etc.)	400.0 + 90.0	1000	500	15
Groundnut	Early leaf spot (<i>Cercospora arachidicola</i>), Late leaf spot (<i>Phaeoisariopsis personata</i>) & Rust (<i>Puccinia arachidis</i>)	300.0 + 67.5	750	500	19
Prochloraz 23.5% + Tricyclazole 20.0% w/w SE					
Rice	Blast disease	235+200	1000	500	28
Prochloraz 24.4% + Tebuconazole 12.1% w/w EW					
Chilli	Fruit rot, Die-back & Powdery mildew	267+133	1000	500	5
Prochloraz 5.7% + Tebuconazole 1.4% w/w ES					
Chickpea	Root rot (<i>Rhizoctonia solani</i>), Wilt (<i>Fusarium</i> spp.)	0.18+ 0.045	3.0 ml/10 kg seeds	-	Seed dresser
Groundnut	Stem rot (<i>Sclerotium rolfsii</i>), Collar rot (<i>Aspergillus niger</i>), Root rot (<i>Rhizoctonia bataticola</i>)	0.18+ 0.045	3.0 ml/10 kg seeds	-	Seed dresser

Propiconazole 13.9% + Difenconazole 13.9% EC					
Paddy	Sheath blight, dirty panicle	0.02% - 0.03%	(0.07-0.1%) 0.7-1.0 ml/L	500	46
Propiconazole 10.7% w/w + Tricyclazole 34.2% w/w SE					
Paddy (Rice)	Sheath blight, Blast	262.5 to 393.75	500-700	500	46
Pyraclostrobin 133 g/l + Epoxiconazole 50g/l SE					
Groundnut	Tikka	114.37-137.25	625-700	500	21
Soybean	Cercospora leaf spot	137.25	750	500	27
Coffee	Rust	137.25	750	750	37
Wheat	Yellow rust	137.25	750	500	47
Cumin	Alternaria blight	137.25	750	500	22
Maize	Leaf blight	137.25	750	500	48
Banana	Sigatoka leaf spot	137.25	750	500	24
Tebuconazole 6.7% + Captan 26.9% w/w SC					
Chilli	Powdery mildew and Anthracnose	80+320	1000	500	5
Apple	Powdery mildew, Alternaria leaf spot/blight, Scab	124+496 0.02% + 0.08%	1550 0.25% or 2.5ml/l of water	10 L/tree	10
Sedaxane 12.61% w/w + Azoxystrobin 3.15% w/w + Thiamethoxam 22.06% w/w					
Rice	Sheath Blight Leaf Blast, Brown spot	1.35 (g/kg seed) (Sedaxane -0.45 Azoxystrobin - 0.11 Thiamethoxam - 0.79)	3.00 (ml/kg seed)	8-10 (For Pre-soaked seeds) (ml/kg seed) 15-20 (For dry seeds) (ml/kg seed)	Use as a seed treatme nt, hence waiting period is not applica ble

Tebuconazole 10% + Sulphur 65% WG					
Chilli	Powdery mildew & Fruit rot	937.50(125+812.5)	1250	500	5
Soybean	Leaf spot & Pod blight	937.50(125+812.5)	1250	500	26
Tebuconazole 50% + Trifloxystrobin 25% WG					
Rice (Paddy)	Sheath blight, Leaf, Neck Blast, Glume discoloration (dirty panicle)	100 + 50	200	375-500	21
Tomato	Early blight	175+87.5	350	500	5
Grapes	Powdery mildew	87.5+43.75	175	1000	34
Chilli	Powdery mildew, Anthracnose, Alternaria leaf spot	125+62.5	250	500	5
Wheat	Yellow rust, powdery mildew	150+75	300	300-500	40
Mango	powdery mildew, Anthracnose	0.056% --0.075%	0.075%--0.1%(75—100g/100lit water)	Spray fluid as required depending on size of tree	15
Tebuconazole 15% + Zineb 57% WDG					
Paddy	Sheath blight, brown leaf spot, blast and dirty panicle	187.5 + 712.5	1250	500	21
Chilli	Powdery mildew, leaf spot, Choanephora blight and Anthracnose fruit rot	187.5 + 712.5	1250	500	28
Potato	Black scruf (<i>Rhizoctonia spp</i>)	10g/100 kg tuber	20/100 kg seed tuber	Sufficient to coat the seeds uniformly	NA Seed dresser
Chickpea	Wilt (<i>Fusarium oxysporum</i>) Root rot (<i>Rhizoctonia spp.</i>)	2.0	4.0	Sufficient to coat the seeds uniformly	NA Seed dresser

Thiophanate methyl 38% + Kasugamycin 2.21% SC					
Tomato	Powdery mildew & Bacterial leaf spot	402.1-502.6	1000 - 1250	375-500	07
Tricyclazole 20.4% w/w + Azoxystrobin 6.8% w/w SC					
Rice (Paddy)	Blast, False smut, Sheath blight and Grain discoloration (Dirty Panicle)	300 (225+75)	1000	500	10
Tricyclazole 45% + Hexaconazole 10% WG					
Paddy (Rice)	Blast and Sheath blight	225+50	500	500	23
Tricyclazole 18.0% w/w + Tebuconazole 14.4% w/w SC					
Rice (Paddy)	Sheath blight, Blast, false smut and grain Discoloration	360 (200+160)	1000 ml/ha	---	44
Triticonazole 80 g/l + Pyraclostrobin 40 g/l (w/v) FS					
Wheat	Loose smut	0.12	1.0	Sufficient to coat the seeds uniformly	NA
Valifenalate 6% + Mancozeb 60% WG					
Tomato	Early blight & Late blight	120+ 1200 to 150 + 1500	2000 to 2500	500	5 days
Potato	Late blight	120+ 1200 to 150 + 1500	2000 to 2500	500	20 days
Grape	Downy mildew	120 + 1200	2000	750	14 days

* Warning: When used as a foliar spray on Red Delicious variety of apples. This product may cause resetting.

** In case of, fruit trees the values given pertain to the concentration of a.i. in spray solution and volume of spray solution required per tree.



भारत सरकार / Government of India
कृषि एवं पशुसंरक्षण कल्याण मंत्रालय / Ministry of Agriculture & Farmers Welfare
कृषि एवं पशुसंरक्षण कल्याण विभाग
Department of Agriculture & Farmers Welfare
वनस्पति संरक्षण, संगरोध और संग्रह विभाग
Directorate of Plant Protection, Quarantine & Storage
केन्द्रीय कीटनाशी बोर्ड एवं पंजीकरण समिति
Central Insecticide Board & Registration Committee
एन. एच. - 4, फरीदाबाद - 121 001 (हरियाणा)
N.H.-IV, Faridabad - 121 001 (Haryana)

MAJOR USES OF PESTICIDES
(Registered under the Insecticides Act, 1968)

(As on – 31/05/2022)

(Based on certificate issued)

**Disclaimer: 'The document has been compiled on the basis of available information for guidance and not for legal purposes'.*

BIO-INSECTICIDES

1. Major uses of Bio-insecticides - (Page No. 2 to 14).
2. Public health use - (Page No.15 to 19).

1. Major uses of Bio-Insecticides					
Name of crop	Name of Insect	Dose/ha		Dilution in water (liter/ha)	Waiting period (Days)
		a.i. (g)	Formulation (g/ml)/%		
Azadirachtin 0.15% EC w/w Min. Neem Seed Kernel Based					
Cotton	White fly, Bollworms	-	2500-5000	500-1000	05
Rice (Paddy)	Thrips, Stem borer, Brown plant hopper, Leaf folder	-	1500-2500	500	05
Azadirachtin 00.30% EC (3000 PPM) Min. Neem Seed Kernel Based					
Cotton	American bollworm	-	4000	1000	05
Azadirachtin 01.00% EC Min. Neem Based					
Tea	Thrips	-	400-500	450	01
	Red spider mites	-	400-500	600	01
Azadirachtin 01.00% EC (10000 PPM) Min. Neem Based					
Tomato	Fruit borer (<i>Helicoverpa armigera</i>)	-	1000-1500	500	03
Brinjal	Shoot & fruit borer (<i>Leucinodes orbonalis</i>)	-	1000-1500	500	03
Azadirachtin 00.03% EC Min. Neem Oil Based					
Cotton	Bollworm (<i>Helicoverpa armigera</i>), Aphids	-	2500-5000	500	05
Rice (Paddy)	Leaf roller, Stem borer, Brown plant hopper	-	2000	1000	05
Azadirachtin 00.03% WSP (300 PPM) Neem Oil Based					
Bengal Gram (Gram or Chickpea)	Pod borer (<i>Helicoverpa armigera</i>)	-	-	-	07

Red Gram (Tur or Arhar)	Pod borer (<i>Melanagromyza</i> sp.)	-	2500-5000	500-1000	07
Cotton	Aphids, Jassids, Whitefly, Bollworms	-	2500-5000	500-1000	07
Okra (Bhindi)	Fruit borer, Whitefly, Leaf Hopper	-	2500-5000	500-1000	07
Brinjal	Shoot & Fruit borer, beetles	-	2500-5000	500-1000	07
Cabbage	Aphids, Diamond back moth, Cabbage worm, Cabbage looper	-	2500-5000	500-1000	07
Jute	Semi looper, Hairy caterpillar	-	2500-5000	500-1000	07
Azadirachtin 05.00% w/w Min. Neem Extract Concentrates					
Tea	Caterpillar, Pink mite, Red spider mites, Thrips	-	200.0	400	05
Tobacco	Tobacco caterpillar, Aphids	-	200.0	400	05
Rice (Paddy)	Brown plant hopper, Leaf folder, Stem borer	-	200.0	400	05
Cotton	Whitefly, Leaf hoppers, <i>Helicoverpa armigera</i> , Aphids	-	375.0	750	05
Cauliflower	<i>Spodoptera</i> , Diamond back moth, Aphids	-	200.0	400	05
Bhindi (Okra)	Leafhopper, whitefly, Aphid, Pod borer	-	200.0	400	05
Tomato	Aphids, Whitefly, Fruit borer	-	200.0	400	05
<i>Bacillus thuringiensis</i> var. <i>galleriae</i> 1593 M sero type H 59 5b, 1.3% flowable concentrate Potency 1500 IU/mg					

Cabbage & Cauliflower	Diamond back moth (<i>Plutella xylostella</i>)	-	06-1.0	500	-
Tomato	Fruit borer (<i>Helicoverpa armigera</i>)	-	1.0-1.5	500	-
Bhindi (Okra)	Fruit borer (<i>Earias</i> spp.)	-	1.0-1.5	500	-
Chilli	Fruit borer (<i>Spodoptera litura</i>)	-	1.5-2.0	1000	-
Cotton	Bollworm (<i>Helicoverpa armigera</i>)	-	2.0-2.5	1000	-
Rice (Paddy)	Leaf folder (<i>Cnaphalocrocis medinalis</i>)	-	1.0-3.0	1000	-
<i>Bacillus thuringiensis</i> var. <i>4rustaki</i>					
Cotton	Bollworm	-	750-1000	750-1000	-
<i>Bacillus thuringiensis</i> var. <i>4rustaki</i>, serotype H-39, 3B, Strain Z-52					
Cotton	Bollworms, <i>Spodoptera</i>	0.75-1.00	500-750	-	-
Rice (Paddy)	Stem borer & Leaf folder	1.50	500-750	-	-
Gram	<i>Heliothis</i> sp.	0.75	500-750	-	-
Pigeon Pea	<i>Heliothis</i> sp.	0.75	500-750	-	-
Soybean	<i>Spodoptera</i> , <i>Heliothis</i> , <i>Spilosoma</i> , Semilooper, Leaf miner	0.75	500-750	-	-
Tobacco	<i>Spodoptera</i> , <i>Heliothis</i>	1.50-2.00	500-750	-	-
Castor	Hairy caterpillar, <i>Achaea janata</i>	1.00	500-750	-	-
Teak	Defoliator (<i>Hyblaea puera</i>), Skeletonizer (<i>Eutectona machaeralis</i>)	0.25-0.50	500-750	-	-
<i>Bacillus thuringiensis</i> serovar <i>4rustaki</i> (3a, 3b, 3c) 5.0% WP Potency 55000 SU (<i>Spodoptera</i> unit based)					

(5x10⁷ spore/mg)					
Cotton	American Bollworm	25.00-50.00	500-1000	500-1000	-
	Spotted Bollworm	37.50-50.00	750-1000	500-1000	-
Red gram	Pod Borer	50.00-62.50	1000-1250	500-1000	-
Cabbage	Diamond back moth	25.00-50.00	500-1000	500-1000	-
<i>Bacillus thuringiensis</i> var. 5rustaki 0.5% WP serotype 3a, 3b, 3c, Strain DOR Bt-1, Potency 9000 IU/mg min. U/s 9(3b)					
Caster	Caster 5rustaki5r (<i>Achaea janata</i>)	-	0.25	250-300	-
<i>Bacillus thuringiensis</i> var. 5rustaki 0.5% WP serotype 3a, 3b, 3c, Strain DOR Bt-1 NAIMCC-B-01118, Potency 13329 IU/mg min. U/s 9(3b)					
Pigeon pea	Bollworm (<i>Helicoverpa armigera</i>)	-	1-1.25	1000	-
<i>Bacillus thuringiensis</i> var. 5rustaki 0.5% WP serotype 3a, 3b, 3c, Strain DOR Bt-1, Potency 9000 IU/mg min. U/s 9(3b)					
Caster	Caster 5rustaki5r (<i>Achaea janata</i>)	-	0.25- 0.375	250	-
<i>Bacillus thuringiensis</i> var. 5rustaki 0.5% WP serotype 3a, 3b, 3c, Strain DOR Bt-1, Potency 16000 IU/mg min.					
Chickpea	Chick pea pod borer (<i>Helicoverpa armigera</i>)	-	2.0	500	-
<i>Bacillus thuringiensis</i> var. 5rustaki 2.5% AS (Spicbio-BTK AS)					
Gram	Gram pod borer (<i>Helicoverpa armigera</i>)	-	1.0-1.5	500	-
<i>Bacillus thuringiensis</i> var. 5rustaki, Serotype H-3a, 3b, Strain Z-52 Potency:- ☐ 3000 IU/mg min – on Gypsy moth					

☐ 32000 IU/mg min – <i>Trichoplusia vi</i> ☐ 50000 IU/mg min – <i>Helicoverpa armigera</i> ☐ 55000 IU/mg min – <i>Spodoptera exigua</i>					
Cotton	Bollworms, Spodoptera	-	0.75-1.0 kg.	500-750	-
Rice	Stem borer & Leaf folder	-	1.50 kg.	500-750	-
Gram	<i>Helicoverpa armiger</i>	-	0.75 kg.	500-750	
Pigeon Pea	<i>Helicoverpa armiger</i>	-	0.75 kg.	500-750	-
Soyabean	<i>Spodoptera litura</i> , <i>Helicoverpa armigera</i> , <i>Spilosoma brustak</i> , Semilooper, Leaf miner	-	0.75 kg.	500-750	-
Tobacco	Spodoptera, Helicoverpa armigera	-	1.50-2.00 kg.	500-750	-
Castor	Hairy caterpillar, Caster 6rustaki6r (<i>Achaea janata</i>)	-	1.00 kg.	500-750	-
Teak	Defoliator (<i>Hyblaea puera</i>), Skeletonizer (<i>Eutectona machaeralis</i>)	-	0.25-0.50% Sol.	As required.	-
<i>Bacillus thuringiensis</i> var. 6rustaki Strain HD-1, serotype 3a, 3b, 3.5% ES for Import & repack. Potency 17600 IU/mg					
Cotton	Bollworms	-	750-1000	750-1000	-
<i>Bacillus thuringiensis</i> var. 6rustaki Serotype 3a, 3b, SA II WG Potency:- 53000 SU/mg, 32000 IU/mg					
Cabbage, Cauliflower	Diamond back moth	-	0.5 kg.	500-700	-
<i>Beauveria bassiana</i> 1.15% WP					
Cotton	Bollworms	-	400	750-1000	-
<i>Beauveria bassiana</i> 01.15% WP					
Cotton	Bollworm	-	2000	400	-
Rice (Paddy)	Leaf folder	-	2.50 kg/ha	750-850	-

<i>Beauveria bassiana</i> 1.15% WP. (1x10⁸ /gm min) Strain BB-ICAR-RJP, Accession No – MCC 1022					
Rice	Rice leaf folder (<i>Cnaphalocrosis medinalis</i>)	-	2.5 kg.	750-850	-
<i>Beauveria bassiana</i> 1.15% WP (Strain : BB – 5372, own R & D Isolate)					
Rice	Rice leaf folder (<i>Cnaphalocrosis medinalis</i>)	-	2.5 kg.	600-750	-
<i>Beauveria bassiana</i> 1.15% WP (1x10⁸ /gm min) Strain ICAR, Research Complex, Umiam, Meghalaya, Accession No – NAIMCC-F-03045					
Rice	Rice leaf folder (<i>Cnaphalocrosis medinalis</i>)	-	2.5 kg.	750-850	-
<i>Beauveria bassiana</i> 1.15% WP (1x10⁸ /gm min) Accession No – NAIMCC-F-03045, Strain No. NBAIM, MAU.					
Rice	Rice leaf folder (<i>Cnaphalocrosis medinalis</i>)	-	2.5 kg/ha	750 liter/ha	-
<i>Beauveria bassiana</i> 1.15% WP (1x10⁸ /spores/ml) Strain BCRL, Accession No – BCRL Bbpx-6892					
Cabbage	Diamond back moth (<i>Plutella xylostella</i>)	1-1.5 litre	500-750	Apply using any type of sprayer (high, low or ultra low volume) which gives good coverage	NA
<i>Beauveria bassiana</i> 1.0% WP, Strain No: NBRI – 9947 (1x10⁸ CFU/gm Min.)					
Chick pea	Pod borer (<i>Helicoverpa armigera</i>)	-	3.0 kg.	500	-
<i>Beauveria bassiana</i> 1.0% WP (1x10⁹ CFU/gm min), Strain No. IPL/BB/MI/01					
Okra (Bhindi)	Fruit borer, Spotted bollworm	-	3.75-5.0 kg.	400-500	-
<i>Beauveria bassiana</i> 1.0% WP (1x10⁸ CFU/gm min), Strain No. SVBPU/CSP/Bb-10, Accession No. ITCC-					

7520					
Chick pea	Pod borer (<i>Helicoverpa armigera</i>)	-	3.0 kg.	500	-
<i>Beauveria bassiana</i> 5.0% WP, (1x10⁸ CFU/gm min) Strain IARI, Accession No. ITCC-7353					
Cabbage	Diamond back moth (<i>Plutella xylostella</i>)	-	2.0 kg.	500	-
<i>Beauveria bassiana</i> 5.0% SC, Strain: NBAII , Bangalore , Accession No. ITCC-7102, (Strain Isolated by Project Directorate of Bio-logical control, Bangalore)					
Tomato	Fruit borer (<i>Helicoverpa armigera</i>)	-	500	500	-
<i>Beauveria bassiana</i> 5.0% AS Strain : BB-AAU-RJP Accession No. MCC – 1024					
Tomato	Fruit borer (<i>Helicoverpa armigera</i>)	-	0.5	500	-
<i>Beauveria bassiana</i> 1.15% WP (1x10⁸ /gm min) Accession No – NAIMCC-F-03048					
Chick pea	Gram Pod Borer (<i>Helicoverpa armigera</i>)	-	2500	500	-
<i>Beauveria bassiana</i> 10.00% SC					
Cabbage	Diamond back moth	1-1.5	-	500-750	-
<i>Beauveria bassiana</i> 1.5% Liquid Formulation (CFU count 10X10⁸) Accession No.MTCC-5171					
Tomato	Fruit borer (<i>Helicoverpa armigera</i>)	2.0	Foliar spray	500	-
<i>Beauveria bassiana</i> 1.15% WP (1X10⁶ CFU /gm min)					
Cotton	Bollworm	20	-	400	-
<i>Metarhizium anisopliae</i> 1.15% WP (1x10⁸ CFU/gm min) Accession No. MTCC – 5173					
Rice	Brown plant hopper (<i>Nilaparvata lugens</i>)	-	2.5 kg.	500	-
<i>Metarhizium anisopliae</i> 1.0% WP (1x10⁸ CFU/gm min) Strain No. IPL/KC/44 (Own R & D Isolate), Accession No. 6895.					
Brinjal	Shoot & Fruit borer (<i>Leucinodes orbonalis</i>)	-	2.5-5.0	500-750	-

***Metarhizium anisopliae* 1.15% WP (1x10⁸ CFU/gm min) Strain No. AAI, Allahabad, Accession No. NAIMCC-F-03037.**

Chickpea	<i>Heliothis armigera</i>	2.5	500	--	--
<i>Metarhizium anisopliae</i> 10% GR (CFU count 1 X 10⁸/gm. min.) Strain BCRL– Me, Accession No. ITCC 6911					
Crop	Common name of the target organism	Dosage /ha/application		Waiting period	
		Formulation	Method of application		
Potato	White grub	60kg.	Mix <i>Metarhizium anisopliae</i> (Grub –X 10% GR) with FYM @ 1 : 10 and apply at the root base by broadcasting method @ 6gm/m ² (=60 kg/ha) along the furrows at the time of sowing and next after one month at the time of earthing up.	NA	
<i>Pseudomonas fluorescens</i> 1.0% WP (Strain No. IIHR-PF-2, Accession No. ITCC- B0034)					
Tomato	Root-knot nematodes (<i>Meloidogyne</i> spp.)		Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Pseudomonas fluorescens</i> 1.0% WP @ 50 gm/sq.m and apply <i>Pseudomonas fluorescens</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Brinjal	Root-knot nematodes (<i>Meloidogyne</i> spp.)		Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Pseudomonas fluorescens</i> 1.0% WP @ 50 gm/sq.m and apply <i>Pseudomonas fluorescens</i> 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Carrot	Root-knot nematodes (<i>Meloidogyne</i> spp.)		Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Pseudomonas fluorescens</i> 1.0% WP @ 50gm/sq.m and apply <i>Pseudomonas fluorescens</i> 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Okra	Root-knot nematodes (<i>Meloidogyne</i> spp.)		Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Pseudomonas fluorescens</i> 1.0% WP @ 50gm/sq.m and apply <i>Pseudomonas fluorescens</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
<i>Trichoderma harzianum</i> 1.0% WP (Strain No. IIHR-TH-2 Accessions No. ITCC 6888)					

Tomato	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Trichoderma harzianum</i> 1.0% WP @ 20 gm/kg of seeds & nursery beds with the <i>Trichoderma harzianum</i> 1.0% WP @ 50 gm/sq.m and also apply <i>Trichoderma harzianum</i> 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.	
Brinjal	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Trichoderma harzianum</i> 1.0% WP @ 20 gm/kg of seeds & nursery beds with the <i>Trichoderma harzianum</i> 1.0% WP @ 50 gm/sq.m and also apply <i>Trichoderma harzianum</i> 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.	
Carrot	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Trichoderma harzianum</i> 1.0% WP @ 20 gm/kg of seeds and apply <i>Trichoderma harzianum</i> 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.	
Okra	Root-knot nematodes (<i>Meloidogyne</i>	Treat the seeds with <i>Trichoderma harzianum</i> 1.0%	
	<i>incognita</i>)	WP @ 20 gm/kg of seeds and apply <i>Trichoderma harzianum</i> 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.	
Gerbera	<i>Meloidogyne incognita</i>	Apply the Nemastin @ 50 gm/sq.m at the time of planting	
Carnations	<i>Meloidogyne incognita</i>	Apply the Nemastin @ 50 gm/sq.m at the time of planting	
Tuberose	<i>Meloidogyne incognita</i>	Apply 2 Kg Nemastin 1% Wp mixed in 2 tones of FYM per acre to the soil before planting	
Banana	<i>Meloidogyne incognita</i>	Apply 2 Kg Nemastin enriched FYM @ 2 Kg/pant at the time of planting and at an interval of 3 months after planting for a period of one year	
Acid lime	Citrus nematodes (<i>Tylenchulus semipenetrans</i>)	Apply 2 Kg Nemastin enriched FYM @ 2 Kg/pant at the time of planting and at an interval of 3 months after planting for a period of one year	
Papaya	<i>Meloidogyne spp.</i> Reniform Nematodes (<i>Rotelenchulus reniformis</i>)	Apply 2 Kg Nemastin enriched FYM @ 2 Kg/pant at the time of planting and at an interval of 3 months after planting for a period of one year	
PB Rope L			
Crop	Common name of	Dosage	PHI (Days)

	pest	a.i.(mg/dispenser)	Pheromones dispensers	Recommended area of treatment in (Ha)	
Cotton	Pink bollworm (Pectinophora gossypiella)	>140	9875	25	NA
Trichoderma harzianum 1.5% WP (Strain No. IIHR-TV-5 Accessions No. ITCC 6889)					
Tomato	Root-knot nematodes (<i>Meloidogyne incognita</i>)		Treat the seed with <i>Trichoderma harzianum</i> 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma harzianum</i> 1.5% WP @ 50gm/sq.m and also apply <i>Trichoderma harzianum</i> 1.5% WP @ 5kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Brinjal	Root-knot nematodes (<i>Meloidogyne incognita</i>)		Treat the seed with <i>Trichoderma harzianum</i> 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma harzianum</i> 1.5% WP @ 50 gm/sq.m and also apply <i>Trichoderma harzianum</i> 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Carrot	Root-knot nematodes (<i>Meloidogyne</i>		Treat the seed with <i>Trichoderma harzianum</i> 1.5%		
	<i>incognita</i>)		WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma harzianum</i> 1.5% WP @ 50 gm/sq.m and also apply <i>Trichoderma harzianum</i> 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Okra	Root-knot nematodes (<i>Meloidogyne incognita</i>)		Treat the seed with <i>Trichoderma harzianum</i> 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma harzianum</i> 1.5% WP @ 50 gm/sq.m and also apply <i>Trichoderma harzianum</i> 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Trichoderma viride 1.5% WP (Strain No. IIHR-TV-5 Accessions No. ITCC 6889)					

Tomato	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Trichoderma viride</i> 1.5% WP @ 20 gm/kg of seeds & nursery beds with the <i>Trichoderma viride</i> 1.5 % WP @ 50 gm/sq.m. and also apply <i>Trichoderma viride</i> 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Brinjal	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Trichoderma viride</i> 1.5% WP @ 20 gm/kg of seeds & nursery beds with the <i>Trichoderma viride</i> 1.5% WP @ 50 gm/sq.m. and also apply <i>Trichoderma viride</i> 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Carrot	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Trichoderma viride</i> 1.5 % W P @ 20 gm/kg of seeds and apply <i>Trichoderma viride</i> 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before Planting’.
Okra	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Trichoderma viride</i> 1.5 % W P @ 20 gm/kg of seeds and apply <i>Trichoderma viride</i> 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before Planting’.
<i>Verticillium chlamydosporium</i> 1.0% WP, (2x10⁶ CFU/gm min) Strain – IIHR-VC-3 Accession No – ITCC-6898		
Tomato	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Verticillium chlamydosporium</i> 1.0% WP @ 20 gm/kg of seeds & nursery beds with the <i>Verticillium chlamydosporium</i> 1.0% WP @ 50 gm/sq.m and
		also apply <i>Verticillium chlamydosporium</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Brinjal	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Verticillium chlamydosporium</i> 1.0% WP @ 20 gm/kg of seeds & nursery beds with the <i>Verticillium chlamydosporium</i> 1.0% WP @ 50 gm/sq.m and also apply <i>Verticillium chlamydosporium</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.

Carrot	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Verticillium chlamydosporium</i> 1.0% WP @ 20 gm/kg of seeds and apply <i>Verticillium chlamydosporium</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Okra	Root-knot nematodes (<i>Meloidogyne incognita</i>)	Treat the seeds with <i>Verticillium chlamydosporium</i> 1.0% WP @ 20 gm/kg of seeds and apply <i>Verticillium chlamydosporium</i> 1.0% WP @ 5 kg/ha enriched FYM * @ 5 tons/ha to the soil before transplanting.			
<i>Verticillium lecanii</i> 1.15%WP, (1x10⁸ CFU/gm min) Strain – AS MEGH-VL Accession No – MCC-1028					
Cotton	White flies	-	2500	500	-
Citrus	Mealybug (<i>Planococcus citri</i>)	-	2500	550	-
<i>Verticillium Lecanii</i> 1.50% Liquid Formulation, (1x10⁸ CFU/ml. min.) Strain – T Stanes VI-1, Accession No – MTCC-5172					
Tomato	White fly (<i>Bemisia tabaci</i>)	-	2000 (Foliar spray)	500	-
<i>Verticillium lecanii</i> 3.0% AS, (strain: Accession No. MCC-1127, Strain No. MPKV / Biocontrol/ RVN/ VL-01					
Onion	Thrips (<i>Thrips tabaci</i>)	-	2000-2500	500	-
<i>Verticillium lecanii</i> 5.0% SC, (Strain: Accession No. NFCCI - 2638					
Cabbage	Diamond Back Moth (<i>Plutella xylostella</i>)	-	500	500	-
<i>Verticillium lecanii</i> 5.0% SC, (1x10⁸ CFU/gm Min.) Strain – Own Red Isolate, Strain No. VI-17874, MTCC No.5716					
Rice	White backed plant hopper (<i>Sogatella furcifera</i>)	-	3.125 kg.	600	-
Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 0.43% AS (1x10⁹ POB/ml)					
Cotton	<i>Helicoverpa armigera</i>	-	2700	400-600	-

Tomato	<i>Helicoverpa armigera</i>	-	1500	400-600	-
Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 2.0% AS, Strain No. GBS/HNPV -01 (1x10⁹ POB/ml Min.)					
Pigeon pea	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500	500-750	-
Gram	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500	500-750	-
Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 2.0% AS, Strain No. NBRI-8821 (1x10⁹ POB/ml Min.)					
Pigeon pea	Pod borer (<i>Helicoverpa armigera</i>)	-	500	500	-
Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 2.0% AS, Strain No. IBH-17268 (1x10⁹ POB/ml Min.)					
Pigeon pea	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500 ml	500-750	-
Gram	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500 ml	500-750	-
Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 2.0% AS, Strain No. BIL/HV-9 POB(1x10⁹ POB/ml Min.)					
Pigeon pea	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500	500-750	-
Chick pea	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500	500-750	-
Tomato	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500	500	-
Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 2.0% AS, Strain No. IBL-17268					
Pigeon pea	Pod borer (<i>Helicoverpa armigera</i>)	-	250-500	500-750	-
Chick pea	Pod borer (<i>Helicoverpa armigera</i>)	-	500-1000	500-750	-

Nuclear Polyhedrosis Virus of <i>Helicoverpa armigera</i> 0.43% AS, Strain No. BIL/HV-9 (1x10 ⁹ POB/ml Min.)					
Cotton	<i>Helicoverpa armigera</i>	-	2700	400-600	-
Tomato	<i>Helicoverpa armigera</i>	-	1500	400-600	-
Nuclear Polyhedrosis Virus of <i>Spodoptera litura</i> 0.5% AS, (1x10 ⁹ POB/ml Min.)					
Tobacco	<i>Spodoptera litura</i>	-	1500	400-600	-
NPV of <i>Helicoverpa armigera</i> 0.5%AS, (1x10 ⁹ POB/ml Min.)					
Chickpea	Pod borer (<i>Helicoverpa armigera</i>)	-	250	500	-
NPV of <i>Helicoverpa armigera</i> 2.0%AS, (1x10 ⁹ POBs count / ml min) Biological Insecticide					
Chickpea	Pod borer (<i>Helicoverpa armigera</i>)	-	250	600	-
<i>Paecilomyces lilacinus</i> 01.15% WP					
Brinjal	Root Knot Nematode	03.0 kg	500 kg Organic manure/ Organic fertilizer	-	-
2. Public health use					
Name of Insect	Habitat	Dose		Surface	Waiting Period (days)
		a.i. (gm)	Formulation (gm)		
Azadirachtin 0.15% EC					
Mosquito larvae	Stagnant water, Drainage water, Puddle	1.0	1.0	10.7 m ²	-
	Iron containers, Machinery scraps, Iron box, Iron tanks	5.0	5.0	53.6 m ²	-
	Plastic scraps, Pit	933.3	933.3	01 ha	-
<i>Bacillus thuringiensis</i> var. israelensis WP					
Anopheles and Culex (larvae)	-	-	2-5 kg.	-	14-28

<i>Bacillus thuringiensis</i> var. israelensis , Serotype H-14 (VECTOBAC 12 AS) Potency 1200 ITU / MG (VCRC Serotype H-14 strain					
Culex	Drains, Cesspits Casuarina pits, Disused wells	-	5.0 litres	01 liter in 100 liter of water	-
Anopheles	Paddy fields, Ponds, Pools	-	10.0 litres	01 liter in 50 liter of water	-
Aedes	Tree holes, Disused tyres	-	10.0 litres	01 liter in 50 liter of water	-
Culex	Drains, Cesspits Casuarina pits, Disused wells	-	5.0 litres	01 liter in 100 liter of water	-
<i>Bacillus thuringiensis</i> var. israelensis, Serotyp H-14 (Vectobac 12 AS) potency 1200 ITU/mg					
Anopheles	Clean water, cement tanks	-	1-2 liters	-	-
Culex	Polluted water, Cesspits, Cement tank, Stagnant and flowering drains	-	2-4 liters	-	-
<i>Bacillus thuringiensis</i> var. israelensis 5.0% AS (Strain VCRC-B-17, Serotype H-14, Accession No.- MTCC 5596) potency 630 ITU/mg.min.					
Culex	Polluted water (Drain, Cesspits, Casuarina, Pit, Disused well)	-	05-10 liters	01 liter in 50-100 liters of water	-
Anopheles	Clean water (Ponds, Pool, Paddy fields)	-	05 liters	01 liter in 100 liters of water	-
Aedes	Tree holes, disused tyres	-	10 liters	01 liter in 100 liters of water	-
Culex	Polluted water (Drain, Cesspits, Casuarina, Pit, Disused well)	-	10 lit (1 ml/m ²)	01 liter in 100 liters of water	-
Anopheles	Clean water (Ponds, Pool, Paddy fields)	-	05 liters(0.5 ml/m ²)	0.5 liter in 100 liters of water	-
Aedes	Tree holes, disused tyres	-	10 liters (1 ml/m ²)	01 liter in 100 liters of water	-

Culex	Drains, Cesspits, casuarinas pits, Disused Wells	-	5 lit/ha	01 liter in 100 liters of water	-
Anopheles	Paddy fields, ponds, pools	-	10 lit/ha	01 liter in 50 liters of water	-
Aedes	Tree holes, disused tyres	-	10 lit/ha	01 liter in 50 liters of water	-
Culex	Polluted water (Drains, Cesspits, Casuarina Pits, Disused wells)	10 lit (1 ml/m ²)		200 Liters of Water	
Anopheles	Clean water (Paddy fields, Ponds, Pool)	5 (0.5 ml/m ²)		200 Liters of Water	

***Bacillus thuringiensis* var. *israelensis* (H-14) 5.0% AS**

Culex	Drains, Cesspits, casuarinas pits, Disused Wells	-	5 lit/ha	01 liter in 100 liters of water	-
Anopheles	Paddy fields, ponds, pools	-	10 lit/ha	01 liter in 50 liters of water	-
Aedes	Tree holes, disused tyres	-	10 lit/ha	01 liter in 50 liters of water	-

***Bacillus thuringiensis* var. *israelensis*, Serotyp H-14, 5% WP Potency 2000 ITU/mg**

Area and Breeding (Habitat)	Dose (g/m ²)	Recommended application Frequency
River bed pool	0.5	Weekly
Cement tanks	0.5	Fortnightly
Pokhars small kaccha or cement tanks with low walls	0.5	Weekly
Pits and ditches	0.5	Weekly
Paddy fields	0.5	Weekly
Semi polluted pits	0.5	Weekly
Ornamental fountains	0.5	Fortnightly
Septic tanks	1.0	Weekly/Fortnightly
Flood prone polluted cesspits and ditches	0.5	Weekly
Drains with polluted stagnant or flowing very slowly	0.5	Weekly/Fortnightly

<i>Bacillus thuringiensis</i> var. israelensis, Strain Designation- ABIL, Accession No. NAMICC-B01318 (CFU Count- 4.8 x 10⁸) Serotyp H-14, 5% WP Potency 7000 ITU/mg					
Name of Insect	Habitat	Formulation (lit/ha.)		Dilution in water (Liters)	Waiting period (Days)
		Gm/m ²	Kg/ha		
<i>Anopheles</i> species, <i>Culex</i> species, <i>Aedes</i> species	Clean water, (Cement tanks, coolers, Drains, Pools and Pits)	0.75	7.50	200	-
species	Highly Polluted water- (Underground tanks, Container, Drums & Tyros)	1.00	10.00	200	-
<i>Bacillus thuringiensis</i> var. sphaericus1593 M sero type H 59 5b					
<i>Anopheles</i> species, <i>Culex</i> species	For Drains, Cesspits Cesspools, Paddy fields, ponds	-	112	1 liter in 10 liter of water	-
<i>Anopheles</i> species, <i>Culex</i> species	Casuarinas pits, unused wells, unused overhead tanks, Domestic wells (Not for drinking requirements)	-	112	1 liter in 10 liter of water	-
<i>Bacillus thuringiensis</i> var. israelensis 12% AS (Vectobac)					
<i>Anopheles</i> species	Clean water, cement tanks	-	1-2 liter	-	-
<i>Culex</i> species	Polluted water, cess pits, cement tanks, stagnant and flowing drains	-	2-4 liter	-	-
<i>Bacillus thuringiensis</i> var. israelensis 00.50%WP					
Mosquito spp.	Anopheles, Culex and Aedes (Habitat-Cement tank, Coolers, Drains, Pool pits, Highly polluted underground tanks, Container drums & Tyres.)	0.75 mg/m ²	-	200	-
<i>Bacillus thuringiensis</i> var. israelensis 05.00%WP					

Mosquito spp.	Anopheles, Culex and Aedes (Habitat-Cement Tank, Coolers, Drains, Pool pits	0.75 g/m ²	7.50 kg/ha.	200 L	-
	Highly polluted water (underground tanks, Container Drums and Tyres.)	1.00 g/m ²	10.00 kg/ha	200 L	-
<i>Bacillus sphaericus</i> 1593 M sero type H 59 5b, 1.3% flowable concentrate Potency 13000 IU/mg					
<i>Anopheles</i> species, <i>Culex</i> species	For Drains, Cesspits Cesspools, paddy fields, ponds	-	112 ml	1 liter/10 liter of water	-
<i>Anopheles</i> species, <i>Culex</i> species	Casuarinas pits, unused wells, unused overhead tanks, Domestic wells (Not for drinking requirements)	-	112 ml	1 liter/10 liter of water	-

****END****



Government of India
Ministry of Agriculture & Farmers Welfare
Department of Agriculture & Farmers Welfare
Directorate of Plant Protection, Quarantine & Storage
Central Insecticide Board & Registration Committee N.H.-IV,
Faridabad-121001 (Haryana)

MAJOR USES OF BIO-PESTICIDES
(Registered under the Insecticides Act, 1968)

(UPTO - 31/05/2022)

(Based on certificate issued)

Disclaimer: The document has been compiled on the basis of available information for guidance and not for legal purposes.

BIO-PESTICIDES

1. Major uses of Bio-fungicides (Page No. – 02 to 25)

1. Major uses of Bio-Fungicides					
Name of Crop	Common name of the Disease	Dose/ha		Dilution in water (liter/ha)	Waiting period (Days)
		a.i. (g)	Formulation (g/ml)/%		
<i>Ampelomyces quisqualis</i> 2.0% WP					
Okra (Bhindi)	Powdery mildew (<i>Erysiphe cichoracearum</i>)	-	2.5 kg	500	-
Neem oil based EC containing, Azadirachtin 0.030% (300 ppm)					
Bhindi	Powdery mildew	-	2-2.50	500	03
<i>Pseudomonas fluorescens</i> 1.75% WP (T Stanes Pf-1 Strain Accession No. MTCC 5671)					
Wheat	Loose smut	-	05 g/kg seed (Seed treatment)	Mix the required quantity of seeds with the required quantity of <i>Pseudomonas fluorescens</i> 1.75% WP formulation and ensure uniform coating. Shade dry and sow the seeds.	Dilution in water (lit/ha) As per requirement for uniform coating of seeds 500 lit per ha
		-	2.5 kg per ha (05 g/litre water) (Foliar spray)	Spray <i>Pseudomonas fluorescens</i> 1.75% WP uniformly on the crop.	500 lit per ha

Tomato	Early blight		05 g/kg seed (Seed treatment)	Mix required quantity of the seeds with the required quantity of <i>Pseudomonas fluorescens</i> 1.75% WP. Ensure uniform coating, shade dry and sow the seeds.	Dilution in water (lit/ha) As per requirement for uniform coating of seeds
			3 kg per ha (06 g/litre water) (Foliar spray)	Spray <i>Pseudomonas fluorescens</i> 1.75% WP uniformly on the crop.	500 lit per ha
<i>Bacillus subtilis</i> 1.50% L.F (T Stanes Bs-1 Strain MTCC 25072)					
Banana	Sigatoka (<i>Mycosphaerella musicola</i>)	-	5 Liter/ha (Foliar spray)	750 Liter/ha	-
<i>Pseudomonas fluorescens</i> 2.0% AS (Strain No. IPL/PS-01, Accession No. MTCC 5727)					
Paddy	Bacterial leaf blight (<i>Xanthomonas oryzae</i> pv. <i>oryzae</i>)	-	10 ml/litre of water	Seedling Root Dip Treatment: Mix 10 ml of <i>Pseudomonas fluorescens</i> 2.0% AS in one litre of water and dip the paddy seedling root for 30 minutes before transplanting followed by	Nil

				foliar application after 40-45 days of transplantation.	
		-	1.87-2.50 litre/ha	Foliar Spray: Suspend 1.87 to 2.50 litre of <i>Pseudomonas fluorescens</i> 2.0% AS in 500 litre of water and spray uniformly after 40-45 days of transplantation over one hectare land 2-3 spray are required depending upon the disease incidence at interval of 10-12 days using a hand operated Knapsack sprayer or power sprayer fitted with a hollow cone nozzle.	Nil
<i>Bacillus subtilis</i> 2.0% AS (Strain No. IPL/BS-09, Accession No. MTCC 5728)					
Paddy	Bacterial leaf blight	-	10 ml/litre of	Seedling Root	Nil

	(Xanthomonas oryzae pv. oryzae)		water	Dip Treatment: mix 10ml of <i>Bacillus subtilis</i> 2.0% AS in one litre of water and dip the paddy seedling root for 30 minutes before transplanting followed by foliar application.	
		-	1.87-2.50 litre/ha	Foliar Spray: Suspend 1.87 to 2.50 litre of <i>Bacillus subtilis</i> 2.0% AS in 500 litre of water and spray uniformly after 40-45 days of transplantation over one hectare land 2-3 spray are required depending upon the disease incidence at interval of 10-12 days using a hand operated Knapsack sprayer or power sprayer fitted with a hollow cone nozzle.	Ni
Bacillus subtilis 1.15% AS (MTCC Accession no. 5786)					
Grapes	Powdery mildew (<i>Erysiphe necator</i>)	-	2 ml/litre water	<i>Bacillus subtilis</i> 1.15% AS is applied as foliar	-

				spray and soil spray @ 2 ml/litre of water. The product has to be used with activator provided. Shake the bottle well. Mix the contents of <i>Bacillus subtilis</i> 1.15% AS activator bottles with <i>Bacillus subtilis</i> 1.15% AS in a clean vessel. For 1 Ltr packing add 10 g activator (2 bottles of 5 g each). Mix thoroughly and spray. The product can be applied at 15 days interval. Thorough coverage is essential for optimum result.	
<i>Pseudomonas fluorescens</i> 0.5% WP (TNAU Strain Accession No. ITCC BE 0005)					
Groundnut	Late leaf spot	-	10 g/kg seed	Seed Treatment: Mix the required quantity of seeds with the required quantity of <i>Pseudomonas fluorescens</i> 0.5% WP formulation and	-

				ensure uniform coating. Shade dry and sow the seeds.	
		-	1 kg/ha	Soil Treatment: 01 kg of <i>Pseudomonas fluorescens</i> 0.5% WP spread uniformly over 1 hectare of land (foliar spray @ 2%).	-
Rice	Leaf and neck blast (<i>Pyricularia oryzae</i>)	-	10 gm/kg seed	Seed Treatment: Mix required quantity of the seeds with the required quantity of <i>Pseudomonas fluorescens</i> 0.5% WP.	Nil
		-	1 kg/ha	Soil Treatment: Broadcast 1 kg <i>Pseudomonas fluorescens</i> 0.5% WP by mixing with 2.5 kg organic manure in one ha area.	-
		-	1 kg/ha	Foliar spray: Spray 0.5% WP @ 1 kg/ha	-
Chili seedlings	Damping off (<i>Pythium aphanidermatum</i>)	-	10 g/kg seed	Seed Treatment: Mix required	Nil

				quantity of the seeds with the required quantity of <i>Pseudomonas fluorescens</i> 0.5% WP and ensure uniform coating, shade dry and sow	
Tomato	Wilt (<i>Fusarium oxysporum</i> F.sp.)	-	10 gm/kg of seeds	Seed Treatment: Mix required quantity of the seeds with the required quantity of <i>Pseudomonas fluorescens</i> 0.5% WP and ensure uniform coating, shade dry and sow	Nil
			2.5 kg/ha	Soil Treatment: 2.5 kg of <i>Pseudomonas fluorescens</i> 0.5% WP Spread uniformly over a hectare of land	Nil
Cotton	Bacterial Leaf blight	-	10 g/kg seed	Seed treatment- Mix required quantity of the seeds with the required quantity of <i>Pseudomonas fluorescens</i> WP and ensure uniform coating with 0.2%	Nil

				Foliar spray, shade dry and sow	
<i>Pseudomonas fluorescens</i> 1.5% WP (BIL-331 Accession No. MTCC5866)					
Paddy	Bacterial Leaf blight (<i>Xanthomonas oryzae</i>),Blast (<i>Pyricularia oryzae</i>),Leaf spot (<i>Helminthosporium oryzae</i>)	-	5 gm/kg of seed	Seed Treatment: Make a thin paste of required quantity of <i>Pseudomonas fluorescence</i> 1.5% WP with min. volume of water and coat the seed uniformly, shades dry the seeds just before showing.	Nil
		-	2.5 kg /ha	Soil Treatment: Mix 2.5 kg of <i>Pseudomonas fluorescens</i> 1.5% WP with 50 kg FYM or and broadcast uniformly over hectare of land 30 days after planting.	Nil
<i>Pseudomonas fluorescens</i> 1.0% WP (IPL/PS-01 Accession No. MTCC5727)					
Tomato	Wilt (<i>Fusarium oxysporum</i>), Damping Off (<i>Pythium aphanidermatum</i>), Root rot (<i>Rhizoctonia</i> spp.)	-	5 gm/kg of seed	Seed Treatment: Make a thin paste of required quantity of <i>Pseudomonas fluorescens</i>	Nil

				1.0% WP with the minimum volume of water & coat the seed uniformly, shade dry the seed just before sowing.	
		-	2.5 kg/ha	Soil Treatment: Mix 2.5kg of <i>Pseudomonas fluorescens</i> 1.0% WP with 62.5 kg FYN and broadcast uniformly over a hectare of land.	Nil
		-	10gm/litres of water	Seedling Root Dip Treatment: Mix 10 gm of <i>Pseudomonas fluorescens</i> 1.0% WP in one litre of water and dip the tomato seedling root rot for minutes.	Nil

***Pseudomonas fluorescens* 1.0% WP (Strain No. IIHR-PF-2 Accession No. ITCCB0034)**

Tomato	Wilt (<i>Fusarium oxysporum</i>)	Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Pseudomonas fluorescens</i> 1.0% WP @ 50gm/sq.m and apply <i>Pseudomonas fluorescens</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Brinjal	Wilt (<i>Fusarium solani</i>)	Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Pseudomonas fluorescens</i> 1.0% WP @ 50 gm/sq.m and

		apply <i>Pseudomonas fluorescens</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Carrot	Root rot (<i>Athelia rolfsii</i>)	Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20gm/kg of seeds and apply <i>Pseudomonas fluorescens</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5tons/ha to the soil before sowing.			
Okra	Wilt (<i>Fusarium oxysporum</i>)	Treat the seed with <i>Pseudomonas fluorescens</i> 1.0% WP @ 20 gm/kg of seeds and apply <i>Pseudomonas fluorescens</i> 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.			
<i>Pseudomonas fluorescens</i> 1.5% LF (MTCC no. 5671, Strain designation Pf-1)					
Paddy	Leaf/neck blast	4.5 ml per kg seed	Seed Treatment: Mix the required quantity of seeds with the required of <i>Pseudomonas fluorescens</i> 1.5% Liquid formulation ensure uniform coating, shade dry and sow.		
		6.0 litre per ha	Foliar spray: Spray <i>Pseudomonas fluorescens</i> 1.5% Liquid formulation uniformly on the crop.		
<i>Pseudomonas fluorescens</i> 1.5% AS (ICAR-CRDE, KVK Strain Accession No. MTCC - 2539)					
Groundnut	Late leaf spot	-	10 ml/kg seed	Seed Treatment: Mix the required quantity of seeds with the required of <i>Pseudomonas fluorescens</i> 1.5% AS and ensure uniform coating. Shade dry and sow the seeds.	Nil
		-	01 litre/ha	Soil Treatment: 1 Litre of <i>Pseudomonas</i>	Nil

				<i>fluorescens</i> 1.5% AS spread uniformly over 1 hectare of land (foliar spray @ 0.2%)	
<i>Trichoderma harzianum</i> 0.50% WS					
Cardamom	Capsule rot (<i>Phytophthora meadii</i>)	-	100 gm/plant	Soil Treatment: Apply 100 gm product/ plant along with Neem cake (0.5 kg/plant) and 5 kg FYM/plant	-
<i>Trichoderma harzianum</i> 1.0% WP (Strain No. IIHR-TH-2 Accessions No. ITCC 6888)					
Tomato	Wilt (Fusarium Oxysporum)	Treat the seed with <i>Trichoderma harzianum</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma harzianum</i> 1.0% WP @ 50 gm/sq.m and apply <i>Trichoderma harzianum</i> 1.0% WP @ 5 kg/ha enriched FYM*@5tons/ha to the soil before transplanting.			
Brinjal	Wilt (<i>Fusarium solani</i>)	Treat the seed with <i>Trichoderma harzianum</i> 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma harzianum</i> 1.0% WP @ 50gm/sq.m and apply <i>Trichoderma harzianum</i> 1.0% WP @ 5kg/ha enriched FYM*@5tons/ha to the soil before transplanting.			
Carrot	Root rot (<i>Sclerotium rolfsii</i>)	Treat the seed with <i>Trichoderma harzianum</i> 1.0% WP @ 20gm/kg of seeds and apply <i>Trichoderma harzianum</i> 1.0% WP @ 5kg/ha enriched FYM*@ 5tons/ha to the soil before sowing.			
Okra	Wilt (<i>Fusarium oxysporum</i>)	Treat the seed with <i>Trichoderma harzianum</i> 1.0% WP @ 20gm/kg of seeds and apply <i>Trichoderma harzianum</i> 1.0% WP @ 5kg/ha enriched FYM*@ 5tons/ha to the soil before sowing.			
<i>Trichoderma harzianum</i> 1.0% WP (Strain no. Th3 Accession no. 5593)					

Chickpea	Root rot (<i>Rhizoctonia solani</i>)	6 gm/kg of seeds (seed treatment) and soil drenching with <i>Trichoderma harzianum</i> after 50 days of sowing.			
<i>Trichoderma harzianum</i> 2.0% WP (NBRI-1055)					
Maize	Root rot (<i>Fusarium moniliforme</i>), Fusarium wilt	-	20 gm/kg seed	Seed Treatment: Make a thin paste of required quantity of <i>Trichoderma harzianum</i> 2.0% WP with minimum volume of water and coat the seeds uniformly, shade dry the seeds just before sowing.	-
<i>Trichoderma reesei</i> 3.0% WP (CSR-T-3 Strain Accession No. NAIMCC-SF-0030)					
Banana	Panama wilt	Dosage per hectare			Waiting period from last spray to harvest (in days)
		a.i.(g)	Formulation (ml)	Dilution in Water	
		18 kg/ha.	250 ml/plant	600 Liters	7 days
<i>Trichoderma viride</i> 1.0% WP					
Pigeon pea	Wilt, Root rot	-	8 gm /kg seed	Seed Treatment	Nil
		-	5.0 kg/ha	Soil Treatment	Nil
Pulses (Cowpea, Mung bean, Urdbean)	Root rot	-	4 g/kg of seed	Seed Treatment	Nil

Chilli	Damping off	-	4 g/kg of seed	Seed Treatment	Nil
<i>Trichoderma viride</i> 0.5% WP					
Tomato	Wilt (<i>Fusarium oxysporum</i>)	-	10 g/kg seed	Seed Treatment- Mix the required quantity of seeds with the required quantity of <i>Trichoderma viride</i> 0.50% WP and ensure uniform coating, Shade dry and sow.	-
<i>Trichoderma viride</i> 1.15% WP (T Stanes Tv-1 Strain Accession No. MTCC 5170)					
Groundnut	Seedling wilt	-	4 gram/kg seeds	Seed Treatment: Mix required quantity of seeds with the required quantity of <i>Trichoderma viride</i> 1.15% WP and ensure uniform coating, shade dry and sow. Soil Application: Mix 2.5 kg <i>Trichoderma viride</i> 1.15% with 100 kg of properly decomposed farmyard manure and spread	-

				decomposed farmyard manure and spread uniformly over a hectare of land at the time of crop transplanting and at the time of flowering.	
Trichoderma viride 1.0% WP (TNAU Strain Accession No. ITCC 6914)					
Cowpea	Root Rot	-	5 gm/kg seed	Seed Treatment: Make a fresh slurry of required quantity of <i>Trichoderma viride</i> 1.0% WP with minimum volume of water and coat the seeds uniformly, shade dry the seeds just before sowing.	Nil
		-	2.5 kg/ha	Soil Treatment: Mix 2.5 kg of <i>Trichoderma viride</i> 1.0% WP with 62.5 kg FYM and broadcast uniformly over a hectare of land and irrigate the field immediately	Nil
Chili seedlings	Damping off (<i>Pythium</i>	-	4 g/kg seed	Seed	Nil

	<i>aphanidermatum</i>)			Treatment: Mix required quantity of the seeds with the required quantity of <i>Trichoderma viride</i> 1.0% WP and ensure uniform coating shade dry and sow	
Urd bean	Root rot (<i>Macrophomina phaseolina</i>)	-	4 g/kg seed	Seed Treatment: Mix required quantity of the seeds with the required quantity of <i>Trichoderma viride</i> 1.0% WP and ensure uniform coating shade dry and sow	Nil
Pigeon pea	Root rot (<i>Macrophomina phaseolina</i>)	-	4 g/kg seed	Seed Treatment: Mix required quantity of the seeds with the required quantity of <i>Trichoderma viride</i> 1.0% WP and ensure uniform coating shade dry and sow	Nil
<i>Trichoderma viride</i> 1.0% WP (Strain T-14 in house isolate of M/s Indore Biotech Inputs & Research (P) Ltd., Indore)					
Chickpea	Wilt (<i>Fusarium oxysporum</i>)	-	5 gm/kg seed	Seed Treatment:	-

				Make slurry of required quantity of <i>Trichoderma viride</i> 1.0% WP with minimum volume of water & coat the seeds uniformly, shade dry the seeds just before sowing	
	Root Rot (<i>Rhizoctonia solani</i> & <i>Sclerotium rolfsii</i>)	-	5.0 kg/ha	Soil Treatment: Mix 5.0 kg of <i>Trichoderma viride</i> 1.0% WP in 100 kg FYM and broadcast over a hectare land mix well with soil and irrigate the field immediately.	-
Paddy	Sheath blight (<i>Rhizoctonia solani</i>)	-	5-10 gm/litre of water	Foliar spray: Mix 2.5 kg of <i>Trichoderma viride</i> 1.0% WP in 500 litres of water. Spray three times at 15 days interval uniformly over one hectare land 30 days after planting	-
<i>Trichoderma viride</i> 1.5% LF (Strain No. TV-1, Accession No. MTCC 5170)					
Tomato	Root wilt (<i>Fusarium oxysporum</i> f.sp. <i>lycopersici</i>)	-	5 ml/kg seed + 5 ml/lit water	Seed treatment + Seedling dip	Dilution in water-

			+ 3000 ml/ha	treatment + Soil treatment	500 liter/ha
Trichoderma viride 1.5% WP (Strain No. IIHR-TV-5, Accession No. ITCC 6889)					
Tomato	Wilt (<i>Fusarium oxysporum</i>)	Treat the seed with <i>Trichoderma viride</i> 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma viride</i> 1.5% WP @ 50 gm/sq.m and apply <i>Trichoderma viride</i> 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Brinjal	Wilt (<i>Fusarium solani</i>)	Treat the seed with <i>Trichoderma viride</i> 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the <i>Trichoderma viride</i> 1.5% WP @ 50 gm/sq.m and apply <i>Trichoderma viride</i> 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Carrot	Root rot (<i>Sclerotium rolfsii</i>)	Treat the seed with <i>Trichoderma viride</i> 1.5% WP @ 20 gm/kg of seeds and apply <i>Trichoderma viride</i> 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.			
Okra	Wilt (<i>Fusarium oxysporum</i>)	Treat the seed with <i>Trichoderma viride</i> 1.5% WP @ 20 gm/kg of seeds and apply <i>Trichoderma viride</i> 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.			
Trichoderma viride 1.0% WP(IPL/VT/101)					
Cauliflower	Stalk rot (<i>Sclerotinia sclerotiorum</i>)	-	4 gm/kg seed	Seed Treatment: Make a thin paste of required quantity of <i>Trichoderma viride</i> 1.0% WP with minimum volume of water and coat the seeds uniformly, shade dry the seeds just	-

				before sowing	
		-	2.50 kg/ha	Soil Treatment: Mix 2.5 kg of <i>Trichoderma viride</i> 1.0% WP with 62.5 kg FYM and broadcast uniformly over a hectare of land and irrigate the field immediately	-
Brinjal	Root Rot/ Wilt/ Damping off (<i>Rhizoctonia bataticola</i> , <i>Sclerotium rolfsii</i> , <i>Fusarium oxysporum</i> , <i>Rhizoctonia solani</i>)	-	5 gm/kg seeds	Seed Treatment: Make a thin paste of required quantity of <i>Trichoderma viride</i> 1.0% WP with minimum volume of water and coat the seeds uniformly, shade dry the seeds just before sowing	
		-	250 gm/50 litre of water/400 sq. m	Nursery Treatment: Mix 250 gm of <i>Trichoderma viride</i> 1.0% WP in 50 litres of water and drench the soil in 400 sq.m area	-
		-	10 gm/litre of water	Seedling Root dip Treatment: Mix 10 gm of	-

				Trichoderma viride 1.0% WP in one litre of water and dip the Brinjal seedling root for 15 minutes	
		-	2.5 kg/ha	Soil Treatment: Mix 2.5 kg of Trichoderma viride 1.0% WP with 62.5 kg FYM and broadcast uniformly over a hectare of land and irrigate the field immediately	
Cabbage	Root rot/Collar rot (<i>Rhizoctonia solani</i>)	-	10 gm/litre water	Seedling Root dip Treatment: Mix 10 gm of Trichoderma viride 1.0% WP in one litre of water and dip the Cabbage seedling root for 30 minutes	-
		-	2.5 kg/ha	Soil Treatment: Mix 2.5 kg of Trichoderma viride 1.0% WP with 62.5 kg FYM and broadcast uniformly over a hectare of land and irrigate the field immediately	-

Trichoderma viride 1.0% WP					
Tomato	Seedling wilt (<i>Fusarium oxysporum</i>), Damping off (<i>Pythium aphanidermatum</i> , <i>Rhizoctonia solani</i>)	-	9 g/kg seed	Seed Treatment: Mix 9 kg of the product per kg seed.	-
		-	2.5 kg/ha	Root zone application: Mix thoroughly 2.5 kg of the product in 150 kg of compost or farmyard manure and apply this mixture in the field after sowing/transplanting of crops	-
Bengal gram	Seedling wilt (<i>Fusarium oxysporum</i>), Damping off (<i>Pythium aphanidermatum</i> , <i>Rhizoctonia solani</i>)	-	9 g/kg seed	Seed Treatment: Mix 9 kg of the product per kg seed.	-
		-	2.5 kg/ha	Root zone application: Mix thoroughly 2.5 kg of the product in 150 kg of compost or farmyard manure and apply this mixture in the field after sowing/transplanting crops	-
Trichoderma viride 1.0% WP					

Sunflower	Seed rot (<i>Sclerotium rolfsii</i>), Root rot (<i>Sclerotium rolfsii</i>)	-	6 g/kg seed	Seed Treatment: Mix required quantity of the seeds with the required quantity of product in rice gruel, ensure uniform coating, shade dry and sow	-
		-	1.25-2.5 kg/ha	Soil Treatment: Mix with 30-60 kg of compost/ farmyard manure and spread uniformly over 1 hectare of land.	-
Trichoderma viride 1.0% WP (TNAU Strain Accession No. ITCC 6914)					
Pigeon pea	Root rot (<i>Macrophomina phaseolina</i>)	-	4 gm/kg seed	Seed Treatment: Mix required quantity of the seeds with the required quantity of <i>Trichoderma viride</i> 1.0% WP and ensure uniform coating, shade dry and sow	-
Urd bean	Root rot (<i>Macrophomina phaseolina</i>)	-	4 gm/kg seed	Seed Treatment: Mix required quantity of the seeds with the required	-

				quantity of <i>Trichoderma viride</i> 1.0% WP and ensure uniform coating, shade dry for 24 hours and sow	
<i>Trichoderma viride</i> 5.0% SC (Strain Accession No. ITCC 7111)					
Chilli (Nursery)	Damping off (<i>Pythium aphanidermatum</i>)	-	2 ml/kg seed	Seed Treatment: Mix required quantity of the seeds with the required quantity of <i>Trichoderma viride</i> 5.0% SC. Ensure uniform coating, shade dry and sow	Nil
<i>Trichoderma harzianum</i> 2.0% AS (Strain No. IPL/VT/102, Accession No. ITCC 6893)					
Paddy	Bakane (Foot rot) (<i>Fusarium moniliforme</i>)	-	30 ml/litre of water	Seedling Root Dip Treatment: Mix 30 ml of <i>Trichoderma harzianum</i> 2.0% AS in one litre of water and dip the paddy seedling root for 30 minutes before transplanting followed by Soil treatment.	Nil
		-	2.5 litre/ha	Soil Treatment: Mix 2.5 litre of <i>Trichoderma</i>	Nil

				<i>harzianum</i> 2.0% AS with 100 kg of properly decomposed FYM and broadcast uniformly over a hectare of land prior to transplanting.	
<i>Trichoderma viride</i> 1.0% AS (Strain TV-AAV-RJP, Accession no. MCC 1013)					
Urd Bean (Black gram)	Root rot	-	4-6 ml/kg. Seed	Seed Treatment: Mix required quantity of the seeds with the required quantity of <i>Trichoderma viride</i> 1.0% AS and ensure uniform coating, shade dry and sow	-
<i>Trichoderma viride</i> 5.0% Liquid Formulation (Accession no. NAIMCC-F-03034)					
Rice	Brown spot (<i>Cochliobolus miyabeanus</i>)	-	500 liter/ha	Foliar spray	-
Pea	Powdery mildew (<i>Microsphaera alni</i>)	-	500 liter/ha	Foliar spray	-
