DIRECTORATE OF AGRICULTURE AND FOOD PRODUCTION,ODISHA

No.APP-PP-PP-0006-2022 668 Agril/pp dt 17.05.23

To

The Joint Director Agriculture (All)
The Chief District Agriculture Officer (All)
The Agriculture District Officers(All)

Sub: Approved Use of Pesticides by Central Insecticides Board as on 1.2.2023 published by DPPQS, Govt. of India

Sir,

Enclosing herewith the CIB approved list of major use of Bio-insecticides, Bio-fungicides , herbicides, Insecticides, fungicides etc on various crops issued by Directorate of Plant Protection Quarantine & Storage (DPPQS) ,Ministry of Agriculture & FW ,Govt. of India for ready reference .

The information is available in the web-site of DPPQS **https://ppqs.gov.in** and all the field functionaries may please be communicated regarding the major uses.

Yours faithfully,

Director of Agriculture &
Food Production, Odisha

Memo No. 669 Agril./PP/dt 17.05.23

Copy forwarded to Technical Director, NIC Bhubaneswar for information and necessary action with a request to upload the soft copy in different portals viz. agrisnetodisha.ori.nic.in, odishaagrilicense.nic.in, epestodisha.nic.in and dbtinputodisha.nic.in.

Director of Agriculture &
Food Production, Odisha

Memo No. 670 Agril./PP/dt 17.05.23

Copy forwarded to Dean (Extension) /Proff & Head , Department of Entomology, Plant Pathology OUAT for information and necessary action.

Director of Agriculture &
Food Production, Odisha

भारत सरकार / **Government of India**
क िष एव षकसान क□ाण मा ालय / **Ministry of Agriculture & Farmers Welfare**
क िष एव षकसान क□ाण षवभाग
Department of Agriculture & Farmers Welfare
वन4िष सर#ण, सगरोध और स$ह षनदेशालय
Directorate of Plant Protection, Quarantine & Storage
क)े ं दर ीय क ीटनाशी ब ोर एवं प ं ज ीकरण
सषमिष **Central Insecticide Board & Registration**
Committee एन. एच. - 4, फरीदाबाद – **121 001** (हररयाणा)
N.H.-IV, Faridabad - 121 001 (Haryana)

MAJOR USES OF PESTICIDES

(Registered under the Insecticides Act, 1968)

(As on – 01/02/2023)

(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					
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 (*Helicoverpa armigera*)	-	1000-1500	500	03
Brinjal	Shoot & fruit borer (*Leucinodes orbonalis*)	-	1000-1500	500	03
Azadirachtin 00.03% EC Min. Neem Oil Based					
Cotton	Bollworm (*Helicoverpa armigera*), 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 (*Helicoverpa armigera*)	-	-	-	07

Red Gram (Tur or Arhar)	Pod borer (*Melanagromyza* 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, *Helicoverpa armigera*, Aphids	-	375.0	750	05
Cauliflower	*Spodoptera*, 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
***Bacillus thuringiensis* var. galleriae 1593 M serotype H 59 5b, 1.3% flowable concentrate Potency 1500 IU/mg**					

Cabbage & Cauliflower	Diamond back moth (*Plutella xylostella*)	-	06-1.0	500	-
Tomato	Fruit borer (*Helicoverpa armigera*)	-	1.0-1.5	500	-
Bhindi (Okra)	Fruit borer (*Earias* spp.)	-	1.0-1.5	500	-
Chilli	Fruit borer (*Spodoptera litura*)	-	1.5-2.0	1000	-
Cotton	Bollworm (*Helicoverpa armigera*)	-	2.0-2.5	1000	-
Rice (Paddy)	Leaf folder (*Cnaphalocrocis medinalis*)	-	1.0-3.0	1000	-
Bacillus thuringiensis* var. *kurstaki					
Cotton	Bollworm	-	750-1000	750-1000	-
***Bacillus thuringiensis* var. *kurstaki*, serotype H-39, 3B, Strain Z-52**					
Cotton	Bollworms, *Spodoptera*	0.75-1.00	500-750	-	-
Rice (Paddy)	Stem borer & Leaf folder	1.50	500-750	-	-
Gram	*Heliothis* sp.	0.75	500-750	-	-
Pigeon Pea	*Heliothis* sp.	0.75	500-750	-	-
Soybean	*Spodoptera*, *Heliothis*, *Spilosoma*, Semilooper, Leaf miner	0.75	500-750	-	-
Tobacco	*Spodoptera, Heliothis*	1.50-2.00	500-750	-	-
Castor	Hairy caterpillar, *Achaea janata*	1.00	500-750	-	-
Teak	Defoliator (*Hyblaea puera*), Skeletonizer (*Eutectona machaeralis*)	0.25-0.50	500-750	-	-
***Bacillus thuringiensis* serovar *kurstaki* (3a, 3b, 3c) 5.0% WP Potency 55000 SU (*Spodoptera* unit based) ($5x10^7$ 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	-
***Bacillus thuringiensis* var. *kurstaki* 0.5% WP serotype 3a, 3b, 3c, Strain DOR Bt-1, Potency 9000 IU/mg min. U/s 9(3b)**					
Caster	Caster 5rustaki5r (*Achaea janata*)	-	0.25	250-300	-
***Bacillus thuringiensis* var. *kurstaki* 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 (*Helicoverpa armigera*)	-	1-1.25	1000	-
***Bacillus thuringiensis* var. *kurstaki* 0.5% WP serotype 3a, 3b, 3c, Strain DOR Bt-1, Potency 9000 IU/mg min. U/s 9(3b)**					
Caster	Caster 5rustaki5r (*Achaea janata*)	-	0.25- 0.375	250	-
***Bacillus thuringiensis* var. *kurstaki* 0.5% WP serotype 3a, 3b, 3c, Strain DOR Bt-1, Potency 16000IU/mg min.**					
Chickpea	Chick pea pod borer (*Helicoverpa armigera*)	-	2.0	500	-
***Bacillus thuringiensis* var. *kurstaki* 2.5% AS (Spicbio-BTK AS)**					
Gram	Gram pod borer (*Helicoverpa armigera*)	-	1.0-1.5	500	-
Bacillus thuringiensis var. krustaki, Serotype H-3a, 3b, Strain Z-52 Potency:- 3000 IU/mg min – on Gypsy moth					

□

□ 32000 IU/mg min – *Trichoplusia* vi □ 50000 IU/mg min – *Helicoverpa armigera* □ 55000 IU/mg min – *Spodptera exiqua*					
Cotton	Bollworms, Spodoptera	-	0.75-1.0 kg.	500-750	-
Rice	Stem borer & Leaf folder	-	1.50 kg.	500-750	-
Gram	*Helicoverpa armiger*	-	0.75 kg.	500-750	
Pigeon Pea	*Helicoverpa armiger*	-	0.75 kg.	500-750	-
Soyabean	*Spodoptera litura*, *Helicoverpa armigera*, *Spilosoma 6rustak*, Semilooper, Leaf miner	-	0.75 kg.	500-750	-
Tobacco	*Spodoptera litura*, *Helicoverpaarmigera*	-	1.50-2.00 kg.	500-750	-
Castor	Hairy caterpillar, Caster semilooper (*Achaea janata*)	-	1.00 kg.	500-750	-
Teak	Defoliator (*Hyblaea puera*), Skeletonizer (*Eutectona machaeralis*)	-	0.25-0.50% Sol.	As required.	-
***Bacillus thuringiensis* var. *kurstaki* Strain HD-1, serotype 3a, 3b, 3.5% ES for Import &repack. Potency17600 IU/mg**					
Cotton	Bollworms	-	750-1000	750-1000	-
***Bacillus thuringiensis* var. *kurstaki* Serotype 3a, 3b, SA II WG Potency:- 53000 SU/mg, 32000 IU/mg**					
Cabbage, Cauliflower	Diamond back moth	-	0.5 kg.	500-700	-
***Beauveria bassiana* 1.15% WP**					
Cotton	Bollworms	-	400	750-1000	-
***Beauveria bassiana* 01.15% WP**					
Cotton	Bollworm	-	2000	400	-
Rice (Paddy)	Leaf folder	-	2.50 kg/ha	750-850	-

***Beauveria bassiana* 1.15% WP. (1x10^8 /gm min) Strain BB-ICAR-RJP, Accession No – MCC 1022**					
Rice	Rice leaf folder (*Cnaphalocrocis medinalis*)	-	2.5 kg.	750-850	-
***Beauveria bassiana* 1.15% WP (Strain : BB – 5372, own R & D Isolate)**					
Rice	Rice leaf folder (*Cnaphalocrocis medinalis*)	-	2.5 kg.	600-750	-
***Beauveria bassiana* 1.15% WP (1x10^8 /gm min) Strain ICAR, Research Complex, Umiam, Meghalaya, Accession No – NAIMCC-F-03045**					
Rice	Rice leaf folder (*Cnaphalocrocis medinalis*)	-	2.5 kg.	750-850	-
***Beauveria bassiana* 1.15% WP (1x10^8 /gm min) Accession No – NAIMCC-F-03045, Strain No. NBAIM, MAU.**					
Rice	Rice leaf folder (*Cnaphalocrocis medinalis*)	-	2.5 kg/ha	750 liter/ha	-
***Beauveria bassiana* 1.15% WP (1x10^8 /spores/ml) Strain BCRL, Accession No – BCRL Bbpx-6892**					
Cabbage	Diamond back moth (*Plutella xylostella*)	1-1.5 litre	500-750	Apply using any type of sprayer (high, low or ultra low volume) which gives good coverage	NA
***Beauveria bassiana* 1.0% WP, Strain No: NBRI – 9947 (1x10^8 CFU/gm Min.)**					
Chick pea	Pod borer (*Helicoverpa armigera*)	-	3.0 kg.	500	-
***Beauveria bassiana* 1.0% WP (1x10^9 CFU/gm min), Strain No. IPL/BB/MI/01**					
Okra (Bhindi)	Fruit borer, Spotted bollworm	-	3.75-5.0 kg.	400-500	-
***Beauveria bassiana* 1.0% WP (1x10^8 CFU/gm min), Strain No. SVBPU/CSP/Bb-10, Accession No. ITCC-**					

7520					
Chick pea	Pod borer (*Helicoverpa armigera*)	-	3.0 kg.	500	-
***Beauveria bassiana* 5.0% WP, ($1x10^8$ CFU/gm min) Strain IARI, Accession No. ITCC-7353**					
Cabbage	Diamond back moth (*Plutella xylostella*)	-	2.0 kg.	500	-
***Beauveria bassiana* 5.0% SC, Strain: NBAII , Bangalore , Accession No. ITCC-7102, (Strain Isolated by Project Directorate of Bio-logical control, Bangalore)**					
Tomato	Fruit borer (*Helicoverpa armigera*)	-	500	500	-
***Beauveria bassiana* 5.0% AS Strain : BB-AAU-RJP Accession No. MCC – 1024**					
Tomato	Fruit borer (*Helicoverpa armigera*)	-	0.5	500	-
***Beauveria bassiana* 1.15% WP ($1x10^8$ /gm min) Accession No – NAIMCC-F-03048**					
Chick pea	Gram Pod Borer (*Helicoverpa armigera*)	-	2500	500	-
***Beauveria bassiana* 10.00% SC**					
Cabbage	Diamond back moth	1-1.5	-	500-750	-
***Beauveria bassiana 1.5%* Liquid Formulation (CFU count $10X10^8$) Accession No.MTCC-5171**					
Tomato	Fruit borer (*Helicoverpa armigera*)	2.0	Foliar spry	500	-
***Beauveria bassiana* 1.15% WP ($1X10^6$ CFU /gm min)**					
Cotton	Bollworm	20	-	400	-
***Metarhizium anisopliae* 1.15% WP ($1x10^8$ CFU/gm min) Accession No. MTCC – 5173**					
Rice	Brown plant hopper (*Nilapavata lungens*)	-	2.5 kg.	500	-
***Metarhizium anisopliae* 1.0% WP ($1x10^8$ CFU/gm min) Strain No. IPL/KC/44 (Own R & D Isolate), Accession No. 6895.**					
Brinjal	Shoot & Fruit borer (*Leucinodes orbonalis*)	-	2.5-5.0	500-750	-

***Metarhizium anisopliae* 1.15% WP (1x10^8 CFU/gm min) Strain No. AAI, Allahabad, Accession No. NAIMCC-F-03037.**

Chickpea	Heliothis armigera	2.5	500	--	--
***Metarhizium anisopliae* 10% GR (CFU count 1 X 10^8 /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 ***Metarhizium anisopliae* (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
***Pseudomonas fluorescens* 1.0% WP (Strain No. IIHR-PF-2, Accession No. ITCC- B0034)**					
Tomato	Root-knot nematodes (*Meloidogyne* spp.)	Treat the seed with *Pseudomonas fluorescens* 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Pseudomonas fluorescens* 1.0% WP @ 50 gm/sq.m and apply *Pseudomonas*			
		fluorescens 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Brinjal	Root-knot nematodes (*Meloidogyne* spp.)	Treat the seed with *Pseudomonas fluorescens* 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Pseudomonas fluorescens* 1.0% WP @ 50 gm/sq.m and apply *Pseudomonas fluorescens* 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Carrot	Root-knot nematodes (*Meloidogyne* spp.)	Treat the seed with *Pseudomonas fluorescens* 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Pseudomonas fluorescens* 1.0% WP @ 50gm/sq.m and apply *Pseudomonas fluorescens* 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			

Okra	Root-knot nematodes (*Meloidogyne* spp.)	Treat the seed with *Pseudomonas fluorescens* 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Pseudomonas fluorescens* 1.0% WP @ 50gm/sq.m and apply *Pseudomonas fluorescens* 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.

***Trichoderma harzianum* 1.0% WP (Strain No. IIHR-TH-2 Accessions No. ITCC 6888)**

Tomato	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Trichoderma harzianum* 1.0% WP @ 20 gm/kg of seeds & nursery beds with the *Trichoderma harzianum* 1.0% WP @ 50 gm/sq.m and also apply *Trichoderma harzianum* 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Brinjal	Root-knot nematodes (*Meloidogyne incognit*a)	Treat the seeds with *Trichoderma harzianum* 1.0% WP @ 20 gm/kg of seeds & nursery beds with the *Trichoderma harzianum* 1.0% WP @ 50 gm/sq.m and also apply *Trichoderma harzianum* 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Carrot	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Trichoderma harzianum* 1.0% WP @ 20 gm/kg of seeds and apply *Trichoderma harzianum* 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.
Okra	Root-knot nematodes (*Meloidogyne*	Treat the seeds with *Trichoderma harzianum* 1.0%
	incognita)	WP @ 20 gm/kg of seeds and apply *Trichoderma harzianum* 1.0% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.
Gerbera	*Meloidogyne incognita*	Apply the Nemastin @ 50 gm/sq.m at the time of planting
Carnations	*Meloidogyne incognita*	Apply the Nemastin @ 50 gm/sq.m at the time of planting
Tuberose	*Meloidogyne incognita*	Apply 2 Kg Nemastin 1% Wp mixed in 2 tones of FYM per acre to the soil before planting
Banana	*Meloidogyne incognita*	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 *(Tylenchulus semipenetrans)*	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	*Meloidogyne spp.* Reniform Nematodes *(Rotelenchulus reniformis)*		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 (*Meloidogyne incognita*)		Treat the seed with *Trichoderma harzianum* 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma harzianum* 1.5% WP @ 50gm/sq.m and also apply *Trichoderma harzianum* 1.5% WP @ 5kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Brinjal	Root-knot nematodes (*Meloidogyne incognit*a)		Treat the seed with *Trichoderma harzianum* 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma harzianum* 1.5% WP @ 50 gm/sq.m and also apply *Trichoderma harzianum* 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Carrot	Root-knot nematodes (*Meloidogyne*		Treat the seed with *Trichoderma harzianum* 1.5%		
	incognita)		WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma harzianum* 1.5% WP @ 50 gm/sq.m and also apply *Trichoderma harzianum* 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.		
Okra	Root-knot nematodes (*Meloidogyne incognita*)		Treat the seed with *Trichoderma harzianum* 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma harzianum* 1.5% WP @ 50 gm/sq.m and also apply *Trichoderma harzianum* 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 (*Meloidogyne incognita*)	Treat the seeds with *Trichoderma viride* l.5% WP @ 20 gm/kg of seeds & nursery beds with the *Trichoderma viride* l.5 % WP @ 50 gm/sq.m. and also apply *Trichoderma viride* 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Brinjal	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Trichoderma viride* l.5% WP @ 20 gm/kg of seeds & nursery beds with the *Trichoderma viride* l.5% WP @ 50 gm/sq.m. and also apply *Trichoderma viride* 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Carrot	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Trichoderma viride* l.5 % W P @ 20 gm/kg of seeds and apply *Trichoderma viride* 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before Planting'.
Okra	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Trichoderma viride* l.5 % W P @ 20 gm/kg of seeds and apply *Trichoderma viride* 1.5% WP (@ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before Planting'.
***Verticillium chlamydosporium* 1.0% WP, (2x106 CFU/gm min) Strain – IIHR-VC-3 Accession No – ITCC-6898**		
Tomato	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Verticillium chlamydosporium* 1.0% WP @ 20 gm/kg of seeds & nursery beds with the *Verticillium chlamydosporium* 1.0% WP @ 50 gm/sq.m and
		also apply *Verticillium chlamydosporium* 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.
Brinjal	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Verticillium chlamydosporium* 1.0% WP @ 20 gm/kg of seeds & nursery beds with the *Verticillium chlamydosporium* 1.0% WP @ 50 gm/sq.m and also apply *Verticillium chlamydosporium* 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.

Carrot	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Verticillium chlamydosporium* 1.0% WP @ 20 gm/kg of seeds and apply *Verticillium chlamydosporium* 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Okra	Root-knot nematodes (*Meloidogyne incognita*)	Treat the seeds with *Verticillium chlamydosporium* 1.0% WP @ 20 gm/kg of seeds and apply *Verticillium chlamydosporium* 1.0% WP @ 5 kg/ha enriched FYM * @ 5 tons/ha to the soil before transplanting.			
***Verticillium lecanii* 1.15%WP, (1x10^8 CFU/gm min) Strain – AS MEGH-VL Accession No – MCC-1028**					
Cotton	White flies	-	2500	500	-
Citrus	Mealybug (*Planococcus citri*)	-	2500	550	-
***Verticillium Lecanii* 1.50% Liquid Formulation, (1x10^8 CFU/ml. min.) Strain – T Stanes VI-1, Accession No – MTCC-5172**					
Tomato	White fly (*Bemisia tabaci*)	-	2000 (Foliar spray)	500	-
***Verticillium lecanii* 3.0% AS, (strain: Accession No. MCC-1127, Strain No. MPKV / Biocontrol/ RVN/ VL-01**					
Onion	Thrips (*Thrips tabaci*)	-	2000-2500	500	-
***Verticillium lecanii* 5.0% SC, (Strain: Accession No. NFCCI - 2638**					
Cabbage	Diamond Back Moth (*Plutella xylostella*)	-	500	500	-
***Verticillium lecanii* 5.0% SC, (1x10^8 CFU/gm Min.) Strain – Own Red Isolate, Strain No. VI-17874, MTCC No.5716**					
Rice	White backed plant hopper (*Sogotella furcifera*)	-	3.125 kg.	600	-
Nuclear Polyhedrosis Virus of *Helicoverpa armigera* 0.43% AS (1x109 POB/ml)					
Cotton	*Helicoverpa armigera*	-	2700	400-600	-

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

Nuclear Polyhedrosis Virus of *Helicoverpa armigera* 0.43% AS, Strain No. BIL/HV-9 (1x109 POB/ml Min.)					
Cotton	*Helicoverpa armigera*	-	2700	400-600	-
Tomato	*Helicoverpa armigera*	-	1500	400-600	-
Nuclear Polyhedrosis Virus of *Spodoptera litura* 0.5% AS, (1x109 POB/ml Min.)					
Tobacco	*Spodoptera litura*	-	1500	400-600	-
NPV of *Helicoverpa armigera* 0.5%AS, (1x109 POB/ml Min.)					
Chickpea	Pod borer (*Helicoverpa armigera*)	-	250	500	-
NPV of Helicoverpa armigera 2.0%AS, (1x109 POBs count / ml min) Biological Insecticide					
Chickpea	Pod borer (*Helicoverpa armigera*)	-	250	600	-
***Paecilomyces lilacinus* 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	-
***Bacillus thuringiensis* var. israelensis WP**					
Anopheles and Culex (larvae)	-	-	2-5 kg.	-	14-28

***Bacillus thuringiensis* 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	-
***Bacillus thuringiensis* var. israelensis, Serotyp H-14 (Vectobac 12 AS) potency 1200 ITU/mg**					
Anoppheles	Clean water, cement tanks	-	1-2 liters	-	-
Culex	Polluted water, Casspits, Cement tank, Stagnant and flowering drains	-	2-4 liters	-	-
***Bacillus thuringiensis* 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	-
Anoppheles	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	-
Anoppheles	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	-
Anoppheles	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/m2		200 Liters of Water	
Anopheles	**Clean water** (Paddy fields, Ponds, Pool)	5 (0.5 ml/m2)		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	-
Anoppheles	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, Serotype H-14, 5% WP Potency 2000 ITU/mg**					
Area and Breeding (Habitat)			**Dose (g/m2)**	**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	

***Bacillus thuringiensis* var. israelensis, Strain Designation- ABIL, Accession No. NAMICC-B01318 (CFU Count- 4.8 x 10^8) Serotyp H-14, 5% WP Potency 7000 ITU/mg**					
Name of Insect	**Habitat**	**Formulation (lit/ha.)**		**Dilution in water (Liters)**	**Waiting period (Days)**
		Gm/m2	**Kg/ha**		
Anopheles species, *Culex* species, *Aedes*	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	-
***Bacillus thuringiensis* var. sphaericus1593 M serotype H 59 5b**					
Anopheles species, *Culex* species	For Drains, Cesspits Cesspools, Paddy fields, ponds	-	112	1 liter in 10 liter of water	-
Anopheles species, *Culex* species	Casuarinas pits, unused wells, unused overhead tanks, Domestic wells (Not for drinking requirements)	-	112	1 liter in 10 liter of water	-
***Bacillus thuringiensis* var. israelensis 12% AS (Vectobac)**					
Anopheles species	Clean water, cement tanks	-	1-2 liter	-	-
Culex species	Polluted water, cess pits, cement tanks, stagnant and flowing drains	-	2-4 liter	-	-
***Bacillus thuringiensis* 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	-
***Bacillus thuringiensis* 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	1.00 g/m^2	10.00 kg/ha	200 L	-
	Tyres.)				
***Bacillus sphaericus* 1593 M serotype H 59 5b, 1.3% flowable concentrate Potency 13000 IU/mg**					
Anopheles species, *Culex* species	For Drains, Cesspits Cesspools, paddy fields, ponds	-	112 ml	1 liter/10 liter of water	-
Anopheles species, *Culex* species	Casuarinas pits, unused wells, unused overhead tanks, Domestic wells (Not for drinking requirements)	-	112 ml	1 liter/10 liter of water	-

END

GovernmentofIndia
MinistryofAgriculture & Farmers Welfare
DepartmentofAgriculture& Farmers Welfare
DirectorateofPlant Protection,Quarantine&Storage
CentralInsecticideBoard&Registration Committee N.H.-IV,
Faridabad-121001 (Haryana)

MAJOR USES OF BIO-PESTICIDES

(Registered under the Insecticides Act,1968)

(UPTO - 01/02/2023)

(Based on certificate issued)

Disclaimer:The documenthas beencompiledonthebasis ofavailableinformationforguidanceandnotforlegalpurposes.

BIO-PESTICIDES

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)/%		
***Ampelomyces quisqualis* 2.0% WP**					
Okra (Bhindi)	Powdery mildew (*Erysiphe cichoracearum*)	-	2.5 kg	500	-
Neem oil based EC containing, Azadirachtin 0.030% (300 ppm)					
Bhindi	Powdery mildew	-	2-2.50	500	03
***Pseudomonasfluorescens*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 *Pseudomonas fluorescens* 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 *Pseudomonas fluorescens* 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 *Pseudomonas fluorescens* 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 *Pseudomonas fluorescens* 1.75% WP uniformly on the crop.	500 lit per ha
***Bacillus subtilis* 1.50% L.F (T Stanes Bs-1 Strain MTCC 25072)**					
Banana	Sigatoka (*Mycosphaerellamusicola*)	-	5 Liter/ha (Foliar spray)	750 Liter/ha	-
***Pseudomonas fluorescens* 2.0% AS (Strain No. IPL/PS-01, Accession No. MTCC 5727)**					
Paddy	Bacterial leaf blight(*Xanthomonas oryzae* pv. oryzae)	-	10 ml/litreof water	**Seedling Root Dip Treatment:**Mix 10 ml of *Pseudomonas fluorescens* 2.0% AS in one litre of water and dip the paddy seedling root for 30 minutes before transplanting followed by foliar application after 40-45 days of transplantation.	Nil

		-	1.87-2.50 litre/ha	**Foliar Spray:**Suspend 1.87 to 2.50 litre of *Pseudomonas fluorescens*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
***Bacillus subtilis*2.0% AS (Strain No. IPL/BS-09, Accession No. MTCC 5728)**					
Paddy	Bacterial leaf blight (*Xanthomonas oryzae*pv. oryzae)	-	10 ml/litre of water	**Seedling Root Dip Treatment:**mix 10ml of *Bacillus subtilis* 2.0% AS in one litre of water and dip the paddy seedling root	Nil

				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 *Bacillus subtilis* 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 (*Erysiphe necator*)	-	2 ml/litre water	*Bacillus subtilis* 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 *Bacillus subtilis* 1.15% AS activator bottles with *Bacillus subtilis* 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.	
***Pseudomonas fluorescens* 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 *Pseudomonas fluorescens* 0.5% WP formulation and ensure uniform coating. Shade dry and sow the seeds.	-
		-	1 kg/ha	**Soil Treatment:** 01 kg of *Pseudomonas fluorescens* 0.5% WPspread uniformly over 1 hectare of land (foliar spray @ 2%).	-
Rice	Leaf and neck blast (*Pyricularia oryzae*)	-	10 gm/kgseed	**Seed Treatment:**Mix required quantity of the seeds with the required quantity of *Pseudomonas fluorescens* 0.5% WP.	Nil
		-	1 kg/ha	**Soil Treatment:**Broadcast 1 kg *Pseudomonas fluorescens* 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 (*Pythium aphanidermatum*)	-	10 g/kg seed	**Seed Treatment:** Mix required quantity	Nil

				of the seeds with the required quantity of *Pseudomonas fluorescens* 0.5% WP and ensure uniform coating, shade dry and sow	
Tomato	Wilt (*Fusarium oxysporum*F.sp.)	-	10 gm/kg of seeds	**Seed Treatment:**Mix required quantity of the seeds with the required quantity of *Pseudomonas fluorescens*0.5% WP and ensure uniform coating, shade dry and sow	Nil
			2.5 kg/ha	**Soil Treatment:** 2.5 kg of *Pseudomonas fluorescens* 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 *Pseudomonas fluorescens* WP and ensure uniform coating with 0.2% Foliar spray, shade dry and sow	Nil
***Pseudomonas fluorescens* 1.5% WP (BIL-331 Accession No. MTCC5866)**					
Paddy	Bacterial Leaf blight (*Xanthomonas oryzae*),Blast (*Pyricularia oryzae*),Leaf spot (*Helminthosporium oryzae*)	-	5 gm/kg of seed	**Seed Treatment:** Make a thin paste of required quantity of *Pseudomonas fluorescence* 1.5% WP with min. volume of water and coat the seed uniformly, shades dry the seeds	Nil

				just before showing.	
		-	2.5 kg /ha	**Soil Treatment:** Mix 2.5 kg of *Pseudomonas fluorescens* 1.5% WP with 50 kg FYM or and broadcast uniformly over hectare of land 30days after planting.	Nil
***Pseudomonas fluorescens* 1.0% WP (IPL/PS-01 Accession No. MTCC5727)**					
Tomato	Wilt (*Fusarium oxysporum*), Damping Off (*Pythium aphanidermatum*), Root rot (*Rhizoctonia* spp.)	-	5 gm/kg of seed	**Seed Treatment:** Make a thin paste of required quantity of *Pseudomonas fluorescens*1.0% WP with the minimum volume of water & coat the seed uniformly, shade dry the seed just before sowing.	Nil
		-	2.5 kg/ha	**Soil Treatment:** Mix 2.5kg of *Pseudomonas fluorescens* 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 *Pseudomonas fluorescens* 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 (*Fusarium oxysporum*)			Treat the seed with *Pseudomonas fluorescens*1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Pseudomonas fluorescens*1.0% WP @ 50gm/sq.m and apply Pseudomonas fluorescens1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.	
Brinjal	Wilt (*Fusariumsolani*)			Treat the seed with *Pseudomonas fluorescens* 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Pseudomonas fluorescens* 1.0% WP @ 50 gm/sq.m and apply Pseudomonas fluorescens 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.	
Carrot	Root rot (*Athelia rolfsii*)			Treat the seed with *Pseudomonas fluorescens*1.0% WP @ 20gm/kg of seeds and apply *Pseudomonas fluorescens*1.0% WP @ 5 kg/ha enriched FYM* @ 5tons/ha to the soil before sowing.	
Okra	Wilt (*Fusarium oxysporum*)			Treat the seed with *Pseudomonas fluorescens* 1.0% WP @ 20 gm/kg of seeds and apply *Pseudomonas fluorescens* 1.0% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.	
***Pseudomonas fluorescens*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 *Pseudomonas fluorescens* 1.5% Liquid formulation ensure uniform coating, shade dry and sow.	
		6.0 litre per ha		**Foliar spray:**Spray *Pseudomonas fluorescens* 1.5% Liquid formulation uniformly on the crop.	
***Pseudomonas fluorescens*1.5% AS (ICAR-CRDE, KVK Strain Accession No. MTCC - 2539)-9(3b)**					
Groundnut	Late leaf spot	-	10 ml/kg seed	**Seed Treatment:**Mix the required quantity of seeds with the required of *Pseudomonas fluorescens* 1.5% AS and ensure uniform coating. Shade dry and sow the seeds.	Nil
		-	01 litre/ha	**Soil Treatment:** 1 Litre of *Pseudomonas*	Nil

				fluorescens 1.5% AS spread uniformly over 1 hectare of land (foliar spray @ 0.2%)	
***Trichoderma harzianum* 0.50% WS**					
Cardamom	Capsule rot (*Phytophthora meadii*)	-	100 gm/plant	**Soil Treatment:**Apply 100 gm product/ plant along with Neem cake (0.5 kg/plant) and 5 kg FYM/plant	-
***Trichoderma harzianum* 1.0% WP(Strain No. IIHR-TH-2 Accessions No. ITCC6888)**					
Tomato	Wilt (Fusarium Oxysporum)	Treat the seed with *Trichoderma harzianum* 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma harzianum* 1.0% WP @ 50 gm/sq.m and apply *Trichoderma harzianum* 1.0% WP @ 5 kg/ha enriched FYM*@5tons/ha to the soil before transplanting.			
Brinjal	Wilt (*Fusarium solani*)	Treat the seed with *Trichoderma harzianum* 1.0% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma harzianum*1.0% WP @ 50gm/sq.m and apply *Trichoderma harzianum* 1.0% WP @ 5kg/ha enriched FYM*@5tons/ha to the soil before transplanting.			
Carrot	Root rot (*Sclerotium rolfsii)*	Treat the seed with *Trichoderma harzianum* 1.0% WP @ 20gm/kg of seeds and apply *Trichodermaharzianum* 1.0% WP @ 5kg/ha enriched FYM*@ 5tons/ha to the soil before sowing.			
Okra	Wilt (*Fusariumoxysporum*)	Treat the seed with *Trichoderma harzianum* 1.0% WP @ 20gm/kg of seeds and apply *Trichoderma harzianum*1.0% WP @ 5kg/ha enriched FYM*@ 5tons/ha to the soil before sowing.			
***Trichodermaharzianum* 1.0% WP (Strain no. Th3 Accession no. 5593)**					
Chickpea	Root rot (*Rhizoctonia solani*)	6 gm/kg of seeds (seed treatment) and soil drenching with *Trichoderma harzianum* after 50 days of sowing.			
***Trichodermaharzianum* 2.0% WP (NBRI-1055)**					

Maize	Root rot (*Fusarium moniliforme*), Fusarium wilt	-	20 gm/kg seed	**Seed Treatment:**Make a thin paste of required quantity of *Trichoderma harzianum* 2.0% WP with minimum volume of water and coat the seeds uniformly, shade dry the seeds just before sowing.	-
***Trichoderma reesei* 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
***Trichodermaviride* 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
***Trichodermaviride* 0.5% WP**					
Tomato	Wilt (*Fusarium oxysporum*)	-	10 g/kg seed	**Seed Treatment-** Mix the required	-

				quantity of seeds with the required quantity of *Trichoderma viride* 0.50% WP and ensure uniform coating, Shade dry and sow.	
***Trichodermaviride* 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 *Trichoderma viride* 1.15% WP and ensure uniform coating, shade dry and sow. **Soil Application:**Mix 2.5 kg *Trichoderma viride* 1.15% with 100 kg of properly decomposed farmyard manure and spread uniformly over a hectare of land.	-
Wheat	Loose smut	-	4 gram/kg seeds	**Seed Treatment:**Mix required quantity of seeds with the required quantity of *Trichoderma viride* 1.15% WP and ensure uniform coating, shade dry and sow.	-
Chilli	Root wilt		5.0 gm/ kg seed	**Seed Treatment:**Mix required quantity of seeds with the required quantity of *Trichoderma viride* 1.15% WP and ensure uniform coating, shade dry and sow. **Seedling dip**	

			5.0 gm/lit water 3.0 kg/ha	**treatment:** Dip roots of the seedlings for 20 minutes at the time of transplanting. **Soil Application:**Mix 3.0 kg *Trichoderma viride* 1.15% with 100 kg of properly 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 *Trichoderma viride* 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 *Trichoderma viride* 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 (*Pythium aphanidermatum*)	-	4 g/kg seed	**Seed Treatment:** Mix required quantity of the seeds with the required quantity of	Nil

				Trichoderma viride 1.0% WP and ensure uniform coating shade dry and sow	
Urd bean	Root rot (*Macrophomina phaseolina*)	-	4 g/kg seed	**Seed Treatment:** Mix required quantity of the seeds with the required quantity of *Trichoderma viride* 1.0% WP and ensure uniform coating shade dry and sow	Nil
Pigeon pea	Root rot (*Macrophomina phaseolina*)	-	4 g/kg seed	**Seed Treatment:** Mix required quantity of the seeds with the required quantity of *Trichoderma viride* 1.0% WP and ensure uniform coating shade dry and sow	Nil
***Trichoderma viride* 1.0% WP (Strain T-14 in house isolate of M/s Indore Biotech Inputs & Research (P) Ltd., Indore)**					
Chickpea	Wilt (*Fusarium oxysporum*)	-	5 gm/kg seed	**Seed Treatment:** Make slurry of required quantity of Trichoderma viride 1.0% WP with minimum volume of water & coat the seeds uniformly, shade dry the seeds just before sowing	-
	Root Rot (*Rhizoctonia solani*&*Sclerotiumrolfsii*)	-	5.0 kg/ha	**Soil Treatment:** Mix 5.0 kg of *Trichoderma viride* 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 (*Rhizoctonia solani*)	-	5-10 gm/litre of water	**Foliar spray:** Mix 2.5 kg of Trichoderma viride 1.0% WP in 500 litres of water. Spray three times at 15 days interval uniformly over one hectare land 30 days after planting	-
***Trichoderma viride* 1.5% LF (Strain No. TV-1, Accession No. MTCC 5170)**					
Tomato	Root wilt (*Fusarium oxysporum* f.sp. *lycopersici*)	-	5 ml/kg seed + 5 ml/lit water + 3000 ml/ha	Seed treatment + Seedling dip treatment + Soil treatment	**Dilution in water-** 500 liter/ha
***Trichoderma viride* 1.5% WP (Strain No. IIHR-TV-5, Accession No. ITCC 6889)**					
Tomato	Wilt (*Fusarium oxysporum*)	Treat the seed with T*richoderma viride* 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma viride* 1.5% WP @ 50 gm/sq.m and apply Trichoderma viride 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before transplanting.			
Brinjal	Wilt (*Fusarium solani*)	Treat the seed with *Trichoderma viride* 1.5% WP @ 20 gm/kg of seeds & treat the nursery beds with the *Trichoderma viride* 1.5% WP @ 50 gm/sq.m and apply *Trichoderma viride* 1.5% WP @ 5 kg/ha enriched FYM*@5tons/ha to the soil before transplanting.			
Carrot	Root rot (*Sclerotium rolfsii*)	Treat the seed with *Trichoderma viride* 1.5% WP @ 20 gm/kg of seeds and apply *Trichoderma viride* 1.5% WP @ 5 kg/ha enriched FYM* @ 5 tons/ha to the soil before sowing.			
Okra	Wilt (*Fusarium oxysporum*)	Treat the seed with *Trichodermaviride* 1.5% WP @ 20 gm/kg of seeds and apply *Trichoderma viride* 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 (*Sclerotinia sclerotiorum*)	-	4 gm/kg seed	**Seed Treatment:** Make a thin paste of required quantity of *Trichoderma viride* 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 *Trichoderma viride* 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 (*Rhizoctonia bataticola, Sclerotium rolfsii, Fusarium oxysporum, Rhizoctonia solani*)	-	5 gm/kg seeds	**Seed Treatment:** Make a thin paste of required quantity of *Trichoderma viride* 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 *Trichodermaviride* 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 (*Rhizoctonia solani*)	-	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 (*Fusarium oxysporum*), Damping off (*Pythium aphanidermatum, Rhizoctonia solani*)	-	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 (*Fusarium oxysporum*), Damping off (*Pythium aphanidermatum, Rhizoctonia solani*)	-	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 (*Sclerotium rolfsii*), Root rot (*Sclerotium rolfsii*)	-	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 (*Macrophomina phaseolina*)	-	4 gm/kg seed	**Seed Treatment:** Mix required quantity of the seeds with the required quantity of *Trichoderma viride* 1.0% WP and ensure uniform coating,	-

				shade dry and sow	
Urd bean	Root rot (*Macrophomina phaseolina*)	-	4 gm/kg seed	**Seed Treatment:** Mix required quantity of the seeds with the required quantity of Trichoderma viride 1.0% WP and ensure uniform coating, shade dry for 24 hours and sow	-
***Trichoderma viride* 5.0% SC (Strain Accession No. ITCC 7111)**					
Chilli (Nursery)	Damping off (*Pythium aphanidermatum*)	-	2 ml/kg seed	**Seed Treatment:** Mix required quantity of the seeds with the required quantity of *Trichoderma viride* 5.0% SC. Ensure uniform coating, shade dry and sow	Nil
***Trichoderma harzianum* 2.0% AS (Strain No. IPL/VT/102, Accession No. ITCC 6893)**					
Paddy	Bakane (Foot rot) *(Fusarium moniliforme*)	-	30 ml/litre of water	**Seedling Root Dip Treatment:** Mix 30 ml of *Trichoderma harzianum* 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 *Trichoderma harzianum* 2.0% AS with 100 kg of properly decomposed FYM and broadcast	Nil

				uniformly over a hectare of land prior to transplanting.	
***Trichoderma viride* 1.0% AS (Strain TV-AAV-RJP, Accession no. MCC 1013)-9(3b)**					
Urd Bean (Black gram)	Root rot	-	4-6 ml/kg. Seed	**Seed Treatment:** Mix required quantity of the seeds with the required quantity of *Trichoderma viride* 1.0% AS and ensure uniform coating, shade dry and sow	-
***Trichoderma viride* 5.0% Liquid Formulation (Accession no. NAIMCC-F-03034)**					
Rice	Brown spot (*Cochliobolus miyabeanus*)	-	500 liter/ha	Foliar spray	-
Pea	Powdery mildew (*Microsphera alni*)	-	500 liter/ha	Foliar spray	-

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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, फरीदाबाद001 121 – (हरियाणा)

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

MAJOR USES OF PESTICIDES

(Registered under the Insecticides Act, 1968)

(UPTO - 01/02/2023)

(Based on certificate issued)

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

INSECTICIDES

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 (*Tetranychus urticae*)	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 (*Helicoverpa armigera*), 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
Acetamiprid 25% + Bifenthrin 25 % WG					
Cotton	Jassid, aphids, thrips, whiteflies, *Pectinophora gossypiella*, *Helicoverpa armigera*, *Earias vitella*	80	160	500	33
Soybean	Whitefly, girdle beetle, semi looper and tobacco caterpillar	125	250	500	28
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 (*Sitophilus oryzae*),Lesser Grain Borer, Khapra Beetle (*Trogoderma granarium*), Rust Red Flour Beetle, Saw Toothed Grain Beetle, Caddle Beetle, Drug Store Beetle, Cigarette Beetle, Pulse Beetle	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 (*Sitophilus oryzae*) or 07 Days (*Trogoderma granarium*)	One hour of partial aeration in case non-polyethylene packed commodities allowed by 6-8 hrs of full aeration. For polyethylene packed commodities minimum aeration period is 48 hrs. The waiting period for the release of stock is 48hrsin 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 Period07 days to be checked PH^3 detector strips.
Empty Godowns &Sheds	Rice Moth, Almond Moth, Mites, Fruit Fly, Granary Weevil, Caddle or Flour worm, Red Flour Beetle, Indian Meal Moth, Larger cabinet	14 tablets/1000 m^3 or 150 gm/100 m^3 or 4pouch 10 gms each/1000 CFTor 150 gm/100 m^3	72 hrs.	Aeration Period24 hrs detectorstrips or 4hosphine detect tubes should be used in the premises to signal safety of atmosphere.

	Moth, Wheat KernelDamage in the field Cockroach.			
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 600100 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 m3	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 (*Tetranychus urticae*)	375	750	3000	-
Bifenazate 22.60 % SC					
Rose	Two Spotted Mite (*Tetranychus urticae*)	120	500	2000	-
Bifenthrin 08 % SC					
Tea	Red spider mite,	40.00	500	400	11

	Tea Mosquito bug				
Apple	Mites	60 gm (0.006% Conc.)	7.50 ml/tree	10 lit/tree	21
Bifenthrin 08.80 % CS					
Rice (Paddy)	Stem borer, Leaffolder	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/ meter3 of wood	400 ml formulation per meter3 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 (*Bandoicota bengalensis; B. indica*) Indian houserat / Black, Indian house rat/black rat/roof rat (*Rattus rattus; R. meltade*),	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 (*Mus musculus*)					
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
Tomato	Fruit borer (*Helicoverpa armigera*) & leaf miner (*Liriomyza trifolii*)	18.6-25.2	62-84	500	1
Soybean	*Helicoverpa armigera*, *Spodoptera litura*, Semilooper (*Chrysodeixis acuta*)	12.6-18.6	42-62	500	37
Red gram	*Helicoverpa armigera* & *Maruca vitrata*	12.6-18.6	42-62	500	25
Broflanilide 20% SC					
Brinjal	Shoot and fruit borer (*Leucinodes orbonalis*), Thrips (*Thrips tabaci*) & Jassids (*Amrasca devastans*)	25	125	500	1
Cabbage	Diamond back moth (*Plutella xylostella*) & Tobacco caterpillar (*Spodoptera litura*)	25	125	500	1
Chilli	Fruit borer (*Helicoverpa armigera*), Tobacco caterpillar (*Spodoptera litura*), Thrips (*Thrips tabaci*) and Jassids (*Amrasca devastans*)	25	125	500	1
Okra	Fruit borer (*Helicoverpa armigera*), Thrips (*Thrips tabaci*) and Jassids (*Amrasca devastans*)	25	125	500	1
Bromadiolone 00.25 % CB					
Paddy (Rice)	Field Rat, Large Bandicota Indian house rat, Indianfield 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	-	-	-
Residential premises	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, Indian house rat	0.005	-	-	-
Wheat	Indian Field mouse, Field Rat	0.005	-	-	-
Gram	Indian house rat, Field Rat, Indian house rat	0.005	-	-	-
Groundnut, Sugarcane	Field Rat, Large Bandicota	0.005	-	-	-
Coconut/ Bamboo	Indian house rat, Field Rat Large Bandicota	0.005	-	-	-
Residentialpremises	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, Cyst nematode	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 –	08

				1000	
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	60 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, Leaffolder	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, Leaffolder	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 gourd	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 (*Helicoverpa armigera & Earias vittella*)	25	71	500	05
Tomato	Fruit borer (*Helicoverpa armigera*)	30	86	500	03
Chlorfenapyr 10 % SC					
Cabbage	Diamond back moth(*Plutella xylostella*)	75 – 100	750 –1000	500	07
Chilli	Mites (*Polyphagotarsonemus latus*)	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

Chlorpyriphos 75 % w/w WG					
Rice	Yellow stem borer *(Scirpophaga 13incertulas)*	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, Leaffolder	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 Chlorpyriphos 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 (*Helicoverpa armigera*)	375	25000	-	07
Chromafenozide 80 % WP					
Paddy (Rice)	Leaf folder, Stemborer	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 (*Helopeltis theiovora*)	60	120	500	05
Coumatetralyl 0.75 % w/w Gel					
Indoor or outdoor	Rats (*Rattus rattus,Rattus norvegicus, Bandicota bengalensis, Bandicota indica, Tetra indica, Meriones hurrianae*)	01 mg per spot	2.50 per spot	-	-
Indoor	Mice	01	2.50	-	-
Coumatetralyl 0.0375 % Bait					
Indoor or outdoor	Rats (*Rattus rattus, Rattus norvegicus, Bandicota bengalensis, Bandicota indica, Tetra indica, Meriones hurrianae*)	01 mg per spot	02.50 per spot	-	-
Indoor	Mice	01	02.50	-	-
Cyantraniliprole 10.26 % OD					
Grapes	Thrips (*Scirtothrips dorsalis),* Flea beetle (*Scelodonta strigicollis)*	70	700	1000	05
Pomegranate	Thrips (*Scirtothrips dorsalis),* Pomegranate butterfly (*Deudorixossypi15s)*	75 (0.0075%)	750 (0.075%)	1000	05

	Whitefly (*Siphoninus phillyreae),* Aphids (*Aphis punicae*)	90 (0.009%)	900 (0.09%)	1000	05
Cabbage	Cabbage Aphid (*Brevicoryne brassicae*), MustardAphid (*Lipaphis erysimi*), Diamond back moth (*Plutellaxylostella*), Tobaccocaterpillar (*Spodoptera litura*)	60	600	500	05
Chilli	Thrips (*Scirtothrips dorsalis*), Fruit borer (*Helicoverpa armigera*), Tobacco caterpillar (*Spodoptera litura*)	60	600	500	03
Tomato	Leaf miner (*Liriomyza trifolii*),Aphids (*Aphis ossypi*), Thrips (*Thrips tabaci*), Whitefly (*Bemesia tabaci*), Fruit borer (*Helicoverpa armigera*)	90	900	500	03
Gherkins	Leaf miner (*Liriomyzatrifolii*), Red pumpkinbeetle (*Aulacophora foveicolli*s), Aphids (*Aphis 16ossypi*), Thrips (*Thrips palmi*), Whitefly (*Bemesia tabaci*), Pumpkin caterpillar (*Diaphaniaindica*), Fruit fly (*Bactrocera cucurbitae*)	90	900	500	05
Cyenopyrafen 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, *Epilachna* 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, Leaffolder	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
Ethofenoprox 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/m3	07 days	10 ppm	Partial aeration Forat least 1 hr. followed by24 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, PinkMite, 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 spidermite		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	75100	250 – 340	750 – 1000	14
Chilli	Thrips, Whitefly,Mites	75 – 100	250 – 340	750 – 1000	07
Brinjal	Whitefly, Shoot andFruit borer, Mites	75 – 100	250 – 340	750 – 1000	10
Okra (Bhindi)	Whitefly, Shoot andFruit 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, PinkMite, 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, Pinkmite, Purple mite	30 – 60	600 – 1200	400	07
Fenpropathrin 10% EW					
Rice	Stem borer (Scirpophagaincertulas) and leaf folder (Cnaphalocrocismedinalis)	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, *Helicoverpa armigera*	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	*Common pest*	a.i. (mg)	Formulation (g)	How to apply	Waiting Period

For rodent control in field , storage andcrops like rice, soybean and coconut)	*Rattus rattus, Bandicota bengalensis, Tatera indica, Mus musculus*	0.75-1.0	15-20	At an interval of 5-10m in bait station or active burrow. Repeat the application after 14days 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, Leaffolder	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	*Spodoptera litura*, Semilooper	50 – 60	250 – 300	500	29
Groundnut	*Spodoptera litura*	60	300	500	31
Black gram	*Spodoptera litura,Maruca* 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, Leaffolder	24.0	50.0	375 – 500	40
Cotton	Bollworms (American & Spottedbollworm)	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 back	18.24	37.5 – 50	375 – 500	07
Brinjal	Shoot and fruit borer	72 – 90	150 – 187.5	500	05
Bengal gram	Pod Borer (*Helicoverpa armigera* & *Spodoptera* spp.)	48	100	500	05
Okra	Shoot & fruit borer	48 – 60	100 – 125	500	03
Soybean	Defoliators (*Helicoverpa armigera*, *Spodoptera litura*and Semilooper)	72	150	500	17
Flubendiamide 00.70 % GR					
Paddy(Rice)	Stem borer	85 – 100	12.14-14.28	NA	25
Fluensulfone 2% GR					
Tomato	Root knot nematode	0.02g/plant & 444 to 512 g/ha	1.0 g/plant & 22.2 to 25.6 Kg/ha	-	7
Cucumber		0.02 g/plant & 100 to 200 g/ha	1.0 g/plant & 8.0 to 10 Kg/ha	-	55
Okra		0.02 g/plant & 800 to 910 g/ha	1.0 g/plant & 40.0 to 45.5 Kg/ha	-	7
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, Purplemite	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 (*Meloidogyne incognita*)	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
Fluxametamide 10% w/w EC					
Brinjal	Leaf hopper, Thrips, Fruit and Shoot Borer	40	400	500	5
Cabbage	Diamond Back Moth, Tobacco caterpillar, Semi looper	40	400	500	5
Chilli	Thrips, Fruit Borer, Tobacco caterpillar	40	400	500	5
Okra	Leaf hopper, thrips, Fruit borer	40	400	500	5
Redgram	Spotted pod Borer, Pod Borer	40	400	500	5
Tomato	Thrips, Fruit borer	40	400	500	5
Hexythiazox 05.45 % w/w EC					
Tea	Scarlet mite (*Brevipalpus phoenicis*)Red spider mite (*Oligonychus cofeeaea*)	15-25	300 – 500	400/ha	05

Chilli	Yellow mites (*Polyphagotarsonemus latus*)	15 – 25	300 – 500	625/ha	03
Apple	European Red Mite (*Panonychus ulmi*)	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 andtermites	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 Green Leaf Hopper	60	300	500	39
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	333 - 400	500 - 1000	15
Indoxacarb 15.80 % EC					
Cotton	Bollworms (*Helicoverpaarmigera*)	75	500	500 - 1000	14
Cabbage	Diamond back moth(*Plutella xylostella*)	40	266	500 - 1000	05
Pigeon pea	Pod borer complex(*Helicoverpa armigera*), Pod fly	50	333	500 - 700	12
Rice	Leaf folder (*Cnephalocrosis medinalis*), Green Semilooper, Stem fly	30	200	500	14

Soybean	Tobacco caterpillar (*Spodoptera litura*),Pod borer (*Heliothis armigera*), Green Semilooper (*Chrysodexis acuta*), stem fly (*Melanogromyza spp*.)	30	333	500	31
Chickpea	Pod borer *(Helicoverpa armigera)*	50	333	500	18
Lambda-cyhalothrin 04.90 % CS					
Cotton	Bollworms	25	500	500	21
Paddy (Rice)	Stem borer, Leaffolder	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 CapsuleBorer 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/lof 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	*Spodoptera litura*	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 (*Spodopotera litura*)	210	875	500	26
	Groundnut leaf minor (*Aproaerema modicella*)	210	875	500	
	Pod borer (*Helicoverpaarmigera*)	210	875	500	
Sugarcane	Early shoot borer (*Chilo infuscatellus*)	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, LesserGrain Bore, KhapraBeetle, Rust Red Flour Beetle, Saw Drug Store Beetle	Air tight cover	24 gm/m3	6-8 hours waiting Period 24 hrs.	As when residues not to exceed 25 ppm
Milled Products:Flour	Khapra Beetle, RustRed Flour Beetle, Lesser grain borer	Air tight cover	24 -32 gm/m3	12-24 hrs waiting Period 72 hrs	As when residues not to exceed 25 ppm
Dry Fruits, Nuts Spices & Oil Seeds	Rust Red FlourBeetle	Air tight cover	24 -32 gm/m3	24 hrs waiting Period 72 hrs	As when residues not to exceed 25 ppm
Milbemectin 01 % EC					
Rose	Two spotted, Spidermite	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	-	-
Phosmet 50% WP					
Chilli	Aphids, Thrips & Fruit borer	500	1000	500	10
Rice	Yellow stem borer & Leaf folder	600	1200	500	45
Cotton	Jassid, Aphids, Whitefly & Bollworms	600	1200	500	47
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 (*H.armigera*) (*Scirtothripsdorsalis*)	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 (*Scripophaga incertulus*) Leaf folder (*Cnaphalocrocis medinalis*)	50 – 60	250 – 300	500	43
Soybean	Girdle beetle (*Oberea brevis*) *Spodoptera spp.* Semilooper (*Chrysodeixis acuta*)	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 (*Maruca* spp.) & (*Helicoverpa*spp.)	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 Foliar application	Whitefly	50	200	500	05
	(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 Foliar application	Whitefly	50	200	500	03
	(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 50	100 200	500 400 –	77 77

	Soil drench			500	
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
Thiamethoxam 0.4% + Bifenthrin 0.8% GR					
Groundnut	White grub & Termite	48+96	12	-	105
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

Triflumezopyrim 10% w/w SC					
Paddy	Brown plant hopper & White backed plant hopper	25	236	500	21
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)	*Rattus rattus, Bandicota bengalensis, Rattus meltade , Tatera indica, Meriones hurrianae, Mus platythrix, Mus musculus, Rattus norvegicus, Musbooduga, Suncus caeruleus*	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 % + Chlorpyriphos 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
Azoxystrobin 10.0% + Fipronil 5% SC					
Chilli	Thrips and fruit borer	50+100	1000	500	5
Rice	Yellow stem borer, leaf folder, brown plant hopper	62.5+ 125	1250	500	53
Azoxysrobin 1.3% + Tebuconazole 0.22% + Thaiamethoxam 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 % + Chlorpyriphos 30 % w/w EC					
Paddy (Rice)	Stem borer, Leaffolder	24 + 240- 30 + 300	800 – 1000	500	21
Bifenthrin 8% + Clothianidin 10% SC					
Ground nut	Whitegrub, thrips and aphids	80+100	1000	1000	83
Cotton	Grey weevil, mealy bug, assids, 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	176	800	400	15

	backed plant hopper, Leaf Folder, Green Leaf Hopper, Stem Borer				
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 (*Scirpophaga incertulus*)	18.75 + 562.5	7.5	-	35
Cartap Hydrochloride 04 % + Fipronil 00.50 % CG					
Paddy (Rice)	Stem borer, Leaffolder	675 – 900	15 – 20	-	27
Cyantraniliprole 7.3% w/w + Diafenthiuron 36.4% w/w SC (Cyantraniliprole 8% w/v + Diafenthiuron 40% w/v SC) (Cyantraniliprole 80 g/L + Diafenthiuron 400 g/L – 480 SC)					
Cotton	Jassids, Whitefly, Thrips, Aphids, Pink bollworm	300 (50 + 250)	625	500	29
Chilli	Thrips, Mites, Whitefly, Fruit borer	300 (50 + 250)	625	500	5
Cyantraniliprole 16.9% + Lufenuron 16.9% SC					

Rice	Stem borer, Leaf folder	20 (10+10)	50	500	39
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, *Spodoptera litura*, 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
Chlorpyriphos 16 % + Alphacypermethrin 01 % EC					
Cotton	Spotted bollworm, Pink bollworm, American bollworm	425	2500	500 – 750	15

Clothianidin 3.5%+Pyriproxyfen 8% SE					
Brinjal	Whitefly, Jassid, Thrips and Aphids	44+100	1250	500	3
Cotton	Whitefly, Jassid, Thrips and Aphids	44+100 – 52.5+120	1250-1500	500	60
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 30 % + Pyriproxyfen 8% w/w SC					
Chilli	Mites & Whitefly	300+80	1000	500	3
Cotton	Whitefly	300+80	1000	500	35
Diafenthiuron 47 % + Bifenthrin 09.40 % w/w SC					
Cotton	Thrips (*Thrips tabaci*), Leaf hopper (*Amrasca devastans*),Whitefly (*Bemisia tabaci*), Aphid (*Aphis gossypii*)	293.75 + 58.7	625	500	30
Chilli	Thrips (*Scirtothrips dorsalis*), Aphids (*Aphis gossypii*)	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 (*Plutella xylostella*) Fruit borer (*Spodoptera litura & Helicoverpa armigera*)	27(Emamectin benzoate 3.0 + Lufenuron 24.0)	60	500	03
Chilli	Fruit borer (*Spodoptera litura & Helicoverpa armigera*) Thrips (*Scritothrips dorsalis*) Mites (*Polypagotarsone muslatus*)	27(Emamectin benzoate 3.0 + Lufenuron 24.0)	60	500	03
Emamectin Benzoate 1.5% + Profenofos 35% w/w WDG					
Cotton	Whiteflies, Jassids, Thrips, Aphids and	10.5 + 245	700	500	15

	Pink Boll Worm				
Chilli	Yellow Mites, Thrips and Fruit Borer	10.5+245	700	500	7
Maize	Fall armyworm	11.25+262.5	750	500	35
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
Ethiprole 10.7% + Pymetrozine 40% WG					
Rice	Brown plant hopper & White backed plant hopper	40.12+150 to 45.48+170	375-425	375	27
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	*Spodoptera litura*	52.5 + 75	1500	500	31
Chilli	*Spodoptera litura* *Helicoverpa armigera*	52.5 + 75	1500	500	10
Flubendiamide 07.5 % + Kresoxim Methyl 37.5 % w/w SC					
Rice	Stem borer & Leaffolder	50 + 250	667	500	30
Tomato	Fruit borer (*Helicoverpa armigera*) Leaf eating caterpillar/Fruit borer (*Spodoptera litura*)	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 (*Holotrichia consanguinea*)	175 + 175- 200 + 200	437.5-500	1000 – 1250	296
Groundnut	White Grubs (*Holotrichia serrata*)	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	30
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
Indoxacarb 10.0% + Thiamethoxam 10.0% WG					
Tomato	Whitefly and fruit borer	75 + 75	750	500	5
Paddy	Brown plant hopper, yellow stem borer and leaf folder	50 + 50	500	50	14
Isoprothiolane 28% + Fipronil 5% EC					
Rice	Stem borer, Brown plant hopper, Green leaf hopper, Whorl maggot	280+50	1000	500	58
Novaluron 05.25 % + Indoxacarb 04.50 % SC					
Tomato	Fruit borer (*Helicoverpa armigera*) & Leaf eating caterpillar	43.31 + 37.13-45.94 + 39.38	825 – 875	500	05

	(*Spodoptera litura*)				
Chickpea	Gram pod borer (*Helicoverpa armigera*)	43.31 + 37.13-45.94 + 39.38	825 – 875	500	9
Soybean	*Spodoptera* spp., *Helicoverpa armigera* and *Semilooper*	43.31 + 37.13-45.94 + 39.38	825 – 875	500	14
Pigeon pea (Red Gram/Arhar/Tur)	Pod borer complex (*Helicoverpa armigera& Maruca ossyp)*	43.31 + 37.13-45.94 + 39.38	825 – 875	500	25

Chilli	Fruit borer complex (*Helicoverpa armigera, Spodoptera litura)*	43.31 + 37.13-45.94 + 39.38	825 – 875	500	7
Black gram	Black gram pod borer complex (*Etiella zinckenella*, *Spodoptera litura* and *Maruca vitrata*)	43.31 + 37.13-45.94 + 39.38	825 – 875	500	14
Rice (Paddy)	Rice leaf folder (*Cnaphalocrosi smedinalis*)	22.97 + 19.69	437.5	500	40
Groundnut	*Helicoverpa armigera & Spodoptera litura*	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
Pyraclostrobin 3.5% + Thiram 15.0% + Clothianidin 22.5% FS					
Ground nut (Seed Treatment)	Aphids, Jassids, termites and white grub	2.45 + 10.5 + 15.75	70 ml / 10 Kg of seed	Not applicable for seed treatment	
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 & fruit borer	25 + 75- 37.5 + 112.5	500 -750	500 – 750	07
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 (*Bemisia tabaci*), Thrips (*Thrips tabaci*), Jassid (*Amrasca biguttula biguttula*), Aphid (*Aphis ossypi*)	250 + 50- 312.5 + 62.50	1000 – 1250	500	35
Pyriproxyfen 10 % + Bifenthrin10 % w/w EC					
Cotton	Whitefly	60 + 60	600	500	19
Pyriproxyfen 8% + Dinotefuran 5% + Diafenthiuron 18% SC					
Brinjal	Whitefly, Jassid, Thrips and Aphids	48+30+108 to 66+41.25+148.5	600-825	500	8-10
Spirotetramat 11.01 % + Imidacloprid 11.01 % w/w SC					

Okra (Bhindi)	Red spider mites	60 + 60	500	500	03
Brinjal	Whitefly, Red spidermites	60 + 60	500	500	05
Mango	Mealy bug	0.018%	0.075%	Spray fluid as required dependin g upon size of tree.	15
Cotton	Mealy bug	75+75	625	500	22
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, Leafeating 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 % + Chlorpyriphos 20 % EC					

Paddy (Rice)	Stem Borer, Brownplant 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 fly	28	200	500	41
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 (50+100)	500 **Application method**-Soil drench (Single application), **Application time**-8-10 days after transplanting	50-100 ml/plant	36
Rice Nursery	Stem borer, Leaf folder, Green leaf Hopper	180 (120+ 60)	600 **Application method**-Soil drench (Single application), **Applicationtime**-At the time of sowing to before transplanting	100L/ha	116
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 Bifenthr 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 Applicatio n**	**Dosage/ha.**			
		a.i. (gm)	**rmulation (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**
Mosquit olarvae	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 & files	400	1000	-	80
Lambda Cyhalothrin 9.7% w/w CS				
Purpose and Target Pest	**Spray Deposit Rate (mg a.i./ sq.m meter)**	**Spray Deposit Rate (g.a.i/sq. meter)**	**g. a.i per 500 sq. mtrs**	**Formulation Dose (ml)**	**Water Volume (litre)**
For public health use for controlling mosquitoes transmit malaria *(Anopheles culicifacies)*	25	0.025	12.5	1.25	10
Lambda-cyhalothrin 10 % WP					
Pest	**Use**	**Dosage 500 m^3 floor area**		**Dilution in water (Litre)**	

		a.i. (gm)	rmulation (gm)	
Mosquitoes	For public health only	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)	rmulation (gm)	Dilution in water (Liter)	
-	Adult mosquitoes	02/m^2	08/m^2	100	peat after6-8 weeks

Novaluron 10 % EC

Place of Application	Insect	Dosages		Waiting Period
		a.i. (gm)	rmulation (ml)	
Clean surface water	*Anopheles stephensi, Aedes aegypti*	30	0.03 ml/m^2	Every 12 weeks
Polluted surfacewater	*Culex quinquefasciatus, Anopheles subpictus*	60	0.06 ml/m^2	Every 6th week and 12th week

Pyriproxyfen 00.50 % GR

Breeding habitats	Dosage/ha		Interval between
	a.i. (gm)	rmulation (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 (*Nilaparvatha Lugens*)	90	375	500	14
	White backed planthopper (*Sogatella furcifera*)	90	375	500	
Cotton	Jassids (*Amarasca bigutella*),	75	313	500	
	Aphid (*Aphis gossypi*)	75	313	500	
	Whitefly (*Bemmissiatabaci*)	90	375	500	
	Cotton mealy bug (*Phenococcus spp.*)	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			o 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-	8.0 ml	1.0	50 ml diluted solution/m^2

	house. Bed net impregnation				
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 mericana, Blatella germenica) 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 (*Periplaneta americana*) and German Cockroach (*Blattella germanica*)	
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	ea 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 (*Periplaneta americana*)	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 nearharborage or aggregation areas, such ascorners, areas where cockroaches forageor crack and crevices, holes, hiddensurfaces, any other places where cockroaches are typically known to hide etc. for the control of cockroaches.
German Cockroach (*Blattella germanica*)	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) foruse 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, areaswhere cockroaches forage or crack andcrevices, holes, hidden surfaces, any otherplaces where cockroaches are typically known to hide etc. for the control of cockroaches.
Fenitrothion 20 % OL			

Name of Pest	Dose (g a.i.)	rmulation (ml)	Instruction for use
edbug (*Cimex* 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 where ever bedbugsoccur.

Fipronil 00.03 % & 0.5 % Gel	
Ready to use household insecticide	ıtrol of German & AmericanCockroaches.

Fipronil 00.05 % GEL

House hold	Common name of the pest	Dosage/m^2
House hold	American Cockroach (*Periplanata mericana*), German cockroach (*Blattella germanica*)	0.03 g (in a bait gun), 3-4 spot/m^2
House hold	German cockroach (*Blattella germanica*)	*(100 mg spot= approx 5 mm diameter)* Low Density – 1 spot / M^2 High Density – 2 spots / M^2
	American Cockroach (*Periplanata mericana*)	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 (*Monomorium pharaonis*), Small black ant (*Monomorium indicum*), Crazy ant (*Paratrechina longicomis*),Ghost ant (*Tapinoma melanocephalum*)	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	trol of German & AmericanCockroaches
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
Bed Bug	Hospitals, Houses, Commercial establishments, Hotels, Dormitories, Old age Homes, Hostels, etc.	

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 ofnetting**		
	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)	**rmulation (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 q*uinquefasciatus, 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 (*Musca domestica*)	0.375 – 0.5 g a.	15 – 20 per	**For Low Pest**	For use as
Mosquito (*Anopheles* spp.)	i. per Litre water (15 – 20 mg. a. i.per square meter)	litre water	**Infestation (Maintenance Rate)** Mix 15 ml of the product in one litre ofwater 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 spraythe solution uniformly @ 40 ml per square meter.	indoor or outdoor as asurface crackand crevice or spot spray treatment in residential, institutional, commercial and industrial areas / establishments etc.
American Cockroaches (*Periplaneta Americana*)				
German Cockroaches (*Blattella germanica*)				

Anopheles stephensi, Culex q*uinquefasciatus, 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 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	
Novaluron 10 % EC				
Clean surface water	*Anopheles stephensi* *Aedes aegypti*	30	0.03 ml/m^2	-
Polluted water	*Culex quinquefasciatus* *Anopheles subpictus*	60	0.06 ml/m^2	-
Permethrin 02.00% (Olyset@ Net) w/w for Import only				
Ready to use household insecticides			For control of mosquitoes both indoors andoutdoors. After unpacking and before usingthe 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.)**	**rmulation (ml)**	**Dilution in water (litres)**
Flying insect- Mosquitoes, Files, Cockroaches , Bed bugs, Flash, Tickscrickets , Woodlice , Mite, Silver fish,Spider, Ants etc.	200	1000	40
Pirimiphos-methyl 01 % Spray			
Location	**Pest**	**Dosage**	**re period (min.hrs.)**
Spot spray inhouses	Cockroaches , bed bugs, flea etc.	100 ml/1 m^2	01
Space spray inhouses	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		ol of Cockroaches andFlies	
Pyrethrin 00.20 % Spray			
Ready to use household insecticide		ol of Cockroaches, Houseflies,Mosquito and bugs	
Propoxur 01 % Spray			
Ready to use household insecticide		ontrol 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.
Renofluthrin 0.025% w/w Mosquito Coil	Used to control adult mosquitoes of *Aedes aegypti*, *Anopheles stephensi* & *Culex quinquefasciatus*
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.)**	**ɔrmulation Dose**	**Application/Usage**

Black Carpenter Ants (*Camponotus* 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 antsforage or crack and crevices, holes, hiddensurfaces 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(*Aedes aegypti, Culex quinquefasciatus*) and Housefly (*Musca domestica*).	
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 31.12.2022

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** *Metarhizium anisopliae, Metarhizium rileyi (Nomuraea rileyi), Beauveria bassiana, Verticilliumlecanii*	1 × 108 CFU/g @ 5 g/litre whorl application. Repeat after 10 days if required.
10	*Bacillus thuringiensis* ver. *Kurstaki*, 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 03rdMay, 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 31.10.2023)

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

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

MAJOR USES OF PESTICIDES

(Registered under the Insecticides Act, 1968)

(UPTO - 01/02/2023)

(Based on certificate issued)

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

FUNGICIDES

1. Fungicides single product formulations use

Crop	Common name of the disease	Dosage perha			Waitingperiod fromlast applicationtoharvest(in days)
		a. i. (g)	Formulation (g/ml)/%	Dilutionin water(L)	
Amisulbrom 20% SC					
Potato	Late blight (*Phytophthora infestans*)	100	500	375-500	19
Grape	Downy mildew (*Plasmopara viticola*)	75	375	400-1000	59
Azoxystrobin 23% SC					
Grapes	Downy mildew, Powdery mildew	125gm	500 ml	500-750	7
Chilli	Fruitrot, Powdery mildew	125gm	500 ml	500-750	5
Mango	Anthracnose, Powdery mildew	0.025%	0.1%	100ml/ 100 Ltr. (depending upon size of tree)	5
Tomato	Early&Lateblight	125gm	500ml	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	-	0.005%	500	30

	spot				
Grapes	Downy mildew Anthracnose	- -	0.005% 0.05%	750 750	15
Citrus	Gummosis	-	1.0%	750 (Soil drench)	30
Apple	Powdery mildew White root rot	- -	0.005% 0.2%	10 lit./tree 5-10 injection 2 gm/tree	30
Potato	Early blight	-	0.005%	750	30
Bitertanol25%WP					
Groundnut	Rust	250gm	1000gm	500	30
	Tikka	250gm	1000gm	500	30
Wheat	Karnalbunt	560gm	2240gm	750	-
Bupirimate 26.7% w/w EC					
Rose	Powdery mildew	1000	4000	1000	5
Captan 50% WG					
Chillies	Fruitrot (Anthracnose)	750gm	1500gm	500	5
Potato	Early blight&Lateblight	750gm	1500gm	500	21
Captan 50% WP					
Apple	Scab	1250gm	2.5kg	750-1000	-
Cherry	Brownrot	1250gm	2.5kg	750-1000	-
Grapes	Downey mildew	1250gm	2.5kg	750-1000	-
Potato	Early blight	1250gm	2.5kg	750-1000	-
	Lateblight	1250gm	2.5kg	750-1000	-
Tomato	Early blight	1250gm	2.5kg	750-1000	-
	Lateblight	1250gm	2.5kg	750-1000	-

Captan 75% WP					
Apple*	Scab,Fly speck&Bitterrot	0.12%**	1667gm	15-20**	8
Cherry	Brownrot	0.12%**	1667gm	15-20**	NA
Grape	Downy mildew	1250gm	1667gm	1000	8
Cabbage/ Cauliflower, Tomato, Brinjal, Chillies, Beans, Ornamental	Damping off (Nursery)	0.25%	2500gm	1000 Soildrench inthe nursery	NA
Potato	Early blight	1250gm	1667gm	1000	8
	Lateblight	1250gm	1667gm	1000	8
Tomato	Early blight	1250gm	1667gm	1000	6
	Lateblight	1250gm	1667gm	1000	6
Chillies	Early blight	1250gm	1667gm	1000	8
	Fruitrot	1500gm	2000gm	1000	8
Citrus	Brownrot	0.25**	2500gm	15-20**	NA
	Scab	0.12**	1667gm	15-20**	NA
Rose	Blackspot	1250gm	1667gm	1000	NA
Paddy(Rice)	Leafspot	750gm	1000gm	750	NA
Captan 75%WS					
Chillies (soildrench)	Damping off (soil drench)	15-25 gmper kgseed	20-30gm perkgseed	1	
Cabbage	Damping off (soil drench)	15-25gmper kgseed	20-30gm perkgseed	1	
Tomato	Damping off (soil drench)	15-25 gmper kgseed	20-30gm perkgseed	1	
Carbendazim 5% GR					
Paddy (Rice)	Brownleaf spot	0.62kg	12.5 kg	-	
Carbendazim 46.27% SC					
Grape	Powderymildew	0.046% or 46 g /100 lit. water	0.1%or100 ml/100lit.Wat er	Asrequired	30

Mango	Powderymildew	0.046% or 46 g/100 lit. water	0.1%or100 ml/100lit. Water	Asrequired	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	Loosesmut	1gm/kg seed	2gm/kg seed	1Lit./10 kg seed	(wet slurry treatment)
Barley	Loosesmut	1 gm/kg seed	2 gm/kg seed	1Lit./10 kg seed	(wet slurry treatment)
Tapioca	Setrot	0.5gm	1	1	-
Cotton	Leafspot	125	250	750	-
Jute	Seedlingblight	1gm/kg seed	2gm/kgseed	1Lit./10 kg seed	(wet slurry treatment)
Groundnut	Tikkaleafspot	112.5 gm	225gm	750	-
Sugar beet	Leafspot	100gm	200gm	400	-
	Powderymildew	100gm	200gm	400	-
Peas	Powderymildew	125gm	250gm	600	-
ClusterBeans	Powderymildew	175gm	350gm	750	-
Cucurbits	Powdery mildew	150gm	300gm	600	-
	Anthracnose	150gm	300gm	600	-
Brinjal	Leafspot	150gm	300gm	600	-
	Fruitrot	150gm	300gm	600	-
Apples	Scab	1.25gm	2.5gm	10Lit./tree	-
Grapes	Anthracnose	150gm	300gm	600	-
Walnut	Downyleafspot	1.5gm	3gm	10 Lit./tree	-
Rose	Powdery mildew	0.5gm	1gm	2	-
Ber	Powdery mildew	5gm	10gm	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	-
	Anthracnose	150	300	600	-
	Powdery Mildew	150	300	600	-
Tobaco	Frog eye spot	112.5	225	750	-
	Anthracnose	112.5	225	750	-
Carboxin75%WP					
Wheat	Flagsmut	1.5 -1.875 gm/ kg seed	2-2.5 gm/ kgseed	N/A	Onlyonetime seedtreatment required
	Loosesmut	1.5 - 1.875 gm/ kg seed	2-2.5gm/kgseed	N/A	Only one time seed treatmentrequired
	Bunt	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kgseed	N/A	Only one time seed treatmentrequired
Barley	Loosesmut	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kgseed	N/A	Only one time seed treatment
	Coveredsmut	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kgseed	N/A	required
Cotton	AngularLeaf spot	1.5 - 1.875 gm/ kg seed	2-2.5 gm/ kgseed	N/A	Only one time seed treatment
Carpropamid27.8%SC					
Rice (Paddy)	Blast	0.03%	0.1%	300-500 depending uponcrop stage	-
Chlorothalonil 75% WP					
Groundnut	Tikkaleaf 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&Latebligh t	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	Anthracnose 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	Downymildew	0.12%or 120g/100Ltr. water	0.24%or 240g/100 Ltr. water	Asrequired depending uponPP equipmentused	30
Mango	Anthracnose	0.12%or120 g/100Ltr. water	0.24%or 240g/100Ltr. water	Asrequired depending uponPP equipmentused	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	Anthracnose	350	1000	500	5
Rice (Paddy)	False smut, Bacterial leaf blight	525	1500	500	10
Copper Hydroxide 77% WP					
Rice (Paddy)	Falsesmut	1000gm	2000gm	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 (*Leveilulla taurica*)	15	300	375-500	5
Grapes	Powdery mildew (*Uncinula necator*)	25	500	400-1000	25
Cymoxanil50%WP					
Grapes	Downeymildew	0.12%	0.24%or 240gm/100 ltr.water	Asrequired depending upon the crop stage and	15

				equipment used	
Cyazofamid 34.5% SC					
Potato	Late blight	80g	200ml	500	27
Tomato	Late blight	80g	200ml	500	3-5
Grapes	Downy mildew	80g	200ml	500	7
Difenoconazole 3% WS					
Wheat	Loose smut	6.0	200	This is used as seed dresser	This is used as seed dresser
Difenoconazole25% EC					
Apple	Scab	0.004% or4 g/100 ltr. water	0.015%or 15ml/100 ltr. water	Asrequired depending upon the size of the plant and plant protection equipment used	14
Paddy (Rice)	Sheathblight	0.0125% or12.5g/100ltr. water	0.05%or50 ml/100ltr. water	500	25
Chilli	Die-back, Fruit rot	0.0125%or 12.5g/100 ltr. water	0.05%or50 ml/100ltr. 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	Anthracnose, Powdery mildew	0.0075% or 7.5 g/l00 ltr. water	0.03% or 30ml/100 ltr. of water	500	10
Groundnut	Leaf spot, rust	0.025% or 25g/100ltr. water	0.1%or 100 ml/100 ltr..water.	As required depending upon the size of the plant and plant protection	34

				equipment used	
Dimethomorph50%WP					
Grapes	Downymildew	500gm	1000gm	750L	25
Potato	Lateblight	500gm	1000gm	750L	16
Dinocap 48% EC					
Mango	Powdery mildew	2.4gm	5gm	10	-
Rose	Powdery mildew	0.96gm	2ml	10lit. water	-
Dithianon 75%WP					
Apple	Scab	1350gm	1800gms	2400L	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
	Brownleaf spot	250-300	500-600	750-1000	21
Ethaboxam 40% SC					
Potato	Late blight	200-225	500-663 ml	500	11
Flusilazole 40% EC					
Rice (Paddy)	Sheath blight	120g a.i./ha	300ml/ha	500	24
Chilli	Powdery mildew	40-60 g a.i/ha	100-150 ml/ha	500	5
Fluxapyroxad 333 g/l FS					
Sorghum	Anthracnose	0.33	1.0 ml/kg seed	Sufficient to coat the seeds uniformly	N.A(Seed Dresser)

Soybean	Rhizoctonia root rot, Cotyledonary spot	0.33	1.0 ml/kg seed	Sufficient to coat the seeds uniformly	N.A (Seed Dresser)
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	1120-1600gm	1400- 2000 gm	750-1000	30
Cardamom	Azukhal Diseaseand Damping off	1800-2400gm	2250-3000 gm	750-1000	90
Hexaconazole0.5%GR					
Rice	Sheath blight & Sheath rot	50 gm	10 kg	Not applicable	38
Hexaconazole2%SC					
Chillies	Powderymildew &Fruitrot	60gm	3.0L	500	7
Potato	Early blight& Lateblight	60gm	3.0L	500	21
Grapes	Powdery mildew	30-60gm	1.5-3.0L	500-750 depending uponcrop canopy	14
Hexaconazole 5% EC					
Apple	Scab	0.0025%	0.05% (50ml/100lt)	Asrequired	30
Rice (Paddy)	Blast, Sheath blight	50gm	1000 ml	500	40
Groundnut	Tikkaleaf spot	75gm	1500 ml	500	30
Mango	Powdery mildew	0.005% (5g/100 lit)	0.1% (100ml/100 lt)	Asrequired	30
Soybean	Rust	0.005% (5g/100 lit)	0.1%or (100ml/100 lit)	Asrequired	30
Tea	Blister blight	10gm	200ml	70-90 with power sprayers, 175-200 withknap Sack sprayer	7
Grapes	Powdery mildew	25-50gm	500-1000ml	500	14

Hexaconazole 5% SC					
Mango	Powderymildew	0.01% (10 g/100 lt. water)	0.2%or (200ml/100 lt.water)	Asrequired depending onsizeof treeand plant protection equipment used.	27
Rice (Paddy)	Sheath blight	0.01% (10 g/100lt.water)	0.2%or (200ml/100 lt.water)	Asrequired depending onsizeof treeand 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% or100 gramin 100ltr. ofwater	0.20%or 200mlin 200lit.of water	Asrequired depending upon crop stageand plant protection equipment used	15
Chilly	Fruit rot /die-back	0.10% or100 gramin 100lit. ofwater	0.20%or 200mlin 200lit. of water	Asrequired depending upon crop stageand plant protection equipment used	3
Tomato	Early blight	0.10% or100 gramin 100lit. ofwater	0.20%or 200mlin 200lt. of water	Asrequired depending upon crop stageand plant protection equipment used	5
Potato	Early blight	0.10% or100 gramin 100lit. ofwater	0.20%or 200mlin 200lit. of water	As required depending upon crop stage and plant protection equipment used	48
Onion	Purple blotch	0.10% or100 gramin 100lit. ofwater	0.20%or 200mlin 200lt. of water	Asrequired depending upon crop stage and plant protection equipment used	63
Pomegranate	Anthracnose	0.10% or100 gramin 100lit. ofwater	0.20%or 200mlin 200lt. of water	Asrequired depending upon crop stage andplant protection equipment used	10
Grape	Anthracnose	0.10% or100 gramin 100lit. ofwater	0.20%or 200mlin 200lit.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	300-350gm	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		2% pre & 1% post blossom

			conventional sprayers.		
Peach	Powdery mildew	0.44-1.10/ha	2-5 lit/hectare		Only one application before the buds swell, 3 pre harvest application
Mancozeb35%SC					
Tomato	Early blight& Lateblight	0.175% or175 gm/100 Lt. water	0.5%or500 gm/100lt. water	500Lt.Water or as required depending upon crop stage and equipment used	10
Potato	Early blight & Late blight	0.175%or1 75gm/100 Ltr. water	0.5%or500 gm/100lt. water	500Lt Water or as required depending upon crop stage and equipment used	35
Mancozeb 75% WG					
Tomato	Early blight	750gm	1000gm	500Ltr.	5-6
Potato	Late blight	750gm	1000gm	500Ltr.	3-5
Apple	Scab, Pre-mature leaf fall, Alternaria spot/blight, sooty blotch	18.75-22.5/tree	25-30/tree	10L/tree	40
Mancozeb75%WP					
Wheat	Brown& black rust, Blight	1.125-1.5 kg	1.5-2kg	750Ltr..	-
Maize	Leafblight, Downy mildew	1.125-1.5 kg	1.5-2kg	750Ltr.	-
Paddy (Rice)	Blast	1.125-1.5 kg	1.5-2kg	750Ltr.	-
Jowar	Leafspot	1.125-1.5 kg	1.5-2kg	750Ltr.	-
Potato	Lateblight, Earlyblight	1.125-1.5 kg	1.5-2kg	750Ltr.	-
Tomato	Lateblight, Buckeye rot, Leafspot	1.125-1.5 kg	1.5-2kg	750Ltr.	-

Chilies	Damping off	2.25g	3g (soil drench)	1000 Ltr.	-
	Fruitrot, Riperot, Leafspot	1.125-1.5kg	1.5-2kg	750Ltr.	-
Cauliflower	Collarrot	2.25gm	3gm	1000 Ltr.	-
	Leafspot	1.125-1.5kg	1.5-2kg	750Ltr.	-
Groundnut	Tikka disease& rust	1.125-1.5kg	1.5-2kg	750Ltr.	-
	Collar rot, Leaf spot	18.75 to 22.50/ 10 kg seed	25 to 30/ 10 kg seed	0.1 (water slurry)	-
Grapes	Angular leafspot, Downy mildew, Anthracnose	1.125-1.5kg	1.5-2kg	750Ltr.	-
Guava	Fruitrot	15g/tree	20g/tree	10 Ltr.	-
Banana	Cigar end rot, Tip rot, Sigatoka leafspot	1.125-1.5 kg	1.5-2kg	750 Ltr.	-
Apple	Scab& sooty blotch	22.5 g /tree	30gm/tree	10Ltr.	-
Cumin	Blight	1.125-1.5 kg	1.5-2kg	500Ltr.	-
Mandipropamid23.4% 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
MeptylDinocap 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, Browny stripe downy mildew	Slurryseed treatment with240g/ 100 kg seed	700g/100 Kgseed	0.75-1.0/100 Kg seed	3½-4months Dependingonth e variety
Bajra	Downymildew	Slurryseed treatmentwit h200g/100 Kgseed	600g/100 Kgseed	0.75-1.0/100kg seed	3-3½months Dependingon the variety
Sorghum	Downymildew	Slurry seed treatment with 200g/100 Kgseed	600g/100 Kgseed	0.75-1.0/100kg seed	3½-4months Dependingon the variety
Sunflower	Downy mildew	Slurry seed treatment with 200g/100 Kgseed	600g/100 Kgseed	0.75-1.0/100kg seed	3½-4months Dependingon the variety
Mustard	Whiterust	Slurry seed treatment with 200g/100 Kgseed	600gm/100 Kgseed	0.75-1.0/100kg seed	3½-4months Dependingon the variety
Metiram70%WG					

Tomato	Alternariablight	1750gm	2500gm	500-750 Lt.	6
Groundnut	Tikka	1400gm	2000gm	500-750Lt.	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	Powderymildew	0.004%	0.04%	500 lit/ha	15
Chilies	Powdery mildew, Leafspot, Die-back	0.004%	0.04%	500lit/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	Powderymildew	0.005% or5 gm/100 Ltr. water	50ml/100Ltr. water	Dependinguponthe requirement	30
Apple	Scab	0.005% or5 gm /100 Ltr. water	50ml/100Ltr. water	10Ltr. Waterper tree	30

Mango	Powderymildew	0.005% or5 gm/100 Ltr. water	50ml/100Ltr. water	10Ltr. Waterper tree	30
Pulses (Black gram /Greengram)	Powderymildew	0.005% or5 gm/100 Ltr. water	50ml/100Ltr. water	500Ltr./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)	Sheathblight	150-187.5gm	600-750ml	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(*Phakopsora pachyrhizi*) Leaf spot (*Cercospora kikuchii*& *Alternaria alternata*)	100	400	500	25
Cumin	Cumin blight (*Alternaria burnsii*)	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 (*Neovossia indica*)	125gm	500gm	750	30
	Leaf rust / Brown Rust (*Puccinia recondite F.sp. tritici*)	125gm	500gm	750	30
	Stemrust (*B.graminisf.sp . tritici*)	125gm	500gm	750	30
	Stripe rust /Yellow Rust (*P. striiformis*)	125gm	500gm	750	30
Rice (Paddy)	Sheath blight (*Rhizoctoniasol ani f.sesakii*)	125gm	500gm	750	30
Groundnut	Earlyleaf spot (*Cercospora arachidicola*)	125gm	500gm	750	15
	Lateleaf spot (*C. personata*)	125gm	500gm	750	15
	Rust (*Puccinia arachidis*)	125gm	500gm	750	15
Tea	Blister blight	31.25-62.50gm	125-250gm	175-250	7
Soyabean	Rust(*Phakopsoa pachyrhizi*)	125gm	500gm	500	26
Cotton	Alternaria leaf spot	125gm	500gm	500	23
Propineb70%WP					
Apple	Scab	0.21%or 210 g/100Ltr. water	0.30%or300 gram/100Ltr. water	As required depending uponsize ofthetree andplant	30

				protection equipment used	
Pomegranate	Leafand Fruitspots	0.21%or 210 g/100Ltr. water	0.30%or300 gram/100Ltr. water	As required depending uponsize ofthetree andplant protection equipment used	10
Potato	Early& Lateblight	0.21%or 210g/100 Ltr. water	0.30%or300 gram/100Ltr. water	As required depending uponcrop stageand plant protection equipment used	15
Chilli	Die-back	0.21%or 210 g/100Ltr. water	0.5%or500 gram/100Ltr. water	As required depending uponcrop stageand plant protection equipment used	10
Tomato	Buckeyerot	0.21%or 210 g/100Ltr. water	0.30%or300 gram/100Ltr. water	As required depending uponcrop stageand plant protection equipment used	10
Grapes	Downymildew	0.21%or 210 g/100Ltr. water	0.30%or300 gram/100Ltr. water	As required depending uponcrop stageand plant protection equipment used	40
Rice (Paddy)	Brownleaf spot and Narrow leaf spot	1050to 1400 g	1500to2000 g	Use 500 Litrespray 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 spot	75-100	375-500	500	26
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	Anthracnose	100	500	500	3
Pyraclostrobin 100g/l CS					
Paddy (Rice)	Blast Disease	100	1000	500	18
(Streptomycin Sulphate 90% + Tetracylin Hydrocloride 10%) SP					
Apple	Fireblight	-	Spray Streptocycline25to50 ppmsolution at20to30% bloom.Itis advisableto spraytrees every3to4 days during blossomtime.	-	-
Beans	Haloblight	-	Spray Streptocycline100 to 150ppm solution thriceat intervalof7 days.For prevention applyfirst spray10 days after emergence ofleaf.	-	-

Citrus	Citruscanker	-	Spray Streptocycline50to100 ppm solution repeatedly atan intervalof15to 20 days after the appearance ofnew growth. Coverthe foliageand youngfruits fully.	-	-
Potato	Blackleg Andsoft rot, bacterial brownwilt orringor Thebangle Diseaseof potato	-	**Seeds treatment**: Prior to planting soak potato seed tubers in streptocycline40to100 ppm solution for half anhour. **Spray:**Two tothree sprays of40 to50ppm Solutionat aninterval of20days. Firstspray 30days after planting.	-	-
Tobacco	Wildfire	-	Spray Streptocycline 40to100 ppm solution at two leaf stageofthe plant. Repeated application at an	-	-

			intervalof 7 days is necessary till the plants get established inthefield.		
Tomato	Bacterial Leafspot	-	Spray seedlings with streptocycline40to100 ppm solution in seed beds and fields after the appearance of first true leaves two sprays of streptocycline, one before transplanting and another after areeffective for controlling thedisease.	-	-
Paddy (Rice)	Bacterial Leafblight	-	**Seeds treatment:** Prepare streptocycline 40 ppm solutionand soak seeds for12hours at room temperature before sowing. **Seedling treatment:**Dip the seeding in streptocycline40to100 ppm solution. The antibiotic will be absorbed through the injured roots	-	-

			and penetrate the vascular bundles insides the seedlings. **Spray:** Spray streptocycline 100to 150ppmsolution at earlyroot stage. Second spray,if necessary beforegrain set.		
Tea	Blister Blight	-	It is fungal Disease and can be controlled by spraying 40gmswith 350 to 420 gms copper oxychloride (50% Wettable powder) in 67 liters of water perhectarewith air blast sprayer, covering tworowson eitherside.	-	-
Sulphur40%SC					
Beans	Powdery mildew	2.25-3.00 Kg	5.65-7.50 Kg	750-1000	-
Cumin	Powdery mildew	1.40g	3.50 Kg	1000	-
Grapes	Powdery mildew	1.22 Kg	3.00 Kg	1000	-
Groundnut	Tikkaleaf spot	2.25-3.00 Kg	5.65-7.50 Kg	750-1000	-
Mango	Powdery mildew	1.50-2.00Kg	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	1.50-2.00Kg	3.75-5.00 Kg	1000	-
Sulphur 52% Flowable					
Pea	Powdery mildew	1.04Kg	2.00Ltr.	400	-
Chilli	Powdery mildew	1.04Kg	2.00Ltr.	400	-
Sulphur 55.16% SC					
Grapes	Powderymildew	0.165%or 165 g/10Ltr. water	0.30%or300 ml/100Ltr. water	As required	10
Mango	Powderymildew	0.165%or 165g/10Ltr. water	0.30%or300 ml/100Ltr. water	As required	10
Sulphur 80% WP					
Apple	Powdery mildew	2-4kg	2.5-5.0Kg	750-1000	-
Grapes	Powdery mildew	2-4kg	2.5-5.0Kg	750-1000	-
Groundnut	Tikka leaf spot	2-4kg	2.5-5.0Kg	750-1000	-
Cowpea, Moong/Urid	Powdery mildew	2.5kg	3.13Kg	750-1000	-
Pea	Rust	2.5kg	3.13Kg	750-1000	-
Sorghum	Grainsmut	2.4-3.2 g/kg seed	3-4g/Kg seed	1Lt/10kg seed	-
Chillies & Okra	Powdery mildew	2.5kg	3.13Kg	750-1000	-
Mango	Powdery mildew	2.5kg	3.13Kg	750-1000	-
Citrus	Powdery mildew	2.5kg	3.13Kg	750-1000	-
Sulphur80%WG					
Grapes	Powderymildew	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-
Cowpea, Guar, Pea	Powderymildew	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-
Cumin	Powderymildew	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	Powderymildew	1.50-2.00 kg	1.875-2.50 Kg	750-1000	-

Wheat	Powderymildew	2000	2500	500	24
Sulphur85%DP					
Grape	Powdery mildew	12.75-17kg	15-20kg	-	-
Groundnut	Tikkaleaf spot	12.75-17kg	15-20kg	-	-
Beans (Cowpea, moong, Urd)	Powdery mildew, Rust	12.75-17kg	15-20kg	-	-
Pea	Powdery mildew	12.75-17kg	15-20kg	-	-
Rubber	Powdery mildew	31.875 kg	37.50 kg	-	-
Cumin & Coriander	Powdery mildew	12.75-17kg	15-20kg	-	-
Tobacco (on ground)	Powdery mildew	85kg	100kg	-	-
Sorghum	Grain smut	2.55-3.40 g/kg of seed	3-4 g/kg of seed	-	-
Tebuconazole 2% DS					
Wheat	Loosesmut, Flag smut	0.2kg/10kg seed	10Lt/10kg seed		
Groundnut	Collarrot, Rootrot, Stemrot	0.2to 0.25kg/10kg seed	10 to 12.5Lt/10 kgseed		
Tebuconazole 5.36% FS					
Wheat	Loose smut	0.2	3.33/10kg of seed	-	-
Tebuconazole5.4% 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
Tebuconazole25.9%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	Anthracnose (pod blight)	0.1563	0.625	500	14
Black gram	Leaf spot, Anthracnose	187.5	750	500	17
Tebuconazole25% 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 (*Rhizoctonia solani*)	15	120	Sufficient to coat the seed uniformly	NA (Seed dresser)
Thifluzamide24%SC					
Rice (Paddy)	Sheath blight, *(Rhizoctonia solani)*	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
ThiophanateMethyl70%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
Thiophanatemethyl70%WG					
Bottle gourd	Anthracnose	750-1000	1070-1430	750-1000	1
Thiophanatemethyl 41.7% SC					
Paddy	Blast, Sheath rot, Grain Discoloration	500	1000	500	37
Groundnut	Tikka leaf spot	500	1000	500	27
Chilli	Fruit Rot/Antracnose	500	1000	500	10
Thiram 40% FS					
Maize	Seedling blight	9.6gm/10 kg seeds	24ml/10 kg seeds	100 ml	Seed dresser
Thiram75%WS					
Groundnut	Collarrot	37.5gm	50gm	1	7-10

Wheat	Flagsmut	18.8-22.5 gm	25-30gm	1	7-10
	Karnal bunt	18.8-22.5 gm	25-30gm	1	7-10
Barley	Leafstripe	18.8-22.5 gm	25-30gm	1	7-10
Maize	Seedling blight	18.8-22.5 gm	25-30gm	1	7-10
Sorghum	Loosesmut	18.8-22.5 gm	25-30gm	1	7-10
	Seedlingblight	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	Seedborn disease	18.8-22.5 gm	25-30gm	1	7-10
Triadimefon 25% WP					
Wheat	BuntofWheat	0.025%	0.500kg	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
Tricyclazole75%WP					
Paddy (Rice)	Blast	225-300 gm	300-400gm	500	30
Validamycin3%L					
Rice (Paddy)	Sheath Blight	60gm	2000gm	750	Theres houldb enoresi dues on grains andstra w ofpadd

					y14days beforethe harvest.
Zineb75%WP					
Jowar	Redleaf spot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Leafspot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Leafblight	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	Leafblight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Ragi (Bajra)	Blast	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Tobacco	Leafspot	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	
	Lateblight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Tomato	Early blight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Lateblight	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Greyleaf mould	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Chillies	Fruitrot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Leafspot	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	

	Anthracnose	1.125-1.5KG	1.5-2KG	750-1000 Lt	
	Leafspot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Cauliflower	Leafspot	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	Leafspot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Grapes	Downy mildew	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Guava	Fruitrot	1.125-1.5KG	1.5-2KG	750-1000 Lt	
Ziram80%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

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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, Turcicum leaf blight, Rust	0.26	1	500	52
Ametoctradin 27%+ Dimethomorph 20.27% w/w SC					
Grape	Downey mildew	420-525	800-1000ml	750	34
Cucumber	Downey mildew	420-525	800-1000ml	500	07
Potato	Late Blight	420-525	800-1000ml	500	32
Tomato	Late Blight	420-525	800-1000ml	500	03
Azoxystrobin 18.2% + Difenoconazole 11.4% w/w SC					
Chilli	Anthracnose & 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 /	500	5

			Litre water		
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,Stemphyliu m 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 14 % + Epoxiconazole 9 % SC					
Rice	Sheath blight	(105+67.5)	750	375	28
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 4.7% + Mancozeb 59.7% + Tebuconazole 5.6% WG					
Cucumber	Downy mildew, Powdery mildew, Anthracnose	1400	2000	500	10
Azoxystrobin 7.1% + Propiconazole 11.9% w/w SE					

Rice	Sheath Blight	37.5+62.5	500	500	43
Wheat	Yellow rust (*Puccinia striiformis* f.sp. *Tritici*)	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 (*Pyricularia oryaze)* & Sheath Blight (*Rhizoctonia solani)*	98.0 + 175.0 + 350.0	1750	500	40
Chilli	Anthracnose Leaf Spot, Die Back, Fruit rot, (*Colletotrichum capsici)* and Powdery	70.0 + 125.0 + 250.0	1250	500	10

	Mildew (*Leveillula taurica*)				
Black Gram	Leaf Spot (*Cercospora canescens)*& Powdery Mildew (*Erysiphe poligoni*)	70.0 + 125.0 + 250.0	1250	500	35
Azoxystrobin 1.3% + Tebuconazole 0.22% + Thiamethoxam 25.9% FS					
Okra	Damping off *(Rhizoctonia spp. & Pythium spp.)*	0.9+0.15+18.0	60	NA	NA
Azoxystrobin 2.5% + Thiophanate Methyl 11.25% + Thiamethoxam 25% FS					
Soybean	*Fusarium* root rot, *Phytophthora* root rot, *Rhizoctonia* seedling blight, *Pythium* seedling blight	38.75 g/10 kg seeds	100 ml/10 kg seeds	Not applicable	-
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
Boscalid25.2%+Pyraclostrobin12.8%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
Captan70%+ Hexaconazole5%WP					
Chillies	Fruitrot (Anthracnose)	375-750	500-1000	500	5

Potato	Earlyblight &Late blight	375-750	500-1000	500	21
Blackgram	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
Carbendazim12%+ Mancozeb63%WP					
Groundnut	Leafspot	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, Earlyleaf 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
Carboxin17.5%+ Thiram17.5%FF					
Wheat	Loose smut	8.75 to 10.5gm	25 to 30gm	100ml	Seed treatment
Carboxin37.5%+ Thiram37.5%WS					
Wheat	Loosesmut andother seedborne andearly	2.25gm/Kg seed	3.0gm/Kgseed	10 ml/kg (To make slurry)	Being seed

	soilborne diseases				treatment waiting not required
Soybean	Collarrot, Charcoal rotand other seedling diseases	2.25gm/Kg seed	3.0gm/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	Collarrot,Seedrot,Rootrot, Stemrot	2.25gm/Kg seed	3.0gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required
Pigeonpea	Seedrot, Rootrot, Stemrot, Fusarium wilt	3gm/Kg seed	4.0gm/Kg seed	10 ml/kg (To make slurry)	Being seed treatment waiting not required
Potato	Blackscurf	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 + Difenoconazole 4.0 w/w SC					
Tomato	Early blight, Late blight	440^ (400+40)	1000	500	7
Chilli	Powdery mildew,	440^ (400+40)	1000	500	7

	Anthracnose, Fruit rot				
^ 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
Cymoxanil8%+ Mancozeb64%WP					
Grapes	Downy mildew	1080-1440 gm	1500–2000gm	500-1000	10days
Potato	Lateblight	1080gm	1500gm	500-750	10days
Tomato	Lateblight	1080gm	1500gm	500-750	10days
Cucumber	Downy mildew	1080gm	1500gm	500-600	10days
Citrus	Gemmosis (Foot Rot) (*Phytophthora palmivora*)	180 g/100L of water + 18 g/l of water of linseed oil	250 g/100L of water + 25 g/l of water of linseed oil	10 l/tree;50 ml (linseed oil) tree	82 days
Difenoconazole 10 % + Mancozeb 50% WDG					
Paddy	Blast & Sheath Blight	62.5 + 312.5	625gm	500	33
Chilli	Powdery mildew, Die-Back&Fruit rot	62.5 + 312.5	625g 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
Famoxadone16.6%+ Cymoxanil22.1%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
Fenamidone4.44%+ Fosetyl-AL 66.7%WDG					
Grape	Downy mildew	88.8+ 1334 - 111.0+ 1667.5 gm	2000-2500gm	500-750 lt.	90days
Fenamidone10%+ Mancozeb50%WG					
Potato	Lateblight	125+625-150+750gm	1250-1500gm	500lt.	30
Grapes	Downymildew	150+750 gm	1500gm	500-750	85

Gherkin	Downymildew	150+750 gm	1500gm	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	750ltr.	32
Fluopyram17.7% 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 +Tebconazole100	500	500	5
Rice (Paddy)	False smut, Dirty panicle	Fluopyram110 +Tebconazole110	550 g/ha	500	22
Fluxapyroxad 75 g/l + Difenoconazole 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 250g/l + Pyraclostrobin 250g/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.
Iprodione25%+ Carbendazim25%WP					
Rice (Paddy)	Sheath blight,Blast	250gm	500gm	500lt.	30
Iprovalicarb 5.5% + Propineb 61.25% WP					
Potato	Late Blight	110g + 1225 g	2.0 Kg	500	26
Grapes	Downy Mildew	123.75 g + 1378.13 g	2.25 kg (0.3%)	750	55
Kasugamycin 5% + copper oxychloride 45% WP					
Grapes	Anthracnose, 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 -	500	500	22

		40			
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
MetalaxylM4%+ Mancozeb64%WP					
Grapes	Downy mildew	0.17% or 1700 gm	0.25% or 2500 gm	500-1000	8
Potato	Lateblight	0.17%or 1700 gm	0.25%or 2500gm	500-1000	24
Black pepper	*Phytophthora* footrot	0.17%or 1700gm	0.25%or2500gm	2 L/vine as folliar spray	Not less

				and 3 L/vine as soil drench	than 21 weeks
Mustard	Downy mildew, White rust	0.17%or 1700gm	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 M 3.9% + Mancozeb 64% WG					
Grapes	Downy Mildew	1697.5	2500	500	60
Potato	Early blight and Late blight	1697.5	2500	500	32
Metalaxyl8%+ Mancozeb64%WP					
Grapes	Downymildew	2000gor 0.4%	2500gor 0.5%	500lt.	Notless than7 weeks
Tobacco Nursery	Dampingoff	3600gor 0.072%	5000gor 0.1%	1000lt.	Notless than7 weeks
	Leafblight/ Black Shank (Soil drenchat sowingand sprayat30days aftersowing)	1440gor 0.14%	2000gor 0.2%	1000lt.	Notless than7 weeks
Potato	Lateblight	1800gm or0.18%	2500gmor 0.25%	1000lt.	Notless than7 weeks

Mustard	Whiterust and Alternaria blight	1800gm or0.18%	2500gmor 0.25%	1000lt.	Notless than8 weeks
BlackPepper	Phytophthorafootrot	1.8ga.i/vine or0.09%	2.5gm/vine or0.125%	2lt./vine (spraying) 5lt./vine (soil drenching)	Notless than21 weeks
Pearlmillet	Downy mildew	1440gm or0.28%	2000gmor 0.4%	500lt.	Notless than7 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
Blackgram	Leafspot 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	12.32+12.32-	80 – 100		

	disease	15.4+15.4			
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, (*Rhizoctonia solani*) False smut, (*Ustilaginoidea virens*) Dirty Panicle	200	1000	500	24
Wheat	Yellow Rust (*Puccinia striiformis sp. tritici*)	200	1000	500	52
Picoxystrobin 6.78% + Tricyclazole 20.33 %w/w SC					
Paddy (Rice)	Leaf Blast & Neck Blast	300	1000	500	29
Chilli	Anthracnose, Wet rot, Powdery mildew	300	1000	500	3
Prochloraz 34.8% + Propiconazole 7.8% w/w EC					
Rice	Grain discoloration (Fungal complex i.e *Curvularia* sp., *Sarocladium oryzae*, *Phoma* sp., *Microdochium* sp., *Nigrospora* sp., *Fusarium* sp., etc.)	400.0 + 90.0	1000	500	15

Groundnut	Early leaf spot (*Cercospora arachidicola*), Late leaf spot (*Phaeoisariopsis personata*) & Rust (*Puccinia arachidis*)	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 (*Rhizoctonia solani*), Wilt (*Fusarium* spp.)	0.18+ 0.045	3.0 ml/10 kg seeds	-	Seed dresser
Groundnut	Stem rot (*Sclerotium rolfsii*), Collar rot (*Aspergillus niger*), Root rot (*Rhizoctonia bataticola*)	0.18+ 0.045	3.0 ml/10 kg seeds	-	Seed dresser
Propiconazole 13.9% + Difenoconazole 13.9% EC					
Paddy	Sheath blight, dirty panicle	0.02% - 0.03%	(0.07-0.1%) 0.7-1.0ml/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
Pyraclostrobin 10% + Fipronil 5% SC					
Rice					53
Chilli					7
Pyraclostrobin 3.5% + Thiram 15% + Clothianidin 22.5% FS					
Groundnut	Collar rot, Stem rot	2.45+10.50+15.75 gms	70 ml	-	Seed Treatment
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 treatment, hence waiting period is not applicable
Tebuconazole 10%+Sulphur65%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(*Rhizoctonia spp*)	10g/100 kg tuber	20/100 kg seed tuber	Sufficient to coat the seeds uniformly	NA Seed dresser
Chickpea	Wilt (*Fusarium oxysporum*) Root rot (*Rhizoctonia* spp.)	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.

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भारत सरकार

Government of India

कृषि और किसान कल्याण मंत्रालय

Ministry of Agriculture & Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture & Farmers Welfare

वनस्पति संरक्षण, संगरोध एवं संग्रह निदेशालय

Directorate of Plant Protection, Quarantine & Storage

केंद्रीय कीटनाशी बोर्ड एवं पंजीकरण समिति

Central Insecticides Board & Registration Committee

एनएच IV, फरीदाबाद-121 001 (हरियाणा)

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

Major Uses of Pesticides

(Registered under the Insecticides Act, 1968)

(UPTO - 01/02/2023)

(Based on certificate issued)

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

HERBICIDES

APPROVED USES OF REGISTERED HERBICIDES

HERBICIDES

Herbicide name & approved Crops	Weed species	Dosage /ha		Dilution In Water (Litres)	Waiting period / PHI between last application & harvest (days)
		a.i. (gm/ Kg)	Formulation in (gm/ ml /Kg/ ltr)		
Ametryne 80% WDG					
Sugarcane	*Dactyloctenium aegyptium, Digitaria sanguinalis, Cynodon dactylon, Ageratum conyzoides, Trianthema monogyna, Parthenium hysterophorus*	2.0 kg	2.5 kg	500	311
Anilofos 30% EC					
Transplanted paddy	*Echinochloa crusgalli Echinochloa colonum Cyperus difformis, Cyperus iria, Eclipta alba Ischaemum rugosum Fimbristylis sp. Marsilea quadrifoliata*	0.3-0.45 kg	1-1.5 ltrs.	375-500	30
Anilofos 18% EC					
Transplanted Paddy	*Echinochloa crusgalli Echinochloa colonum Cyperus difformis, Cyperus iria, Eclipta alba Ischaemum rugosum Fimbristylis sp.*	0.30-0.45 kg	1.66-2.5 kg	500-600	-

Anilophos 2 % G					
Transplanted rice	*Echinochloa crusgalli* *Echinochloa colonum* *Ischaemum rugosum* *Cyperus iria,* *Cyperus difformis,* *Fimbristylis sp.*	0.4-0.5 Kg	20-25 Kg	-	30
Atrazine 50% WP					
Maize	*Trianthama monogyna* *Digera arvensis,* *Echinochloa spp* *Eleusine Spp.* *Xantheium strumarium* *Brachiaria sp,* *Digitaria sp,* *Amaranthus viridis,* *Cleome viscose,* *Polygonum spp.*	0.5-1.0 kg	1-2 kg	500-700	-
Sugarcane	*Protulaca oleracea,* *Digitaria spp.,* *Boerhaavia diffusa,* *Euphorbia spp.,* *Tribulus terrestris*	0.50-2.00 kg	1.00- 4.00 kg	500-700	-
Azimsulfuron 50% DF					
Rice (Transplanted)	*Enchinochloa colonum,* *E. crusgalli,* *Cyperus spp.,* *Fimbristylis miliacea,* *Ludwigia parviflora,* *Eclipta alba,* *Bergia capensis,* *Marsilea quadrifoliata,* *Ammania baccifera,* *Sphenoclea zeylanica*	35	70	300	59
Rice (Direct Seeded)	*Enchinochloa colonum,* *E. crusgalli,* *Cyperus spp.,* *Fimbristylis miliacea,* *Ludwigia parviflora,* *Eclipta alba,* *Bergia capensis,* *Marsilea quadrifoliata,* *Ammania baccifera,* *Sphenoclea zeylanica*	35	70	300	59

Bensulfuron Methyl 60% DF					
Transplanted Rice. Pre-em (3 DAT)	*Marsilea quadrifoliata* *Eclipta alba,* *Ammania baccifera* *Ludwigia parviflora* *Sphenoclea Zeylenica ,* *Monochoria vaginalis ,* *Alternanthera sessillis* *Cyperus iria ,* *Cyperus difformis ,* *Fimbristylis miliacea,* *Scirpus royeli*	60 gm	100 gm	300 ltrs	88 days
Transplated Rice (post-em 20 DAT)	*Ammania baccifera* *Cyperus differmis* *Cyperus iria* *Eclipta alba* *Fimbristylis miliacca* *Ludwigia parviflora* *Marsilea quadrifoliata* *Monochoria vaginalis* *Alternanthera sessillis* *Scirpus royeli* *Sphenoclea zeylenica*	60gm	100 gm	300 ltrs.	71
Bentazone 480 g/l SL					
Soybean (Early POE: 2-3 leaf stage of weeds)	*Cyperus rotundus* *Achalipha indica* *Commelina bengalansis* *Echinocloa colanum* *Echinocloa crusgalli*	960	2000	500	62
Transplanted rice (Early POE: 2-3 leaf stage of weeds)	*Cyperus rotundus* *Cyperus diformis* *Ludwigia sps.* *Eclipla alba* *Echinocloa colanum* *Echinocloa crusgali*	960	2000	500	71
Bispyribac Sodium 10% SC					
Rice (Nursary) (10-12 DAS)	*Echinochloa crusgalli* *Echinochloa colonum*	20-25 gm	200 ml.	300 ltrs.	-
Rice (Transplanted) (10-14 DAP)	*Ischaemum rugosum* *Cyperus differmis,* *Cyperus iria*	20-25 gm	200-250 ml	300 ltrs.	78

Rice (Direct seeded) (10-15 DAS)	*Fimbristylis miliacea, Eclipta alba, Ludwigia parviflora, Monochoria vaginalis, Alternantheraphiloxeroides Sphenoclcea zeylenica*	20-25 gm	200-250 ml	300 ltrs.	78
Butachlor 50% EC					
Paddy (transplanted)	*Cyperus difformis Cyperus iria Echinochloa crusgalli, Echinochloa colonum, Eleusine indica, Eclipta alba, Fimbristylis miliacea, Ludwigia parviflora, Sphenoclea zeylanica*	1.25-2.00kg	2.5-4 ltrs	250-500	90-120
Butachlor 5% GR					
Transplanted Rice	*Echinochloa Crusagalli Digitaria sanguinalis Setaria spp., Commelina benghalensis, Fimbristylis milliacea, Cyperus iria, Eleusine indica, Panicum spp., Echinochloa Colonum, Eclipta alba, Cyperus Defformis, ludwigia paviflora.*	1.25 -1.87 Kg	25.00 – 37.50 Kg	-	90 – 105
Butachlor 50 % EW					
Transplanted Rice	*Echinochloa colonum Echinochloa crusgalli, Cyperus difformis Cyperus iria Eclipta alba, Fimbristylis miliacea Ludwigia parviflora, Sphenoclea zeylanica Monochoria vaginalis*	1.25-1.5 Kg	2.5-3.0	2.50-500	-
Carfentrazone ethyl 40% DF					

Wheat (25-35 DAS)	*Chenopodium album,* *Melilotus Indica,* *Melilotus alba,* *Medicago denticulata,* *Lathyrus aphaca,* *Analgalis arvensis,* *Vicia sativa,* *Circium arvense,* *Rumex sp,* *Malwa sp.*	20gm	50 gm.	400	80
Direct seeded Rice (10-15 DAS)	*Ludwigia parviflora* *Digera arevensis* *Phyllanthus niruri* *Spilanthes sp,* *Eclipta alba* *Cyperus sp.*	25	62.50	300	102
Chlorimuron Ethyl 25% WP + Surfactant					
Soybean (3-15DAS)	*Cyperus rotundus* *Commelina benghalensis* *Celosia argentea* *Digera arvensis* *Cucumis trigonus* *Cyprus iria,* *Parthenium hysterophorus,* *Acalypha indica,* *Phyllanthus niruri,* *Trianthema portulacashurm,* *Caesulia auxillaris*	9 gm	36 gm.	300 ltrs. + non ionic surfactant 0.2 % (Iso-octyl phenoxyl-poloxethanol 12.5 %)	45
Rice (transplanted) (5-10 DAT)	*Echinochloa crusgalli,* *Eclipta alba,* *Commelina benghalensis,* *Chenopodium album,* *Cyperus rotundus,* *Echinochloa colonum*	6gm	24 gm.	500-600	60
Cinmethylin 10% EC					
Transplanted Rice	*Cyperus iria* *Fimbristylis milacea* *Monochoria vaginalis* *Commelina Benghalensis* *Echinocloa crusgalli* *Marsilea minuta*	75-100 gm	0.75-1.0 ltrs.	500-700	110

Clodinafop- propargyl 15%WP					
Wheat	*Phalaris minor (Canary grass)*	60gm	400 gm.	375-400	110
Clodinafop- propargyl 15% w/w DF					
Wheat	*Phalaris minor (Canary grass)*	60 gm	400	500	70
Clethodim 25% EC					
Soybean	*Grasses* (*Echinocloa spp, Digitaria spp* and *Cynadon dactylon)*	120-180	500-700 ml	500	62
Clomazone 50%EC					
Soybean	*Digiteria sp.* *Echinochloa sp.* *Parthenium hysterophorus* *Commelina sp.*	0.75-1.00Kg	1.5-2.0 Ltrs.	500-600	90
Transplanted Rice	*Echinochloa crusgalli* *Echinochloa colonum* *Cyperus difformis* *Cyperus iria,* *Ludwigia parviflora* *,Eclipta alba*	0.4 – 0.5kg	0.8-1.0 ltr	500-750	90
Sugarcane	*Enchinochloa colonum* *Brachiaria repens* *Dactylotenium aegyptium* *Trianthema portulacastrum*	0.75-1.00 kg a.i./ha	1.5-2.0 ltr/ha	500 Lit	296
Cyhalofop Butyl 10% EC					
Rice (Directed seeded)	*(Echinochloa spp.)* *Barnyard grass*	75-80 gm	0.75-0.80ltr	500-600	90
2,4-D Dimethyl Amine salt 58% SL					
Maize	*Trianthema monogyna,* *Amaranthus sp.,* *Tribulus terristeris,* *Boerhaavia diffusa,* *Euphorbia hirta,* *Portulaca oleracea,*	0.5 kg	0.86	400-500	50-60

	Cyperus sp.				
Wheat	*Chenopodium album,* *Fumaria parviflora,* *Melillotus alba,* *Vicia sative,* *Asphodelus tenuifolius,* *Convolvulus arvensi,*	0.5-0.75 kg	0.86-1.29	500-600	-
Sorghum	*Cyperus iria, Digera arvensis,* *Convolvulus arvensis,* *Trianthema sp.,* *Tridax procumbens,* *Euphorbia hirta,* *Phyllanthus niruri.*	1.8 kg	3.1	500-600	-
Potato	*Chenopodium album,* *Asphodelus tenuifolius,* *Anagalis arvensis,* *Convolvulus arvensis,* *Cyperus iria,* *Portulaca oleracea.*	500.30 kg	3.44	400	-
Sugarcane	*Cyperus iria* *Digitaria sp.* *Dactylactenium aegyptium* *Digera arvensis* *Portulaca oleracea* *Commelina benghalensis* *Convolvulus arvensis*	3.5	6.3	500	-
Aquatic Weeds Non crop area	*Eichhornia crassipes.* *Parthenium hysterophorus,* *Cyperus rotundus*	0.5-1.0 kg 500.30 kg 2.5 kg	0.86-1.72 4.56 4.30	600-700 300-400 300-400	15-20 15-20 -
2,4-D Sodium salt Technical **(having 2,4-D acid 80 % w/w)** **(Earlier Registered as 80%WP**)					
Citrus	*Euphorbia spp.* *Convolvulus arvensis* *Coronopus didymus* *Amaranthus viridis* *Oxalis corniculata* *Tribulus terrestris* *Fumaria parviflora* *Sonchus arvensis*	1.00-2.5 kg	1.25-3.2 kg	600	>6 months
Grapes	*Convolvulus spp.* *Tridax procumbens*	2.0	2.5	500	> 90 days
	Amaranthus viridis,	500.30 Kg.	1.25	500	120(Pre-em)

Maize	*Trianthema portulacastrum* *Phyllanthus niruri.,* *Euphobia geniculata,* *Amaranthus spinosus.* *Cleome chelidonii,* *Lagasca mollis*				90(post-em)
Sugarcane	*Boerhaavia diffusa* *Chenopodium album* *Tribulus terristris* *Portulaca oleracea* *Xanthium spp.* *Convolvulus arvensis* *Amaranthus spinosus* *Digera arvensis* *Celosia argentina.*	2.0-2.6	2.5-3.25	600-900	300
Wheat	*Leucas aspera,* *Chenopodium album,* *Vicia sativa,* *Argemone maxicana,* *Fimbristylis miliacea,* *Anagalis arvensis,* *Amaranthus spinosus.*	0.5-0.84 kg.	0.625-1.0	500	90
Aquatic Weeds	*Boerhaavia hispada,* *Eichhornia crassipes.*	1.5 kg	1.85.	600-1000	-
Non crop land	*Parthenium hysterophorus,* *Cyperus rotundus,* *Solanum elaeagnifolium.*	2.5-6.0 kg. 4-8 Kg 1.8 kg	3.2-7.5 5-10 2.25	600-1000 500-600 500-600	- - -
2,4-D Ethyl Ester 38 % EC (having 2,4-D acid 34 % w/w)					
Maize	*Trianthema monogyna,* *Amaranthus sp.,* *Portulaca oleracea.,* *Tribulus terristris,* *Boerhaavia diffusa,* *Euphorbia hirta,* *Cyperus sp.*	0.9 kg	2.65 ltr	400-450	50-60
Sorghum	*Cyperus iria,* *Striga sp.* *Digera arvensis,* *Convolvulus arvensis,* *Trianthema sp.,* *Tridax procumbens,* *Euphorbia hirta,* *Phyllanthus niruri*	500.30 kg	2.94	425	-

Transplanted Paddy	*Echinochloa colonum, Echinochloa crusgalli*	0.85 kg	2.5	400	-
Wheat	*Chenopodium album, Asphodelus tenuifolius, Fumaria parviflora, Melilotus alba, Spergula arvensis*	0.45-0.75 kg	1.32-2.2	450-500	-
Sugarcane	*Cyperus iria, Digitaria sp., Dactyloctenium aegyptium, Digera arevensis, Portuluca oleeracea, Commelina benghalensis, amaranthus sp., Convolvulus arvensis*	1.2 to 1.8	3.53- 5.29	500	300-330
Aquatic Weeds	*Eichhornia crassipes*	2.5 kg	7.5	700-1000	-
2,4-D Ethyl Ester 20 % WP					
Maize	*Trianthema sp.* *Euphorbia hirta* *Cyperus sp.*	0.9	5.0	625	-
Sorghum	*Convolvullas arvensis*				
Wheat	*Chenopodium slbum* *Malilots alba*				
Paddy	*Echinochloa colonum* *Echinochloa crusgalli*				
2,4-D Ethyl Ester 4.5 % GR (having 2,4-D acid 4 % w/w)					
Transplanted Rice	*Echinochloa Coloum* *E. Crusgalli* *Panium ischaemum* *Cynodon dactylon (germinating)* *Cyperus rotundus (germinating)* *Cyperus iria* *C. difformis* *Ludwigia parviflora* *Monochoria Vaginalis* *Marsilea quadrifoliata* *Cyanotis cucutata* *Eclipta alba* *Ammania baccifera*	500.30 kg	25 kg	-	-
Diclofop Methyl 28% EC					

Wheat	*Avena fatua,* *Phalaris minor*	0.7-1.0 kg	2.5-3.5 ltr	500	90
Diuron 80% WP					
Cotton	*Amaranthus spp,* *Chenopodium album,* *Convolvulas arvensis* *Setaria glauca,* *Digitaria sp,* *Portulaca oleracea,* *Xanthium strumerium,* *Anagallis arvensis,* *Asphodelus temifolius,* *Euphorbia sp,* *Visia sativa* *Paspalum conjugatum,*	0.75-1.5 kg	1-2.2Kg.	625	-
Banana	*Cyperus iria,* *Commelina benghalensis,* *Digitaria sp.,* *Amaranthus spp,* *Dactyloctenium,* *Chloris barbata,* *Eragrostis zeylenica*	1.60 kg	2 kg.	625	-
Rubber	*Grasses & Non grasses*	1.6-3.2 kg	2-4kg.	625	-
Maize	*Cyperus iria,* *Echinochloa spp,* *Digitaria spp,* *Chenopodium album,* *Eleusine sp,* *Amaranthus sp,* *Phyllanthus niruri*	0.8 kg	500.30 kg.	600	-
Citrus (sweet orange)	*Cyperus iria,* *Tribulus Terristris,* *Digera arvensis,* *Commelina nudiflora,* *Cocumis trigonus.*	2-4.0kg	2.5-5.0kg	600	-
Sugarcane	*Cyperus iria,* *Portulaca racea,* *Echinochloa rusgalli,* *Cynotis spp,* *Amaranthus spp,* *Convonvulus Spp.,* *Digitaria spp.*	1.6-3.2kg	2.0-4.0 kg.	600	-
Grapes	*Cleome viscose,* *Chenopodium album,* *Cyperus iria,* *Euphorbia hirta,* *Alternanthera echinata,*	1.6kg	2.0 kg.	625	-

	Amaranthus spp, *Argemone maxicana,* *Ipomoea spp,* *Xanthium strumerium,* *Fumeria parviflora,* *Asphodelus tenuifolius,* *Medicago denticulata,* *Eleusine aegyptia.*				
Diclosulam 84% WDG					
Soybean	*Cyperus spp,* *Commilena benghalensis,* *Euphorbia geniculata,* *Digera arvensis,* *Acylipha spp,* *Echinochlo colona*	22-26gm	26.2-30.9 Time of application 0-3 DAS	500	60
Groundnut	*Amaranlhus viridis,* *Parthenium hysterophorus,* *Trianthema sp.,* *Euphorbia enticulat,* *Cyperus spp.,* *Echinochloa colona*	22-26	26.2-30.9	-	77
Ethoxysulfuron 15% WDG					
Transplanted Rice.	*Fimbristylis miliacea* *Cyperus iria,* *Cyperus difformis,* *Scirpus sp.,* *Eclypta alba,* *Marsilea quadrifoliata,* *Ammania baccifera,* *Monochoria vaginallis*	12.5-15gm	83.3-100gm	500	110
Fenoxaprop-p-ethyl 9% w/w DF					
Transplanted Paddy	*Echinocloa crusgalli (barnyard grass),* *Echinocloa colona (jungle rice)*	56.25	625	500	65
Fenoxaprop-p-ethyl 9.3% w/w EC (9% w/v)					

Soybean	*Echinochloa colonum, Echinochloa crusgalli, Digitaria sp, Eleusine indica, Setaria sp, Brachiaria sp.*	100gm.	1111 ml. (15-20 DAS)	250-300	100
Rice (enticulate)	*Echinochloa crusgalli, Echinochloa colona*	56.25 gm	625 ml. (10-15 DAT)	300-375	70
Blackgram	*Echinochloa crusgalli, Echinochloa colona Digitaria sp. Dactylocteneum Aegyptium*	56.25-67.5 g	625-750ml. (15-20 DAS)	375-500	43
Cotton	*Echinochloa sp. Eluesine indica Dactylocteneum Aegyptium Eragrostit minor*	67.5 g	750ml. (20 -25 DAS)	375-500	87
Onion	*Echinochloa colonum Dactyloctenium aegyptium*	78.75	875	375	10
Groundnut	*Echinochloa sp.*	78.75	875	375	89
Fenoxaprop-p-ethyl 10% EC					
Wheat	*Phalaris minor*	100-120gm	1.0-1.20 kg	250-300	110
Fenoxaprop-p-ethyl 6.7% w/w EC					
Rice (Transplanted & Direct Seeded)	*Echinochloa sp.*	56.6-60.38g	812.5-875	375-500	61
Fluazifop-p-butyl 13.4% EC					
Soybean	*Echinochloa colonum, Echinolchloa crusgalli, Eleusine indica, Cyanodon dactylon, Dactyloctenium Aegyptium, Digitaria sp., Setaria sp.*	125-250 g	1000-2000	500	90

Cotton	*Echinochloa colonum, Digiteria longiflora, Eleusine indica, Dactylactenium aegypticum, Bracharia reptans, Dinebra Arabica spp.*				
Groundnut	*Echinochloa colonum, Digiteria longiflora, Eleusine indica, Dactylactenium aegypticum, Bracharia reptans, Chloris barbata, Aeluropus villosus, Indigofera glandulosa*				
Flucetosulfuron 10% WG					
Rice (Transplanted)	*Echinochloa colonum* *Echinolchloa crusgalli* *Digitaria sanguinalis* *Paspalum discichum* *Paspalum scrobitulatum* *Leersia hexandra* *Panicum repens* *Setaria glauca* *Dinebra retroflexa* *Cyprus difformis* *Cyprus iria* *Fimbristylis miliaceae* *Alternanthera philoxeroides* *Alternanthera enticul* *Marsilea quadrifolia* *Ammania baccifera* *Eclipta alba* *Eclipta prostrate* *Monochoria vaginalis* *Lindernia ciliate* *Ludwigia parviflora* *Sphenoclea zeylanica* *Commelina diffusa* *Cyanotis axillaris*	25	250	500	90
Fluchloralin 45% EC					

Cotton	*Acanthospermum hispidum,* *Cleome enticu,* *Datura sp.* *Trianthema monogyna* *Tridax procumbens,* *Cynodon dactylon (germinating)* *Amaranthus spp.,* *Portulaca spp,* *Achyranthus aspera,* *Euphorbia hirta,* *Cenchrus cathorticus,* *Digitaria sanguinalis,* *Eleusine sp,* *Panicum sp,* *Lagasca mollis,* *Gynandropsis pentaphylla,* *Achalypha indica*	0.9-1.2kg	2.0-2.68 ltrs.	500-800	180
Soybean	*Eragrostis sp.,* *Boerhaavia hispada,* *Cyperus compestris,*	1.0-1.5kg.	2.22-3.33	500-800	120-150
Flufenacet 60% DF					
Paddy (Transplanted)	*Echinochloa crusgalli* *Echinochloa colonum* *Cyperus iria*	120 gm	200 gm	500	90-110
Flumioxazin 50% SC					
Soybean	*Commelina benghalensis,* *Digera arvensis,* *Euphorbia spp.,* *Phyllannthus niruri,* *Echinochloa crusgalli*	125 g.a.i/ha	250ml/ha	500	110
Wheat	*Runnex spp.,* *Medicago denticulate,* *Coronopus didymus,* *Chenopodium album,* *Phalaris minor,* *Avena fatua*	125 g.a.i/ha	250 ml/ha	500	137
Fluroxypyr meptyl 48% W/v (45.5% w/w) EC					
Onion	*Amaranthus viridis* *Anagalis arvensis* *Chenopodium album* *Euphorbia spp.* *Parthenium hysterophorus* *Physalis minima* *Trianthema spp.*	324 to 360	675 to 750 ml/ha		71 days

Fluthiacet Methyl 10.3% EC					
Soybean	*Commelina sp, Digeru arvensis, Acalypha indica, Amaranlhus viridis.*	13.6	125	500	73
Glufosinate Ammonium 13.5% SL (15% w/v)					
Tea	*Panicum repens, Borreria hispida, Imperata cylindrical, Digitaria sanguinalis, Commelina benghalensis, Ageratum conyzoides, Eleusine indica, Paspalum conjugatum*	375-500 gm	2.5-3.3	375-500	15
Cotton	*Echinochloa sp. Cynodon dactylon Cyperus rotundus Digitaria marginata Dactylocteneum aegyptium*	375-450 gm	2.5-3.0	500	96
Glyphosate 20.2% SL IPA salt					
Non Crop area	*Phyllanthus niruri, Ageratum conyzoides, Parthenium hysterophorus, Sorghum halepense, Amaranthus spinosus, Alternanthera enticul, Cynodon dactylon, Cyperus rotundus, Echinochloa colonum, Trianthema portalucastrum*	0.82-1.23 kg	4.1-6.15	400-500	N/A
Glyphosate Ammonium salt 20 % SL					
Non Crop area	*Cynodon dactylon Commelina benghalensis Panicum spp. Dactyloctenium aegyptium Eragrostis major Poa anua Cyperus rotundus Parthenium hysterophorous Acalypha indica*	4.52-6.79g a.i./litre	20-30ml/lit	300-600	-

	Digeria arvensis *Phyllanthus niruri* *Euphorbia enticulat* *Corchorus actangularis* *Saccharum spontenium* *Eleusine indica* *Imperata cylindrical* *Ageratum conzoides*				
Glyphosate 41% SL IPA Salt					
Tea	*Arundinella bengalensis* *Axonopus compressus* *Cynodon dactylon* *Imperata cylindrical* *Kalm grass* *Paspalum scrobiculatum* *Polygonum perfoliatum*	0.820-1.230kg.	2.0-3.0	450	21
Non-cropped area	Soghum helepense and other dicot & monocot weeds in general	0.820-1.230kg.	2.0-3.0	500	-
Glyphosate 54% SL (IPA Salt)					
Non Crop Area	*Ageratum conyzoides* *Alternenthera enticul* *Commilina spp* *Cyperus spp* *Echinochloa sp.* *Eclipta alba* *Iscaemum rogosum* *Setaria spp*	1.8 kg	3.33 ltrs.	400-500	-
Glyphosate Ammonium Salt 5% SL					
Tea	*Ageratum conyzoides* *Biden pilosa* *Boreria latifolia* *Cynodon dactylon* *Cyperus rotundus* *Digitaria sanguinalis* *Euphorbia spp.* *Imperata cylendrica* *Paspalum conjugatum*	1.5 kg.	30 ltrs.	500	7 days

Non Crop area	*Cynodon dactylon* *Cyprus rotundus* *Digera arvensis* *Digitaria sanguinalis* *Eragrostis minor* *Euphorbia spp.* *Parthenium hysterophorus* *Tribulus terrestris* *Xantrhium stremerium*	2 kg.	40 ltrs.	500	-
Glyphosate 71% SG (Ammonium Salt)					
Tea & Non Crop area	*Acalypha indica* *Ageratum conyzoides* *Cychorium intybus Digera arvensis* *Cynondon dactylon* *Cyperus rotunedus* *Digitaria sanguinalis* *Eragrostis spp.* *Ipomea digitarea* *Paspalum conjugatum* *Sida aculata*	2.13 kg	3.0 kg.	500	7
Halosulfuron Methyl 75% WG					
Sugarcane	*Cyperus rotundus*	60-67.5	80-90	375	294
Maize	*Cyperus rotundus* *Cyperus iria*	67.5	90	375	45
Bottle gourd	*Cyperus rotundus* *Cyperus iria*	67.5	90	375	46
Haloxyfop R Methyl 10.5% w/w EC					
Soybean	*Brachiaria sp.* *Digitaria sanguinalis* *Dinebra enticu* *Echinochloa sp.* *Eleusine indica* *Eragrostis sp.* *Pnicum isochmi*	108-135	1000-1250	500	60
Imazethapyr 10% SL					

Soybean	*Cyperus difformis* *Echinochloa colonum* *E. crusgalli* *Euphorbia hirta* *Croton sperrsifeorus,* *Digera arvensis,* *Commelina* *Benghalensis*	100 gm	1.0 Ltr.	500-600	75
Groundnut	*Cyperus difformis* *Commelina* *benghalensis,* *Trianthema* *portulacasturm,* *Eragrostis pilosa*	100-150 gm	1.0-1.5 ltrs.	500-700	90
Imazethapyr 10% SL + Surfactant					
Soybean (1-2 Leaf stage of weeds or 7-14 days after sowing)	*Echinochloa colonum* *Brachiaria mutica,* *Euphorbia hirta* *Commelina benghalensis* *Dinebra enticu,* *Digitaria spp.,*	75-100gm+ MSO adjuvant @ 2ml/l of water	750-1000 ml+ MSO adjuvant @ 2ml/l of water	375	72
Groundnut (1-2 Leaf stage of weeds or 7-14 days after sowing)	*Echinochloa colonum* *Euphorbia hirta* *Commelina benghalensis* *Digera arvensis,* *Amaranthus viridis,* *Physalis minima.*	100-150 gm+ MSO adjuvant @ 2ml/l of water	1000-1500 ml+ MSO adjuvant @ 2ml/l of water	375	102
Black gram	*Brachiaria eruciformis* *Amaranthus viridis* *Euphorbia hirta* *Commelina benghalensis*	75 ga.i.lha+ MSO adjuvant @2 ml/litre of water	750 ml+MSO adjuvant @ 2ml/ha of water.	375	56
Green gram	*Amaranthus viridis* *Trianthema portulacastrum* *Euphorbia hirta*	75 ga.i.lha+ MSO adjuvant @2 ml/litre of water	750 ml+MSO adjuvant @ 2ml/ha of water.	375	46
Red gram	*Digitaria sanguinalis* *Dinemra relroflexa*	75 ga.i.lha+ MSO adjuvant @2 ml/litre of water	750 ml+MSO adjuvant @ 2ml/ha of water.	375	125

Imazethapyr 70% WG + Surfactant					
Soybean (2-3 leaf stage of weeds)	*Cyperus routandus* *Echinochloa spp.* *Dinebra enticu* *Digera spp.,* *Brachiaria mutica,* *Commelina benghalensis* *Commelina communis* *Euphorbia enticulat* *Cyanotis axiallaris*	70 g/ha + Surfactant (Cyspread) @ 1.5ml/Litre + Ammonium Sulphate @ 2 g/lit of Water	100 g/ha + Surfactant (Cyspread) @ 1.5ml/Litre+ Ammonium Sulphate @ 2 g/lit of Water	500	56
Isoproturon 50% WP					
Wheat	*Phalaris minor* *Avena fatua* *Poa annua*	1.0kg	2.0	750	-
Isoproturon 75% WP					
Wheat	*Phalaris minor* *Avena fatua* *Poa annua*	1.0kg	1.33 kg.	750	60 days
MCPA, Amine salt 40% WSC					
Transplanted Rice	*Cyperus rotundus* *Impmoea reptans* *Ammania baccifera* *Lippia nodiflora* *Alternanthera sp.* *Ludwigia parviflora* *Marsilea quadrifoliata*	0.8-2.0 kg	2-5	400-600	
Wheat	*Chenopodium album,* *Asphodelus tenuifolius* *Fumaria parviflora* *Carthamus oxyacantha* *Launea sp.,* *Pluchia lanceolata,* *Melilotus indica,* *Vicia enticu,* *Lathyrus aphaca,* *Medicago enticulate,* *M. lupulina,* *Spergula arvensis,* *Argemone maxicana,* *Phyllathus niruri.*	1.0 kg	2.5	300-600	

Metamifop 10% EC					
Direct seeded Rice	*Barnyard grass (Echinocloa spp), Sacchiolepis Dactyloctenium, Digiteria, panicum*	100 g.a.i	1000 ml	350	87
Metamitron 70% SC					
Sugarbeet	**<u>Sedges & Grasses</u>** *Cynodon dactylon* *Cyperus rotundus* *Dactyloctenium aegyptium* **<u>Broad Leaves</u>** *Convolvulus arvensis* *Chenopodium album* *Parthenium hysterophorus* *Digera arvensis*	a) 2-3 leaf stage of weed – 0.7 kg a.i/ha, b) 4-6 leaf stage of weed – 1.4 kg a.i/ha, c) 8-10 leaf stage of weed – 1.4 kg a.i/ha	a)2-3 leaf stage of weed – 1kg/ha, b) 4-6 leaf stage of weed – 2 kg/ha, c) 8-10 leaf stage of weed – 2 kg/ha	500	90
Methabenzthiazuron 70% WP					
Wheat (PE –2DAS)	*Phalaris minor, Avena fatua, Avena ludoviciana, Poa annua,*	1.05-1.4kg	1.5-2.0 kg.	700-1000	100
Wheat (Post –EM 30 DAS)	*Polypogom monspliensis, Anagallis arvensis, Chenopodium album*	1.05-1.75kg	2.0-2.5 kg.	700-1000	100
Wheat (Early POE.16-18 DAS)	*Phalaris minor, Avena fatua, Avena ludoviciana, Chenopodium album*	0.7-0.87 kg	1.0-1.25 kg.	700-1000	100
Metolachlor 50% EC					
Soybean	*Echinochloa colonum* *Eleusine indica* *Digitaria sp.* *Dactyloctonium aegyptium* *Panicum sp.* *Cyperus sp.* *Amaranthus viridis*	1.0 kg	2.0 ltrs.	600-750	-

Metribuzin 70% WP					
Soybean	*Digitaria spp.* *Cyperus esculentus* *Cyperus campestiris* *Borreria spp.* *Eragrostis spp.*	0.35-0.525 kg	0.5-0.75kg.	750-1000	30
Wheat	*Phalaris minor* *Chenopodium album* *Melilotus spp.*	Medium soil-0.175kg Heavy soil - 0.21kg	0.25 kg 0.30 kg.	500-750	120
Sugarcane	*Cyperus rotundus, Cynodon dactylon, Astodelus fistulosis, Chenopodium album, Convolvulus arvensis, Portulaca oleracea, Anabalis servensis, C.intybus, Echinochloa colonum, Dactyloctenium aegyptium, Parthenium hysterophorus, Commelina spp.*	Post-emergence, 25-30 DAP Or Pre-emergence At first workable spray condition or 3-5 DAP	1.05-1.4 1.05-2	1.5-2 1.5-3	60
Potato	*Chenopodium album, Trianthema monogyna, Parthenium hysterophorus, Funaria parviflora, Melilotus spp., Phalaris minor*	Pre-emergence 3-4 DAP or Post-emergence between emergence and time when the first potato plants have reached height of 5 cms.	0.525	0.750	30
Tomato	*Trianthema portacastrum, Dactylectonium aegypticum, Gynandropsis pentaphylla, Amaranthus viridis, Portulaca oleveae, Digera arvensis, Euphorbia frustrate,*	Pre-planting a week before transplanting Or	0.525	0.760	30

	Echinochloa colonum, conyzoideae, Eleusine indica, S.glauca, Comelina bengalensis	Port planting 15 DAT			
Metsulfuron Methyl 20% WP					
Wheat	*Chenopodium album, Melilotus indica, Lathyrus aphaca, Anagallis arvensis, Vicia sativa, Cirsium arvense.*	4 gm	20 gm	500-600 + Surfactant (Iso-Octyl Phenoxyl-Poloxethanol 12.5%)@ 500 ml/ha	80
Rice (transplanted)	*Cyperus rotundus, Spheanochlea spp., Fimbristylis sp. Ludwigia parviflora Marsilea quadrifoliata*	4 gm.	20 gm.	500-600	60
Sugarcane	*Cyperus esculentus, Amaranthus viridis, Portulaca oleracea, Parthenium hysterophorus, Trianthema sp., Cleome viscosa, Solanum sp., Commelina benghalensis, Euphorbia sp., Digeria sp.*	6	30	500-600 (Add non - ionic surfactant Iso-octyl-phenoxyl - poloxethanol 12.5% @ 2ml per liter of spray volume (0.2%)	346
Metsulfuron Methyl 20% WG					
Wheat	*Chenopodium album Melilotus indioca Melilotus alba Lathyrus aphaca Anagalis arvensis Vicia sativa Rumex denticulate Convolvulus arvensis Meedicago denticulate*	4 gm.	20 gm.	500-600 + Surfactant (Iso-Octyl Phenoxyl-Poloxethanol 12.5%) @0.2%	76

Transplanted Rice	*Monochoria vaginalis* *Ludwigia parviflora* *Ludwigia adscendens* *Marselea quadrifoliata* *Eclipta alba* *Oxalis minima* *Dapatorium juncecum* *Commelina benghalensis* *Ammania baccifera* *Sphenoclea zeylanica* *Caesulia axillaries.*	4 gm	20 gm.	500-600 + Surfactant (Iso-Octyl Phenoxyl-Poloxethanol 12.5%) @0.2%	71
Sugarcane	*Amaranthus viridis* *Ipomeas pp.* *Euphorbia hirta* *Phyllanthus niruri* *Cleome viscose* *Commelina benghalensis* *Trianthema sp.* *Portulaca oleraceae*	6	30g + Non-ionic surfactant @ 2 ml/l of water	500	346
Orthosulfamuron 50% WG					
Transplanted Rice (Paddy)	*Echinocloa spp.* (Barnyard grass) *Cyperus spp.* (Nut grass) *Scirpus spp*. *Ludwigia parviflora* (water crest) *Fimbristylis spp.* (Hoora grass) *Rotala spp.*	60-75	150 3 DAT	500	65
Oxadiargyl 80% WP					
Transplanted Rice	*Echinochloa crusgalli* *E. Colonum,* *Cyperus iria,* *C. difformis,* *Eclipta alba,* *Ludwigia quadrifoliata*	100	125	500	97
Sunflower	*Echinochloa colonum* *Dactyloctenium aegyptium*	240	300	500	81

Oxadiargyl 6% EC					
Transplanted Rice	*Echinochloa crusgalli Echinochloa colonum,*	100gm	1.66 ltrs	500	97
Cumin	*Cyperus iria, cyperus difformis, Eclipta alba Ludwigia quadrifoliata Chenopodium album Remex sp., Melilotus indica, Asphodelus tenuifolius*	60-75gm	1.0-1.25 ltrs.	500	87
Mustard	*Chenopodium album, Melilotus sp*	90	1500	500	35
Oxadiazon 25% EC					
Transplanted Rice	*Echinochloa crusgalli E. colonum Cyperus iria C. difformis Marsilea quadrifoliata, Eclipta alba, Ludwigia sp.*	0.5kg	2.0 ltrs.	500	-
Oxyfluorfen 0.35% GR					
Rice (Direct sown puddled or Transplanted)	*Echinochloa sp. Cyperus difformis Cyperus iria Eclipta alba Ludwigia parviflora Fimbristylis miliacia, Marsilea spp*	100-150 gm	30-40 kg.	-	-
Oxyfluorfen 20% DF					
Onion	*Echinochloa spp., Cyperus spp., Chenopodium album Amaranthus viridis*	150-200 gm	750-1000 gm	500	91
Oxyfluorfen 23.5% EC					

Rice (Direct sown as pre-emergence)	*Echinochloa sp.* *Cyperus iria,* *Eclipta alba,*	150-240 gm	650-1000	500	-
Tea	*Digiteria,* *Imperata,* *Paspalum,* *Borreria hispida,*	150-250 gm	650-1000	500-750	15 days
Onion	*Chenopodium album,* *Amaranthus viridis,*	100-200 gm	425-850	500-750	-
Potato	*Chenopodium,* *Coronpus, Trianthema,* *Cyperus, Heliotropium*	100-200 gm	425-850	500-750	-
Groundnut	*Echinochloa colonum* *Digitaria arginata*	100-200 gm	425-850	500-750	-
Mentha	*Echinochloa colona,* *Cyperus spp.,* *Solanum nigrum,* *Amaranthus viridis,* *Sphenochlea sp.,* *Anagallis arvensis,* *Chenopodium album,* *Commelina benghalensis,* *Digitaria sanguinalis,* *Eclipta alba,* *Euphobia spp.,* *Ludwigia parviflora,* *Portulaca spp.*	206	904.3	500	10
Pendimethalin 30% EC					
Wheat	*Phalaris minor,* *Chenopodium album,* *Melilotus alba,* *Portulaca oleracea,* *Anagallis arvensis,* *Fumaria parviflora,* *Poa annua*	Light soil-1.0 kg, Medium soil-1.25 kg, Heavy soil-1.5 kg	3.3 ltr. 4.2 5.0	500-700 500-700 500-700	-
Rice (Transplanted &direct sown Upland)	*Echinochloa colona,* *E. crusgalli,* *Fimbristylis miliacea,* *Marselia quadrifoliata,* *Alternanthera sessilis,* *Ammonia baccifera,* *Ludwigra parviflora,* *Eclipta alba,* *Cyperus difformis*	Light to Heavy soil 1-1.5kg	3.3 –5 Ltrs.	500-700	
Cotton	*Echinochloa spp.* *Euphorbia hirta* *Amarnanthus*	0.75-1.25kg	2.5-4.165 ltrs	500-700	150

	viridisPortulaca oleraceaTrianthema spp. Eleusine indica				
Soybean	*Echinochloa spp., Euphorbia spp., Amarnanthus viridis, Portulaca oleracea, Trianthema spp., Eleusine indica*	0.75-1.0kg	2.5-3.3 ltrs.	500-700	110
Pigeon pea	*Digitaria sanguinalis Digera arvensis Amaranthus sp. Euphorbia hirta Trianthema sp. Cyperus sp. Eragrostis sp.*	0.7 – 1.00	2.5 – 3.33	500	133
Pendimethalin 5 % G					
Rice (Transplanted & Direct sown puddled)	*Echinochloa colona, E. crusgalli, Fimbristylis miliacea, Marselia quadrifoliata, Alternanthera sessilis, Ammonia baccifera, Ludwigra parviflora, Eclipta alba, Cyperus difformis*	1.0-1.5 kg	20-30 kg	-	-
Pendimethalin 38.7% CS					
Soybean	*Echinochloa colonum Dinebra arabuica Digitaria sanguinalis Bracharia mutica Dactyloctinum aegyptium Portulaca oleracea Amaranthus viridis Euphorbia geniculata Cleome viscose*	580.5-677.25gm	1500-1750	500	40

Cotton	*Digitaria sanguinalis, Echinochloa colonum, Dinebra arabiaca, Brachiaria mutica, Eragratis minor, Portulaca oleracea, Commelina communis, Amaranthus spp., Parthenium hysterophorus*	580.5-677.25gm	1500-1750	500	101
Chilli	*Echinochloa colonum, Dinebra arabiaca, Brachiaria mutica, Amaranthus spp., Portulaca oleracea, Commelina spp., Parthenium hysterophorus, Digera arvensi, Physelis minima*	580.5-677.25gm	1500-1750	500	98
Onion	*Dactyloctenium aegyptium Digitaria sanguinalis, Echinochloa sp., Dinebra arabic, Portulaca oleracea, Euphorbea geneculata, Commelina sp., Digera arvensis, Amaranthus viridis, Trianthema portulacastrum*	580.50-677.25gm	1500-1750	500	104
Groundnut	*Echinochloa colonum, Digitaria marginata, Commelina bengalensis, Portulaca oleracea*	580.5-677.25gm	1500-1750	375	103
Mustard	*Chenopodium album, Digera arvensis, Amaranthus species*	338.625 gm	875	375-400	111
Cumin	*Portulaca oleracea, Digitaria spp, Digera arvensis*	580.5-677.25 gm	1500- 1750	375-500	91
Pinoxaden 5.1% EC					
Wheat	*Phalaris minor (*Canary grass) *Avena ludoviciana (*Wild oat)	40-45 g	800-900 ml 30-35 DAS	225-300	90
Penoxsulam 21.7 % SC					

Rice (Transplanted)		*Ammania bacifera, Cyperus difformis, Echinochloa colonum, Echinochloa crusgalli, Cyperus iria, Fimbristylis miliacea, Ludwigia spp. Monochoria spp. Sphenecelea zeylanica,*	22.5 to 25 (pre-emergence 0-5 DAT) 20 to 22.5 (post-emergence 10-12 DAT)	93.7 to 104.2 83.3 to 93.7		60
Penoxsulam 2.67% OD						
Rice (Transplanted Rice)	Grasses	*Echinochloa Colona Echinochloa Crusagalli*	22.5-25	900-1000 ml/ha	300-500	60
	Sedges	*Cyperus difformis*				
	Broad Leaved Weeds	*Caesulia axillaris*				
Pretilachlor 37% EW						
Transplanted Rice		*Echinochloa crusgalli Echinochloa colonum Cyperus difformis Cyperus iria Digitaria sanguinalis Fimbristylis miliacae Eclipta alba Ludwigia parviflora Monochoria vaginalis*	0.60-0.75 kg	1.5-1.875 ltrs.	500	90
Pretilachlor 30.7% EC						
(Direct seeded rice under puddled condition)		*Echinochloa crusgalli Echinochloa colonum Cyperus difformis Cyperus iria*	0.45-0.60kg.	1.5-2.0 ltr.	500	110
Pretilachlor 50% EC						

Transplanted Rice	*Echinochloa crusgalli* *Echiniochloa colonum* *Cyperus difformis* *Cyperus iria* *Fimbristylis miliacae* *Eclipta alba* *Ludwigia parviflora* *Monochoria vaginalis* *Leptochloa chinensis* *Panicum repens*	0.50-0.75 kg.	1.0-1.5 ltrs.	500-700	75-90
Propaquizafop 10% EC					
Soybean	*Echinochloa colonum,* *Echinochola crusgalli,* *Digiteria sanguinalis,* *Dactyloctenium eigyptium,* *Eleusine indica*	50-75 g	500-750	500-750	21
Blackgram	*Echinochloa colonum,* *Echinochola crusgalli,* *Digiteria sanguinalis,* *Dactyloctenium eigyptium,* *Eleusine indica*	75-100 g	750-1000	500-750	21
Onion	*Echinochloa colonum,* *Digiteria sanguinalis,* *Dactyloctenium aegyptium,* *Phalaris minor*	62.5	625	500	7
Jute	*Digiteria sanguinalis,* *Echinochloa colonum,* *Eleusine indica*	62.5	625	500	87
Cotton	*Echinochloa colonum,* *Digiteria sanguinalis,* *Dactyloctenium aegyptium,* *Cynodon dactylon*	62.5	625	500	115
Groundnut	*Echinochloa colonum,* *Digiteria sanguinalis,* *Dactyloctenium aegyptium,* *Eleusine indica*	62.5	625	500	97
Propanil 35% EC					

Rice	*Barnyard grass (Echinochloa crusgalli, E.colonum), Nut grass (Cyperus difformis, C.iria)*	2.0-3.0 Early post-emergence to weeds (12-15 DAS), Blanket spray	5.8-8.5	400-600	90
Propanil 80% w/w DF					
Direct Seeded Rice	*Echinochloa colonum (*wild rice). *Echinochloa crusgalli (*barnyard grass*)* *Panicum repens (*bullet grass) *Brachiaria mutica (*para grass) *Digitaria sanguinalis (*hairy crabgrass) *Leptochloa chinensis (*red sprangletop) *Eclipta alba (*False daisy) *Commelina spp.,* *Ludwigia parviflora (*water crest) *Cyperus spp.*	2000-3000	2500-3750	375	84
Paraquat dichloride 24% SL					
Tea (Post-emergence directed inter row application at 2-3 leaf stage of weeds)	*Imperata* *Setaria sp.,* *Commelina benghalensis,* *Boerraria hispida,* *Paspalum conjugatum,*	0.2-1.0 kg	0.8-4.25 ltr (For season long weed control, use 2.5-5.0 ltr for initial application. For subsequent repeat spot application use 1 litre)	200-400	Not Necessary (For season-long weed control, muse 2.5 to 5 lit for initial application. For subsequent repeat spot application use 1 lite)
Potato (Post-emergence overall / inter-row application at 5-10 % emergence)	*Chenopodium sp.* *Angallis arvensis* *Trianthema monogyna* *Cyperus rotundus* *Fumeria parviflora*	0.5 kg	2.0 ltr.	500	100

Cotton (Post-emergence directed inter row application at 2-3 leaf stage of weeds)	*Digera arvensis, Cyperus iria, Trianthema monogyna, Corchorus spp., Leucas aspera, Euphorbia spp.*	0.3-0.5 kg	1.25-2.0	500	150-180
Rubber (Post-emergence directed inter row application at 2-3 leaf stage of weeds)	*Digitaria sp., Eragrostis sp., Fimbristylis sp.*	0.3-0.6 kg	1.5-2.5	600	N.A.
Coffee	*Digitaria marginata, paspalum Conjugatum, Ageratum, Conyzides, Borreria hispida, Euphorbia hirta, Commelina benghalensis, Eleusine indica*	250	1.0	400	N.A.
Rice [pre-plant (minimum tillage) before sowing/transplanting for controlling standing weeds]	*Echinochloa crusgalli, Cyperus iria, Ageratum conyzides, Commelina benghalensis, Marsilea quadriofoliata, Brachiaria mutica*	0.3-0.8 kg	1.25-3.5	500	N.A.
Wheat [pre-plant (minimum tillage) before sowing]	*Grassy & Broad leaf weeds*	1.0 kg	4.25 ltrs	500	120-150
Maize [pre-plant (minimum tillage) before sowing]	*Cyperus rotundus, Commelina benghalensis, Trianthema monogyna, Amaranthus sp., Echinochloa sp*	0.2-0.5 kg	0.8-2.0 ltrs	500	90-120
Maize (Post-emergence directed inter row application at 2-3 leaf stage of weeds)	*Cyperus iria, Cyperus rotundus, Commelina benghalensis Amaranthus sp. Echinochloa sp Trianthema monogyna*	0.2-0.5 kg	0.8-2.0 ltrs	500	90-120
Grapes (Post-emergence directed inter row application at 2-3 leaf stage of weeds)	*Cyperus rotundus Cynodon dactylon Convolvulus sp. Portulaca sp. Tridax sp.*	0.5 kg.	2.0ltrs.	500	90
Apple (Post-emergence directed inter row application at 2-3 leaf stage of weeds)	*Rosa moschata Rosa eglantaria Rubus ellipticus*	0.75 kg	3.25 ltrs	700-1000	N.A.

Aquatic weed control Water ways Canals, Ponds Etc	 *Eichhornia crassipes* *Hydrilla* *Typha latifolia*	 1000 1000 1000-2000	 4.25 4.25 4.25-8.5	 600-1000 600 600-1000	 N.A
Pyroxasulfone 85% w/w WG					
Maize	*Echinochloa crusgalli,* *Eleusine indica,* *Phyllanthus niruri*	127.5	150	500	103
Wheat	*Phalaris minor*	127.5	150	500	131
Soybean	*Echinochloa colonum,* *Celosia argentia,* *Trianthema porulacastrum,* *Amarthanas viridis,* *Digeria arvensis*	127.5	150	500	94
Pyrazosulfuron Ethyl 10% WP					
Transplanted Rice	*Cyperus Iria,* *Cyperus difformis,* *Fimbristylis miliacea,* *Monochoria vaginalis,* *Ludwigia parviflora*	10-15 g	100-150	500-600	95
Pyrithiobac Sodium 10% EC					
Cotton (Gossypium)	*Trianthema Spp* *Amaranthus Spp* *Chenopodium Spp* *Digera Spp* *Celosia argentia*	62.5-75 gm	625-750	500	160
Pyroxasulfone 85 % WG					
Wheat	*Phalaris minor*	127.5 g	150 ml	500	131
Maize	*Echinochloa crusgalli,* *Eleusine indica,* *Phyllanthus niruri*	127.5 g	150 ml	500	103
Soybean	*Echinochloa colona,* *Celosia argentia,* *Trianthema portulacastrum,* *Amaranthus viridis,* *Digera arvensis*	127.5 g	150 ml	500	94

Pyrozosulfuron Ethyl 70% WDG					
Transplanted Rice	*Echinicloa spp,* *Cyparus rotundus,* *Ludwigia parviflora*	21g	-	-	43
Quizalofop-ethyl 5% EC					
Soybean	*Echinochloa crusgalli* *E. colomum* *Eragrostis sp.*	37.5-50 gm.	0.75-1.0	500-600	95
Cotton	*Echinolchloa crusgalli,* *Echinochloa colonum,* *Dinebra retroflexa* *Digiteria marginata*	50.5	1000	500	94
Groundnut	*Echinochloa colonum,* *Dinebra retroflexa* *Dactyloctenium sp.*	37.5-50.0	750-1000	500	89
Black gram	*Eleusine indica,* *Dactyloctenium aegyptium,* *Digitaria sanguinalis,* *Eragrostis sp.,* *Paspalidium sp.,* *Echinochloa sp.,* *Dinebra ratroflexa*	37.5-50.0	750-1000	500	52
Onion	*Digitaria sp.,* *Eleusine indicia,* *Dactyloctenium aegyptium,* *Eragrostis sp.,*	37.5-50.0	750-1000	375-450	7
Quizalofop-ethyl 10% EC					
Soyabean	*Love grass (eragrosts ipilosa),* *Crab grass (digitaria sanguinalis/ wild finger/ Makra grass Viper grass,* *Barnyard grass,* *sanwa/Samel,* *Brown top millet*	375-45.0	375-450	300-500	69-103
Quizalofop –p-tefuryl 4.41% EC					

Soybean	*Echinochloa spp.* *Dinebra arabica* *Digitaria sanguinalis* *Cynodon dactylon* *Hemarthria compressa* *Eleusine indica*	30-40 gm	750-1000 ml	400	30
Saflufenacil 70.0% w/w WG					
Non Cropped Areas	*Cyperus rotundus* *Dactyloctanium aegyptium* *Eleusine indca* *Cynodon dactylon* *Chloris barbata* *Echinocloa colona* *Amaranthus viridis* *Portulaca oleraceae* *Commelina benghalensis* *Ageratum conyzoides* *Digera arvensis* *Euporbia hirta* *Parthenium hysterophorus*	70	100	500	N.A.
Tea	*Ageratum conyzoides* *Bidens spp.* *Borreria spp.* *Conyza spp.* *Crassocephala integrifolia* *Galinsoga parviflora* *Mumosa pudica* *Chromolaena odorata* *Commuenila benghalensis* *Lantana camara*	70	100	450	7
Sulfentrazone 39.6% w/w SC					
Soybean	*Acalypha sp.,* *Commelina sp.,* *Digera sp.,* *Cyprus sp.* *Echinochloa sp.,* *Brachiaria sp.,* *Dinebra sp.*	360	750	500	88
Sugarcane	*Trianthema sp.,* *Digera spp.,* *Amaranlhus spp.,* *Phyllanthus spp.,* *Euphorbio spp.,* *Dacteloctenium spp.,* *Digitaria spp.,* *Brachiaria spp.,*	720	1500	500	306

	Echinocloa spp., *Cynodon spp,* *Cyperus spp.*				
Sulfosulfuron 75% WG					
Wheat	*Phalaris minor* *Chenopodium sp.* *Melilotus alba*	25 gm	33.3 gm	200-250 + Cationic surfactant 1250ml/ha	110
Tembotrione 34.4% SC					
Maize	*Trianthema portulacastrum,* *Echinochloa sp.* *Bracheria sp.*	120g	286ml	500L	55
Triallate 50% EC					
Wheat	*Avena fatua*	1.25 kg	2.5 kg.	250-500	150
Triasulfuron 20% WG					
Wheat	*Chenopodium album,* *Anagallis arvensis,* *Medilotus alba,* *Rumex spp,* *Medicago denticulata,* *Fumeria pomiflora,* *Cronopus didymus,* *Spergula arvensis* *Malvela perviflora*	20	100	500	81
Tea	*Ageratum conyzoides,* *Borreria spp.,* *Crassocephalum crepidiodes,* *Oxalis spp.,* *Bidens pilosa,* *Conyza ambigua,* *Drymaria diandra,* *Emillia sonchifolia,* *Mitracarpus verticilatus,* *Syndnedrella nodiflora.*	25	125	500	7
Topramezone 336 g/l w/v SC					

Maize	*Elusine indica, Digitaria sanguinalis, Dactyloctenium aegyptium, Echinocloa spp., Chloris barbata, Parthenium hysterophorus, Digera arvensis, Amaranthus viridis, Physalis minima, Alternanthera sessilis, Convolvulus arvensis, Celotia argentea.*	25.2 to 33.6 g a.i./ha + MSO adjuvant @ 2 ml/l of water	75 to 100 ml + MSO adjuvant @ 2 ml/l of Water	375	83

HERBICIDE COMBINATIONS

Ametryn 73.1% w/w + Trifloxysulfuron sodium 1.8% w/w WG					
Sugarcane	*Echinochloa colona, Cyanadon dactylon, Cyperus rotundus, Amaranthus viridis, Trianthema spp. and Digitaria sanguinalis*	937.5-1125	1250-1500	500	221
Anilofos 24% +2,4-D ethyl Ester 32% EC					
Transplanted rice	*Echinochloa crusgalli Echinochloa colonum Ischaemum rugosum Fimbristylis miliacea*	(0.24+ 0.32) to (0.36 + 0.48) kg	1-1.5 ltrs.	300	90
2,4-D sodium salt 44% + Metribuzin 35% + Pyrazosulfuron ethyl 1.0% WDG					
Sugarcane	*Echinochloa spp, Elusine indica (Indian goosegrass) Brachiaria spp. Digitaria spp. Dactyloctenium agypytium (Crowfoot Grass) Eclipta alba (false daisy) Chenopodium album (Bathua) Physalis minima (Little Gooseberry) Portulaca oleracea (Purslane) Parthenium hysterophorus (Congress grass) Cyperus spp.*	1320 + 1050 + 30	3000	500	249

Bensulfuron methyl 0.6%+Pretilachlor 6% GR					
Transplanted Rice	*Echinochloa crusgalli,* *Echinochloa colonum,* *Cynodon dactylon* *Cyperus iria,* *Cyperus difformis,* *Cyperus rotundus,* *Fimbristylis miliacea,* *Ludwigia parviflora,* *Marselia quadrifolia,* *Enhydra fluctuans,* *Sphenoclea zeylanica,* *Eclipta alba,* *Ammania baccifera.*	60 + 600 gm	10 kg	N.A.	88
Bispyribac Sodium 20% + Pyrazosulfuron Ethyl 15% WDG					
Rice	*Echinochloa colonum,* *Echinochloa crusgalli* *Eclipta alba,* *Cyperus rotundus*	20+15	100	500	130
Carfentrazone ethyl 0.43% + Glyphosate 30.82% EW					
Tea	*Ageratum conyzoides* *Bidenspilosa* *Borreria sp.* *Crassocephalumcr epidioides* *Cynadon sp.* *Cyperous sp.* *Digitaria sp.* *Eleusine indica* *Mimosa sp.* *Mltracarpus villosus* *Oxalis sp.*	12.90 +924.60	3000	500	7
Non-cropped area	*Ageratum conyzoides* *Axonopus sp.* *Brachiaria sp.* *Commelina sp.* *Cynodon dactylon* *Cyperous sp.* *Digitaria sp.* *Eleusine indica* *Imperata cylendrica* *Lantana camera* *Parthenium sp.*	12.90 +924.60	3000	500	--
Carfentrazone ethyl 20% + Sulfosulfuron 25% WG					

Wheat	*Phalaris minor* *Avena ludoviciana* *Chenopodium album Medilotus alba* *Rumex spp*	20+25 +750 ml Surfactant	100	300	110
Clodinafop Propargyl 15% + Metsulfuron Methyl 1% WP					
Wheat	*Phalaris minor,* *Avena fatua, Chenopodium album, Melilotus sp.,* *Fumaria parviflora,* *Vicia sativa,* *Rumex sp.,* *Anagallis arvensis, Coronopus didymus, Lathyrus sp.,* *Convolvulus arvensis*	60+4	400	375 (Add 1250 ml surfactant at the time of sparying)	100
Clodinafop propargyl 9% + Metribuzin 20% WP (W/W)					
Wheat	*Phalaris minor Chenopodium album, Melilotus sp* *Vicia sativa,* *Rumex sp* *Medicago sp* *Cronopus didymus* *Dinebra vetroflexa*	54+120	600	300	120
Clomazone 20%+2,4-D EE 30% EC					
Transplanted Rice	*Echinochloa colonum,* *Echinochloa crusgalli,* *Cyperus iria,* *Cyperus difformis,* *Eclipta alba,* *Leptochloa chinensis,* *Panicum repens,* *Fimbristylis miliacea,* *Marsilea quadrifoliata,* *Ludwigia parviflora.*	0.250-0.375 Kg	1.25 ltrs.	500	100-110
Clomazone 22.5% w/w + Metribuzin 21% w/w WP					
Sugarcane	*Trianthema Spp.* *Amaranthus viridis* *Phyllanthus niruri* *Bracharia Spp.* *Dactyloctenium aegyptium* *Echinochloa spp.* *Digitaria Spp.* *Cynodon dactylon*	563 + 525	2500	500L	307 days

Fenoxaprop-p-ethyl 7.77% w/w + Metribuzin 13.6% w/w EC					
Wheat	*Phalaris minor* (Little seed canary grass) *Chenopodium album* (Lambs quarter) *Lathyrus aphaca* (Meadow Pea) *Rumes Sp.* (Golden dock) *Melilotus spp.* (Sweet clover) *Avena ludoviciana.*	100+175	1250	375	110
Florpyrauxifen-benzyl 1.31% w/w +Penoxsulam 2.1% w/w OD					
Transplanted Rice	*Echinochloa colona,* *Echinochloa crusgalli,* *Cyperus difformis,* *Cyperus iria,* *Eclipta alba,* *Ludwigia parviflora,* *Ammania baccifera*	15.63+25 g	1250	375-500	83
Direct seeded rice	*Echinochloa colona,* *Echinochloa crusgalli,* *Cyperus difformis,* *Cyperus iria,* *Eclipta alba,* *Ludwigia parviflora,* *Commelina communis*	15.63+25 g	1250	375-500	83
Fluazifop-p-butyl 11.1% w/w + Fomesafen 11.1% w/w SL					
Soybean	*Echinochloa colona* *Digitaria sp* *Eleusine indica* *Dactyloctenium aegyptium* *Brachiaria reptans* *Commelina benghalensis* *Digera arvensis* *Trianthema sp.* *Phyllanthus niruri* *Aclypha indica* *Dinebra arbica*	250	1000	500	71
Groundnut	*Echinochloa colona* *Digitaria sp.* *Eleusine indica* *Dactyloctenium aegyptium* *Commelina benghalensis* *Eluropus villosus* *Indigofera glandulosa* *Chloris barbata*	250	1000	500	82

	Trianthema sp. *Digera arvensis* *Cleome viscose* *Phyllanthus niruri* *Amaranthus virdis* *Cyperus sp.*				
Fomesafen 12 % + Quizalofop ethyl 3% w/w SC					
Soybean	*Echinochloa colona,* *Eleusine indica,* *Doctyloctenium aegyptium,* *Digitaria sanguinolis,* *Cyperus rotundus*	180+45	1500	500	71
Glufosinate Ammonium 13.4% + Oxyfluorfen 4.8% w/w EW					
Tea	*Cynodon dactylon,* *Digitaria sanguinalis,* *Commelina benghalensis,* *Bidens biternata,* *Ageratum conyzoides*	420+150 g	3000	500	10
Halosulfuron Methyl 5% + Atrazine 48% WG					
Maize	*Echinochloa spp.* *Digitaria sanguinalis* *Eleusine indica* *Trianthema monogyna* *Celosia argentia* *Cyperus rotundus*	56.25+540	1125	375	37
Halauxifen-methyl 20.8% + Florasulam 20.0% w/w WG(with surfactant Polyglycol 26-2 N)					
Wheat	*Chenopodium album* *Rumex sp.* *Medicago denticulate* *Coronopus didymus*	12.76	31.23	375 (use along with surfactant Polyglycol 26-2 N at 750 ml/ha)	71
Halosulfuron Methyl 12% w/w+ Metribuzin 55% WG					
Sugarcane	*Digitaria sangunalis* *Eleusine indica* *Cyperus rotundus* *Dactylactenium aegyptium*	54+247.5	450	300	294
Hexazinone 13.2% + Diuron 46.8 % WP					

Sugarcane	*Enchinochloa colonum* *Dactylotenium aegyptium* *Trianthema monogyna* *Amaranthus virdis* *Ipomea spp* *Cyperus rotundus* *Cyperus esculentus* *Setaria spp* *Parthenium hysterophorus* *Euphorbia hirta*	1200 gm (264+936)	2 Kg	500	282-306
Indaziflam 1.65% w/w (2%w/v) + Glyphosate Isopropylammonium 44.63% w/w (40%w/v) SC					
Tea	*Ageratum sp.* *Borreria sp.* *Eleusine indica*	50+1000 to 70 + 1400 g.a.i/ha	2500 to 3500 ml/ha	500 L	14 days
Imazethapyr 35% + Imazamox 35% WG					
Soybean	*Echinochloa Colonum,* *Dinebra Arabica,* *Digitaria sanguinalis,* *Brachiaria mutica* *Commelina benghalensis* *Euphorbia hirta*	70 g a.i/ha + MSO Adjuvant @ 2 ml/l of water	100 g MSO Aadjuvant @ 2ml/l of water	375-500	56
Groundnut	*Echinochloa Colonum,* *Digira arvensis,* *Commelina benghalensis* *Euphorbia hirta* *Amaranthus viridis* *Physalis minima* *Brachiria Spp.* *Trianthema portulacastrum*	70 g a.i/ha + MSO Adjuvant @ 2 ml/l of water	100 g MSO Aadjuvant @ 2ml/l of water	375-500	83
Cluster bean	*Echinochloa colonum,* *Euphorbia spp.,* *Digitaria arvensis,* *Amaranthus viridis.*	70 g a.i./ha + MSO adjuvant @ 2m/l of water	100 g/ha + MSO adjuvant @ 2m/l of water	500	64
Red gram	*Euphorbia spp.,* *Amaranthus viridis.*	70 g a.i./ha + MSO adjuvant @ 2m/l of water	100 g/ha + MSO adjuvant @ 2m/l of water	375-500	125
Mesosulfuron Methyl 3% + Iodosulfuron Methyl Sodium 0.6% WG					

Wheat	*Phalaris minor* *Medicago denticulata* *Chenopodium album* *Melilotus sp.* *Rumex sp.* *Anagallis arvensis* *Coronopus didymus* *Lathyrus aphaca* *Fumaria parviflora*	(12+2.4 gm)	400 ml.	400-500 + Surfactant (Genopol LRO fluid) @ 500 ml/ha	96
Mesotrione 2.27% w/w + Atrazine 22.7% w/w SC					
Maize	*Trianthema spp.,* *Cyperus spp.* *Digitaria sanguinalis,* *Echinochloa spp.* *Dactyloctenium aegyptium*	875 gm	3500	500	42
Sugarcane	*Trianthema spp.* *Amaranthus viridis,* *Echinochloa colona,* *Digitaria sanguinalis* *Cyperus rotundus,* *Dactyloctenium aegyptium*	875 gm	3500	500	190
Metribuzin 42% + Clodinafop propargyl 12% WG					
Wheat	*Phalaris minor (Canary grass),* *Avena spp. (Wild oat),* *Chenopodium album (Fat hen),* *Melilotus sp. (Sweet clover),* *Medicago denticulate (Toothed medic),* *Rumex spp. (Wild spinach),* *Anagallis arvensis (Blue Pimpernel)*	210+60	500	375	92
Metsulfuron Methyl 10% + Chlorimuron ethyl 10% WP					
Transplanted Rice (Pre-emergence application-3 DAT	*Cyperus iria,* *Cyperus difformis,* *Fimbristlylis miliaceae,* *Eclipta alba,* *Ludwigia parviflora,* *Cyanotis axillaries,* *Monocoria vaginalis,* *Marsilea quadrifoliata,*	4gm	20 gm.	300	90
Metsulfuron Methyl 10% + Carfentrazone ethyl 40% DF					
Wheat	*Rumex dentatus* *Rumex spinosus* *Medicago denticulate* *Malva parviflora* *Lathyrus aphaca*	25	50	300	100

	Chenopodium album *Melilotus alba* *Melilotus indica* *Anagallis arvensis* *Solanum nigrum* *Vicia sativa* *Convolvulus arvensis*				
Oxyflurofen 2.5% + Glyphosate (Isopropyl amime salt)41% SC(w/w)					
Tea	*Ageratrum Conyzoids* *Cyperous sp* *Borreriabispida* *Pospalumcon jugatum* *Digitaria ciliaris*	50+820	2000	500L/ha.	14
Non Crop area	*Digitaria sanguinalls (Crab grass)* *Cynodon d actylon (Dhoob grass)* *Paspalum conjugalum (Hilo grass)* *Cyperus spp., (Purplenut shedge)* *Digeria aruensis (False Amaranth)*	78.125+1281.25	3125	500	-
Pendimethalin 30%+ Imazethapyr 2% EC					
Soybean	*Echinocloa crusgalli,* *Digera arvensis,* *Commelina benghalensis,* *Amaranthus viridis,* *Portulaca oleracea*	(750+50) to (900+60) gm	2.5-3.0 ltrs	500-600	90
Penoxsulam 0.97% w/w + Butachlor 38.8% w/w SE					
Transplanted Rice	*Echinochloa colonum,* *Echinochloa crusgalli,* *Cyperus iria,* *Cyperus difformis,* *Marsilia quadrifoliata,* *Alternanthera spp.*	820 g.a.i/ha	2000ml/ha	750	60
Penoxsulam 1.02 % + Cyhalofop-butyl 5.1% OD					

Rice (Direct seeded Rice)	*Echinochloa colona* *Echinochloa crusgalli* *Leptochloa chinesis* *Eleusine indica* *Alternanthera sessilis* *Caesulia axillaris* *Cyperus spp*	120-135	2000-2250	300-500	60
Rice (Transplanted Rice)	*Echinochloa colona* *Echinochloa crusgalli* *Leptochloa chinesis* *Caesulia axillaris* *Cyperus difformis* *Cyperus spp*	120-135	2000-2250	300-500	60
Pendimethalin 35% + Metribuzin 3.5% w/w SE					
Wheat	*Canary grass (Phalaris minor),* *Wild Oat (Avena ludoviciana),* *Lamb's quarters (Chenopodium album),* *Field bindweed (Convolvulus arvensis),* *Swine Cress (Coronopus didymus),* *Burmuda grass (Cyanadon doctylon)*	875 +87.5 to 1050 + 105 gm	2.5-3.0	500	123
Pendimethalin 38.4% + Pyrazosulfuron ethyl 0.85% ZC					
Transplanted Rice	*Echinochloa colona (wild rice),* *Echinochloa crus galli (banyyard grass),* *Marsilea quadrifolia (comrnon water clover),* *Ludwigia parvifl otz (rvater crest),* *Cyperus dffirmis (comrnon sedge)*	900 +20	2000	375	86
Pretilachlor 6% + Pyrazosulfuron Ethyl 0.15%(H)					
Paddy	Grassy weeds, Broad Leave, Sedges	600+15	10	-	83
Pretilachlor 6.0% +Pyrazosulfuron Ethyl 0.15% GR					

Transplanted Paddy	*Echinochloa Colonum* *Echinochloa Crusagalli* *Ludwigia paviflora, Elipta alba,* *Leptochola chinensis,* *Monochoria vaginalis, Cyperus difformis, Cyperus iria,* *Fimbristylis miliaceae*	600	10	-	83
Pretilachlor 30.0% + Pyrazosulfuron Ethyl 0.75% WG					
Paddy (Direct seeded Rice)	*Echinochloa colona,* *Eleusine indica,* *Leptochloa chinensis,* *Abernanthe a sessllis,* *Parthenium hysterophrous,* *Cyprus iria* *Cyprus difformis,* *Fimbristylis miliacea*	15+600	2000	375	113
Propaquizafop 2.5% + Imazethapyr 3.75% w/w ME					
Soybean	*Grassy weeds:* *Dactyloctnium aegyptium* *Echinocloa colonum* *Eleusine indica* *Digitaria sanguinalis* *BLW: Commelina* *Benghalensis* *Euphorbia hirta* *Digera arvensis* *Amaranthus viridis*	50+75	2000	500	80
Groundnut	**Monocot weeds** *Echinochloa colona,* *Cyperus difformis,* *Digitaria sanguinalis* **Broad leaved weeds** *Commelina benghalensis* *Digera arvensis*	50+75	2000	500	97
Blackgram	**Monocot weeds** *Digitaria sanguinalis* *Dcatylectonium aegyptium* *Cynodan dactylan* **Broad leaved weed** *Parthenium hysterophorus* *Commelina benghalensis* *Euphorbia hirta*	50+75	2000	500	56

Clusterbean	**Monocot weeds** *Cyperus rotundus* *Digitaria sanguinalis* **Broad leaved Weeds** *Commelina benghalensis* *Amaranthus viridis*	50+75	2000	500	69
Propaquizafop 5% + Oxyfluorfen 12% w/w EC					
Onion	Grassy weeds *Digitaria sanguinalis,* *Dactyloctnium aegyptium,* *Echinocloa colona,* *Eleusine indica* BLW: *Chenopodium album,* *Digera arvensis* *Amaranthus viridis*	43.75 +105	875	500	7
Pyriftalid 31.0% w/w + Bensulfuron methyl 15.7% w/w SC					
Transplanted Rice	*Echinochloa sp.,* *Cyperus spp.,* *Sphenochlea zeylanica,* *Ludwigia spp.,* *Eclipta alba,* *Marsilea spp.,* *Fimbristylis miliacea*	175 (116.1g a.i. of Pyriftalid + 58.9g a.i. of Bensulfuron methyl)	375	Upto 5 L/ha	99
Pyrithiobac Sodium 3.1 % w /w + Pendimethalin 34.0 % w/w ZC					
Cotton	*Digitaria sanguinalis,* *Commelina benghalensis,* *Amaranthus viridis,* *Parthenium hysterophorus,* *Celosia argentia*	649.25-742.00 g	1.75-2.00 lt	500	152
Pyrithiobac Sodium 6% w/w+ Quizalofop-ethyl 4% w/w EC					
Cotton	*Trianthema spp* *Digera spp* *Celosia argentia* *Dinebra retroflexa* *Digitaria marginata*	(60+40) to (75+50) g.a.i/ha	1.0-1.25 Ltr/ha	500	160
Quizalofop ethyl 4% + Oxyfluorfen 6% EC					
Onion	*Digitaria sanguinalis (*Crab grass) *Cyperus rotundus* (Moth)	100	1000	375	7

Quizalofop Ethyl 10% EC + Chlorimuron Ethyl 25% WP + Surfactant (0.2) (Herbicide) (Twin pack)					
Soyabean	Aghada (*Acanthospermum sp.),* *Alternanthra spp.* *Celosia argentia* *Borreria spp.* *Parthenium spp.* *Euphorbia geniculate* *Eragrostis pilosa E. viscosa* *Digitaria marginata* *Dactylactonium aegyptium* *Echinocloa spp.* *Cynodon dactylon* *Brachiaria ramosa*	Quizalofop ethyl 10% EC 37.5g Chlorimuron ethyl 25% WP 9g Surfactant 0.2%	Quizalofop ethyl 10% EC 375ml Chlorimuron ethyl 25% WP 36g Surfactant 0.2%	300	75
Quizalofop ethyl 7.5% + Imazethapyr 15% w/w EC					
Groundnut	*Dactyloctenium aegyptium* *Digitaria spp.* *Echinochloa spp.* *Cyperus rotundus* *Commelina bengalensis* *Digera arvensis*	32.81 + 65.625	437.5	375-500	90
Sulfentrazone 28% + Clomazone 30% WP					
Soybean	*Commelina benghalinsis,* *Acalypha indica,* *Corchorus spp.,* *Euphorbia spp.,* *Parthenium hysterophorus,* *Echinochloa colonum,* *Brachiaria spp.,* *Dinebra spp.,* *Cyperus rotundus.*	350+375	1250	500	84

Sugarcane	*Amaranthus viridis, Trianthema spp., Digera arvensis, Physalis spp., Brachiaria spp., Cynodon dactylon, Echinochloa spp., Dactyloctenium aegtptium, Cyperus rotundus.*	700+750	2500	500	302
Sulfosulfuran 75%+ Metsulfuron Methyl 5%WG					
Wheat	*Phalaris minor, Chenopodium sp., Medicago denticulata, Coronopos dedymus, Rumex spp. Melilotus alba, Anagallis arvensis*	(30+2)	40 gm	250-500 + surfactant 1250 ml/ha	110
Sodium Acifluorfen 16.5% + Clodinafop Propargyl 8% EC					
Soybean	*Acalypha indica, aegyptium, Alternanthera v philoxeroides, Amaranthus spp., Celosia argentea, Cleome viscose, Commelina benghalinsis, Dactyloctanium, Digera arvensis, Digitaria sanguinalis,* Echinochloa spp., *Eleusine indica, Euphorbia spp., Parthenium spp., Phyllanthus niruri, Physalis minima, Stellaria media Trianthema monogyna*	80 + 165	1000	500	61
Topramezone 10 g/l + Atrazine 300 g/l SC					
Maize	*Parthenium hysterophorus Panicum spp. Amaranthus viridis Celotia argentia Melilotus alba Alternenthera sp. Digitaria sanguinalis*	775	2500	500	90
Sugarcane	*Amaranthus viridis Cynodon dactylon Portulaca oleraceae Alternenthera sessalis*	930	3000	500	268

Triafamone 20% + Ethoxysulfuron l0% WG					
Rice Transplanted	*Echinochloa colona, Echinochloa crusgalli, Cyperus rotundus, Cyperus difformis, Fimbistylis miliaceae, Marsilea quadrifolia.*	44+22.5	225	300	83
Rice Direct Seeded	*Echinochloa colona, Cyperus rotundus, Digera arvensis, Commelina benghalinsis.*	44+22.5	225	300	83

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भारत सरकार

Government of India

कृषि और किसान कल्याण मंत्रालय

Ministry of Agriculture & Farmers Welfare

कृषि एवं किसान कल्याण विभाग

Department of Agriculture & Farmers Welfare

वनस्पति संरक्षण, संगरोध एवं संग्रह निदेशालय

Directorate of Plant Protection, Quarantine & Storage

केंद्रीय कीटनाशी बोर्ड एवं पंजीकरण समिति

Central Insecticides Board & Registration Committee

एनएच IV, फरीदाबाद-121 001 (हरियाणा)

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

Major Uses of Pesticides

(Registered under the Insecticides Act, 1968)

(UPTO - 01/02/2023)

(Based on certificate issued)

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

PLANT GROWTH REGULATORS (PGR)

APPROVED USES OF REGISTERED PGR

PLANT GROWTH REGULATORS (PGR)

Name of PGR & approved Crops	Time of application / purpose	Dosage /ha		Dilution In Water (Litres) / Preparation of solution	Waiting period / PHI between last application & harvest (days)
		a.i. (ppm/gm/ %)	Formu-lation (ml/gm/Ltr/kg/%)		
Alpha Naphthyl Acetic Acid 4.5% SL (Na salt)					
Tomato	At the time of flowering two spray.	45ppm	-	-	-
Chillies	1st spray during flowering & 2nd spray 20 -30 days later.	10ppm	-	-	-
Mango	1st spray when tender fruits one of pea size. 2nd spray when fruits one of marble size (about 2 cm diameter) <u>To control Mango malformulation</u>- Before fruit bud differentiations approx.3 months before flowering	20ppm 200ppm	- -	2 ml in 4.5litre. 20 ml in 4.5 ltrs.	- -

Grapes	(a)To increase size & weight of berries. – I[st] sprays at pruning time. – 2[nd] spray when flowering shoot appear (b)To control berry drop (spray on matured grape bunches) 10-15 days before harvesting.	10ppm 100ppm	- -	2 ml in 49 ltrs. 20 ml. in 49 ltrs.	- -
Pineapple	**(a)**<u>To induce flowering and uniform growth</u> (b)To increase fruit size. I To delay maturity - Two weeks before harvest.	10ppm (In dry weather half strength solution i.e. 5 ppm may be used) 199ppm 100ppm	- - -	1 ml in 4.5 ltrs (pour 30-50 ml of solution in to the head of each plant) 10 ml in 4.5 ltrs. (spray to wet the whole plant) 10 ml in 4.5 ltrs.(Wet the whole fruit 2 weeks before harvest.)	- - -
Cotton	To prevent shedding of flower squares & bolls (3 sprays at 15 days interval from square formation stage	10-20 ppm.	222-444 ml	1000 ltr.	
Chlormequat Chloride 50% SL					
Cotton (American)	Square formation of early flowering (one spray)	20-40 gm a.i/ha	40-80 ml/ha	High Volume 375-600 Low volume 125-187	-
Cotton (Deshi)	Square formation of early flowering (one spray)	75 a.i. gm/ha	150 ml/ha	High volume 375-600	-
Brinjal	Seed soaking for 24 hours (before sowing)	50ppm	100ppm	1ml/ 10L water	-

Potato	Dipping of cut pieces for 10 minutes	100ppm	200ppm	2.0ml/ 10 L water	
Grapes 1st spray: 2nd Spray: 3rd Spray:	3-5 leaf stage after April pruning 5-7 leaf stage after April Pruning 3-5 leaf stage after October Pruning	500 g a.i./ha 1000 g a.i./ha 250 g a.i./ha	1000ml 2000 ml 500ml	1000L	91
Chlorpropham 50% HN					
Potato	Antisprouting agent for stocked potatoes under cold storage condition Temp= 10±2ºC R.H.= 90±5%	18-20 gm/MT	36-40 ml/MT	Formulation is to be applied as such with fogging applicator	20
Ethephon 10% Paste					
Rubber	For renewed bark 4 times bark swabbing. During March, August, September & November below the tapping panel after 4 cm scrap of the bark /above the tapping panel/on the tapping cut after removing the lace.	10%	50 ml. formulation per tree directly used without dilution.	-	-
Ethephon 39 % SL					
Mango	a)For breaking alternate bearing tendencies	200 ppm	770-1025	1500-2000	26 ml in 10 lit of water
	b)For Flower induction in juvenile mango	1000 ppm	3846-5128	1500-2000	5ml in 10 lit of water
	c)Post-harvest treatment (For Uniform Ripening)	500 ppm	1923-2564	1500-2000	26 ml in 10 lit of water
Pine apple	For flower induction	100 ppm	385-513	1500-2000	13 ml in 10 lit of water
Coffee (Arabica)	For uniform ripening of berries, One spray at fly pricking stage, when 10-15% berries are ripened.	192 ppm	738-985	1500-2000	5 ml in 10 lit of water

Coffee (Robusta)	For uniform ripening of berries, one spray at fly pricking stage, when 10-15% berries are ripened.	96 ppm	215-287	1500-2000	2.5 ml in 10 lit of water
Tomato	Post-harvest treatment (for Uniform Ripening)	2500 ppm	-	-	65 ml in 10 lit of water
Rubber	Yielding rubber latex	1000 ppm	0	1500-2000	2.5 ml in 10 lit of water
Pomegranate	Defoliation for better flowering and fruit yield	390-48.5 gm	1000-1250 ml	500	135 days (2-2.5 ml/lit water)
Forchlorfenuron 0.1% L (w/v)					
Grapes	Two dipping applications. 1st When size of berry is 3-4 mm diameter and 2nd When size of berry is 6-7 mm diameter,	2ppm.	1 ltrs.	500	60 days
Forchlorfenuron 0.12% EC w/w					
Grapes	To enhance the fruit size in seedless grapes single directed spray on berries at 4-6 mm berry size	3 ppm	1.5 liter	500 liter/ha.	20
Pigeonpea (Tur)	Single directed spray at the time of 100% flowering	2.5ppm	1.125 Litres/ha	Spray Volume-450 l/ha. Mix 250 ml of Sitofex in 100 l water	30 days
Gibberellic Acid Technical (90% w/w)					
Grape fruit	a) At full bloom (for fruit set)-single spray b) Ist week of May (For June fruit drop) –single spray c) Ist week of October (For pre-harvest drop)-single spray	500-1000 ppm	-	-	-
Sweet cherry	When more than 60% buds opened fully.	40-80ppm	-	-	-

Grapes	Two directed spray Ist at full bloom & 2nd at fruit set stages.	100ppm.	-	-	-
Grape (Seedless)	Two blanket spray at Ist full bloom & 2nd at post bloom stage.	15-60ppm	-	-	-
Brinjal	a) seed treatment (dipping) b) When 4 weeks old -weekly spray	10ppm 50ppm	- -	- -	- -
Gibberellic Acid 0.001%L					
	To increase the yield and quality of the crop produce				
Paddy	Short duration varieties 20-25DAT Medium duration varieties 30-35 DAT Long duration varieties 40-45 DAT	0.018gm	180 ml	450-500	-
Sugarcane (Planted crops)	a) First spray 40-45 DAP b) Second spray 70-80 DAS	0.018gm	180 ml	450-500	-
Cotton	a) First spray 40-45 DAP b) Second spray: At the time of ball formation	0.018gm	180 ml	450-500	-
Groundnut	a) First spray at flowering (30-35 AS) b) Second spray at the time of flowering	0.018gm	180 ml	450-500	-
Banana	a) First spray 3rd month b) Second spray 5th month Third spray at the time of fruit formation	0.027gm	270 ml.	450-500	-
Tomato / Potato / Cabbage / Cauliflower	a) First spray 45 DAS b) Second spray 65 DAS	0.018gm	180 ml.	450-500	-

Grapes	**a)** First spray 30-35 days after pruning **b)** Second during the match head stage	0.018gm	180 ml.	450-500	-
Brinjal, Bhindi	a) First spray 34 DAP b) Second spray 70 DAP c)Third spray 105 DAP	0.045 gm	450 ml.	450-500	-
Tea	Five spray at monthly interval.	-	270ml	450-500	-
Mulberry	First spray: 15-20 days after harvest	0.045	450	450-500	
Gibberellic Acid 0.1% GR					
Rice	Broadcast (Manual by hand with rubber gloves or through mechanical dispenser) at 15-20 days after transplanting	12.5-15 g	12.5-15.0 kg	-	76
Gibberellic Acid 0.186% SP					
Cotton	to improve fiber quality one spray at square formation or early flowering stage	142ppm.	71 gm	450-500	-
Gibberellic Acid 40% WSG					
Grape	Pre Bloom- Elongation	40	50	500	-
	Fruit Setting Thinning				
	6-7mm berry size-enlargement				
Rice	20-25 Days After Transplanting	20-25	20-62.5	500	
	At Panicle emergence	20-25	50-62.5	500	
Wheat	20-25 Days After sowing	10-15	25-37.5	500	-
	10% ear emergence				
Maize	Knee high stage (25-30 DAS)	20	50	500	-
Hydrogen Cynamide 50% SL (Import)					
Grapes	For breaking bud dormancy Single application as spray Just after pruning ,	1-1.5%	2-3%	375-500	90-120 days
Hydrogen Cynamide 50% SL (Indigenous manufacture)					

Grapes	For breaking dormancy of fruiting buds Just after pruning, single application by swabbing.	1.5%	1.5 ltrs.	Mix with 200-300 ml. of product in 10 litres of water.	120 days
Hydrogen Cyanamide 49% AS (Import)					
Grapes	For breaking bud dormancy One directed spray, just after pruning.	1.0-1.5%	2-3%	50 ltrs.	110 days
Sugarcane	Dipping of setts	0.50	1.00%	Mix 1000 ml of the product per 100 litres of water	319 days
Mepiquat chloride 5% AS					
Potato	One spray 45 DAP To restrict the excessive vegetative growth of potato and increasing its yield	62.5-75 g	1.25-1.50 ltr	500-600	60-90 days
Cotton	Single spray at flowering stage to control of excessive vegetative growth and to increase crop yield in cotton	50-62.5 g	1.00-1.25 ltr	500-600	57
Groundnut	Single spray at flowering stage to control of excessive vegetative growth and to increase crop yield in groundnut	50-62.5 g	1.00-1.25 ltr	500	60
Chickpea	Single spray at flowering stage to control of excessive vegetative growth and to increase crop yield in chickpea	62.5 g	1.25 ltr	500	56
Soybean	Single spray at flowering stage to control of excessive vegetative growth and to increase crop yield in soybean	62.5 g	1.25 ltr	500	54

Brinjal	Single spray at flowering stage to control of excessive vegetative growth and to increase crop yield in brinjal	62.5 g	1.25 ltr	500	7
Onion	Single spray at flowering stage to control of excessive vegetative growth and to increase crop yield in onion	62.5 g	1.25 ltr	500	48 (bulb) 7 (green leaves)
1-Methylcyclopropene 3.3% VP (Vapour Releasing Product)					
Apple fruit (Under ambient and cold condition)	Applied as soon as possible after harvest, within a maximum of 7 days after harvest on fruits kept at ambient and cold temperature away from source of external ethylene.	2.24 mg	68 mg (1000 PPB)	-	1
Paclobutrazol 23% w/w (25% w/v) SC **(Import Source:- ZENECA Agrochemicals, Fernhurst, Haslemere, Surrey, UK)**					
Mango	To reduce the inter node length of new shoots and earlier formation of terminal bud. Favourably, influence the fruit bud production, fruit colour and harvest yield 7-15yrs old 16-25 yrs.old >25 yrs old Application after the harvest of fruits (Any time from July to Oct)	 - - -	 15 ml. Per tree 20 ml. Per tree. 25-40 ml. Per tree (Note: If the soil is sandy the rate of application may be reduced to 75 % of the	Recommended quantity diluted in clean water of 5-10 lit. and applied in furrow 5 to 10 cm deep about 30 cm away from the trunk. Fill up with soil after application or apply as soil – collar drench.	 -

			recommended. For repeat use the rate of application can be 50 to 75 % of the rate used in the 1st year)		
Paclobutrazol 23% SC (W/W) / (25% W/V) **(Import Source:- PGR International Pty. Ltd., 4 Dairy road, Werribee Vic. 3030 Australia)**					
Mango	To reduce the inter node length of new shoots and earlier formation of terminal bud. increase fruit bud production, and improve fruit yield texture 16-25 yrs old Application after the harvest of fruits (Any time from July to Oct)	4.0 gm per tree - -	16 ml. Per tree (Note: If the soil is sandy the rate of application be reduced to 75 % of the recommended. For repeat use the rate of application can be 50 to 75 % of the rate used in 1st year)	Make a round furrow about 5 to 10 cms deep at least 30cm away from the trunk. Mix the recommended dose with about 5-10 litres of clean water and apply to the furrow. Fill up with soil after application and irrigate once or twice a month subsequently	Waiting Period-NIL as the chemical is applied 8 months before harvest of fruits
Paclobutrazol 23% SC (w/w) / (25% w/v) (Indigenous manufacture)					
Mango	To reduce the inter node length of new shoots and earlier formation of terminal bud. Favourably, influence the fruit bud			Recommended quantity diluted in clean water of 5 litres and applied in furrow 5 to 10	

	production, fruit colour and harvest yield 7-15 yrs old 16-25 yrs old >25 yrs old Application after the harvest of fruits (Any time from July to Oct)	 3.45 4.6 5.75-9.2	 15 ml per tree 20 ml per tree 30 ml per tree (Note: If the soil is sandy the rate of application may be reduced to 75 % of the recommended. For repeat use the rate of application can be 50 to 75 % of the rate used in the 1st year)	cm deep about 30 cm away from the trunk. Fill up with soil after application or apply as soil – collar drench.	-
Pomegranate	To induce flowering and enhance yield	0.69 g.ai./ha	3.0 ml/tree	2L Recommended as soil drench (single application) ring form furrow to be made at a depth of 5-7 cm around plants and soil drenching to be done in active root zone and covered with soil.	83
Apple	To induce flowering and enhance yield	2.3 g.a.i./tree	10 ml/tree	5L Recommended as soil drench (single application) Treatment should be drenched in soil in circular area 25 cm away from tree	155

				stem. (Dormant stage)	
	To induce flowering and enhance yield	0.46 g.a.i/ Litre water (460 ppm)	2 ml/Litre (2000 ppm)	3L Recommended as foliar spray (single application) with the help of high volume knap sack sprayer (at green tip stage)	134
Cotton	To restrict vegetative growth prevent shedding of squares/bolls & enhance yield	34.50 g a.i./ha	150ml/ha	500 L/ha	42
Groundnut	To enhance yield by restricting vegetative growth	28.75 g a.i./ha	125 ml/ha	500 L/ha	70
Paclobutrazole 40% SC					
Pigeon Pea	At Flowering initiation stage	30	75	500	48
Prohexadione-Ca 10% WG					
Apple	Two split applications: 1st application: at 3-5 leaves/ shoot 2nd application 4 weeks after 1st application	125 150	50 gm per 100 liter 60 gm per 100 liter	2500 2500	94
Sodium Para –Nitrophenolate 0.3% SL					
Cotton	Flower bud initiated stage and fruit set stage	0.5%	5 ml	800	16
Tomato	Flowering and fruit stages	0.5%	4 ml	200	7
Triacontanol 0.05% EC					
Cotton	To increase the yield Three sprays at 45, 65 and 85 days after planting	0.125 gm	0.25ltr	400-500	

Rice	Three sprays at 25, 45 and 65 days after transplanting	0.125 gm	0.25ltr	400-500	
Chilli	Three sprays at 25, 45 and 65 days after planting	0.125 gm	0.25ltr	400-500	
Tomato	Three sprays at 25, 45 and 65 days after planting	0.125gm	0.25 ltr	400-500	
Groundnut	Three sprays at 25, 45 and 65 days after planting	0.125 gm	0.25 ltr	400-500	-
Potato	Two sprays at 30 and 45 days after planting	0.250 gm	0.50 ltr	500-600	-
Triacontanol 0.05%w/w min. GR					
Cotton	To increase the yield Broadcast & mix the desired quantity of granules in soil 2-3 days before sowing.	12.5 gm	25 kg.	-	-
Rice	Broadcast & mix the desired quantity of granules in soil 2-3 days before transplanting.	12.5 gm	25 kg.	-	-
Chilli	Broadcast & mix the desired quantity of granules in soil 2-3 days before sowing.	12.5 gm	25 kg.	-	-
Tomato	Broadcast & mix the desired quantity of granules in soil 2-3 days before sowing.	12.5 gm	25 kg.	-	-
Groundnut	Broadcast & mix the desired quantity of granules in soil 2-3 days before sowing.	12.5 gm	25 kg.	-	-
Triacontanol 0.1% EW					
Cotton	To increase the yield Three sprays at 45, 65 and 85 days after sowing	0.25 g	0.25 ltr.	400-500	-
Rice	Three sprays at 25, 45 and 65 days after transplanting	0.25 g	0.25 ltr.	400-500	-

Chilli	Three sprays at 25, 45 and 65 days after transplanting	0.25 g	0.25 ltr.	400-500	-
Tomato	Three sprays at 25, 45 and 65 days after transplanting	0.25 g	0.25 ltr.	400-500	-
Groundnut	Three sprays at 25, 45 and 65 days after sowing	0.25 g	0.25 ltr.	400-500	-
Tea	Three sprays: 1st spray on mature plants, 2nd spray one month after 1st spray, 3rd spray one month after 2nd spray	0.25 g	0.25 ltr	400-500	-
Cyclanilide 2.10% w/w +Mepiquat Chloride 8.40% w/w SC					
Cotton	First spray should be applied at square formation stage or after 45-55 days of sowing. 2nd and 3rd spray should be applied at an interval of 15 days.	4.40 +17.60 to 4.95 +19.80 gm	200 - 225	500	21
Gibberellic acid 1.8% + 6-Benzyladenine 1.8% L					
Apple	To increase the yield through enhancement of fruit size and weight, to improve the shape and development of prominent calyx lobes (typiness). To increase lateral bud break and shoot growth (branching) & improving branch angle of nursery stock young apple trees	30-60 ppm	840-1680 ppm	1000	-

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