



PESTICIDES & PHEROMONE TRAPS

INSECTICIDES

PHEROMONE TRAPS



FUNGICIDES



BIO PESTICIDES



BACTERICIDES

WEEDICIDES







Multiplex Pesticides for Total Crop Protection

FORMULATIONS

Code	Name
Solid Formulations	
DP	Dusting Powder
DS	Powders for dry seed treatment
DT	Tablets for direct application
EG	Emulsifiable Granules
EP	Emulsifiable Powders
GR	Granules
GW	Water soluble gel
SG	Water soluble granules
SP	Water soluble powders
SS	Water soluble powders for seed treatment
ST	Water soluble tablets
WG	Water dispersable granules
WP	Wettable Powders
WS	Water dispersable powders for slurry seed treatment
WT	water dispersable tablets
Liquid formulations - dual character formulations	
SE	Aqueous suspo-emulsions

Code	Name
Liquid formulation- Simple solution	
LS	Solution for seed treatment
OL	Oil-miscible liquid
SL	Soluble liquid
ULV	Ultra-low-volume (ULV) liquids
Liquid formulation-solution for dispersion	
DC	Dispersion concentrate
EC	Emulsifiable concentrate
Liquid formulation-emulsion	
ES	Emulsions for seed treatment
EW	Emulsions, oil-in-water
ME	Micro-emulsions
Liquid formulations - suspensions	
CS	Aqueous capsule suspensions
FS	Flowable concentrates for seed treatment
OD	Oil-based suspension concentrates
SC	Aqueous suspension concentrates

Toxicity Trainagle	Toxicity Level	Label
	Extremely toxic	Red coloured lower triangle, white upper triangle along with skull and cross bones and written as POISON
	Highly toxic	Yellow coloured lower triangle, white upper triangle written as POISON
	Moderately toxic	Blue coloured lower triangle, white upper triangle written as DANGER
	Slightly toxic	Green coloured lower triangle, white upper triangle written as CAUTION

CONTENTS



INSECTICIDES

2



FUNGICIDES

21



BACTERICIDES

32



WEEDICIDES

35



BIO-PESTICIDES

42



PHEROMONE TRAPS

45

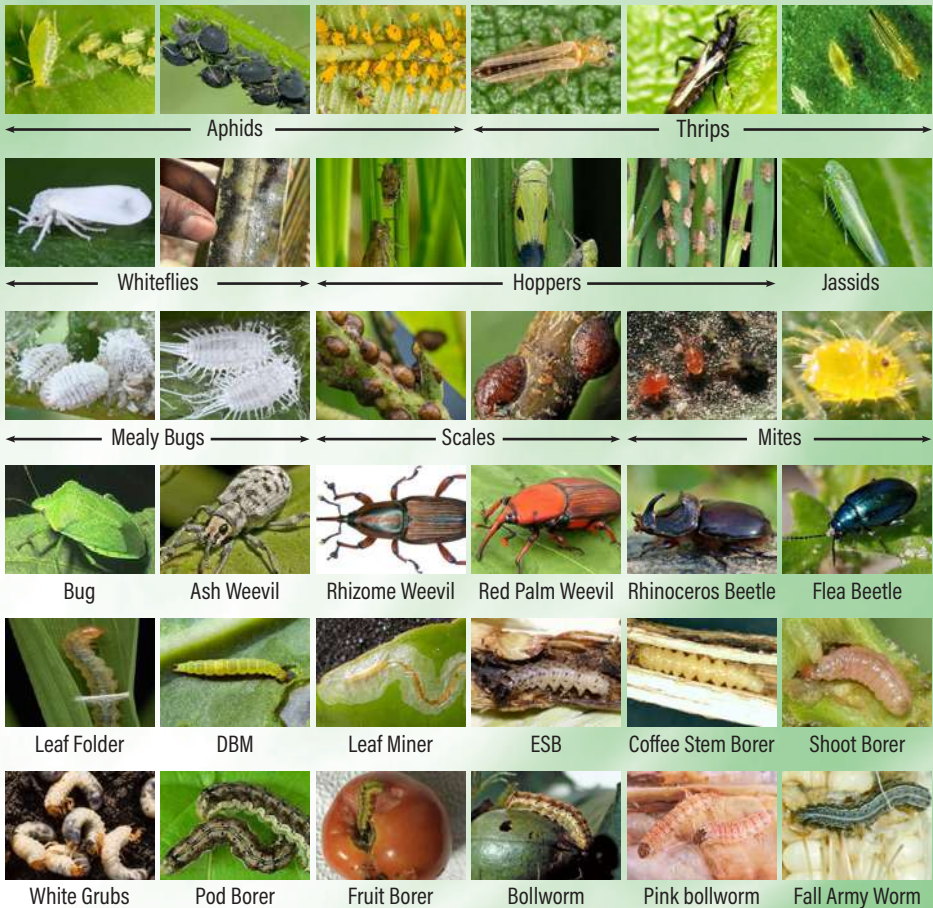




INSECTICIDES

Insecticides are chemicals used to control insect pests by killing or preventing them from damaging crops. Insecticides are used to control insect pests that infest cultivated plants or act as vectors to many diseases. Majority of Insecticides affect the nervous system of insects, inhibit the production of essential enzymes or interferes with metamorphosis. Insecticides are classified according to type of action as Stomach poisons, Contact poisons, Systemic poisons, Fumigants, Repellants and Attractants. Many insecticides act in more than one way.

COMMON INSECT PESTS OF CROPS



INSECTICIDES



MULTIPLY NAGTAP



ACTIVE INGREDIENT:

CARTAP HYDROCHLORIDE 4% GR

MODE OF ACTION: Nereistoxin analogues, nAchR channel blocker, IRAC group 14. Systemic, Contact and Stomach insecticide.

TARGET PESTS: For control of pests like Stem Borer, Fruit & Shoot Borer, Leaf folder and whorl maggot in Paddy, Sugarcane, Cotton, Potato, Ginger & Vegetables.

DOSAGE: 8 to 10 kg per acre.

SPECIAL FEATURES: It is very good fumigant and can be effectively used in combination with synthetic pyrethroids

AVAILABLE PACKING: 5 kg

MULTIPLY POLESTAR



ACTIVE INGREDIENT:

BUPROFEZIN 25% SC

MODE OF ACTION: Inhibitors of chitin biosynthesis type 1, IRAC group 16, broad spectrum Systemic and Contact insecticide.

TARGET PESTS: Effective on pests such as Plant hoppers, Leaf hoppers, Whiteflies, Scales and Mealybugs in crop like Paddy, Cotton, Citrus, etc., Effectively controls Brown plant hoppers in Paddy.

DOSAGE: 2 to 2.5 ml/ litre of water.

SPECIAL FEATURES: It is an Insect Growth Regulator. Inhibits moulting of nymphs and larvae.

AVAILABLE PACKING: 250 ml, 500 ml, 1 litre & 5 litres



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INSECTICIDES

MULTIPLEX CLASH-D



ACTIVE INGREDIENT:

CHLORPYRIPHOS 1.5% DP

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B. Non-Systemic, broad spectrum Contact and Stomach action.

TARGET PESTS: Stem borer, Leaf roller, Green Leaf hopper, Brown Plant hopper, Gall midge, Leaf folder, Stem borer, Cutworm, Early Shoot borer, Rootgrub and Termites.

DOSAGE: 5 to 10 kg/ acre

SPECIAL FEATURE: It gives quick knockdown effect with vapour action

AVAILABLE PACKING: 500 g, 1 kg & 25 kg

MULTIPLEX NAGIN-D



ACTIVE INGREDIENT:

QUINALPHOS 1.5% DP

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Contact and Stomach action.

TARGET PESTS: Ear head bug, Ear-head midge, BPH, Pod borer, Leaf weevil, Stem fly, Aphids, Jassids, Thrips, Bollworm, and Red Hairy Caterpillar and Termites in crops like Sorghum, Paddy, Pulses, French bean, Fibre Crops, Cotton, Groundnut, Safflower, Vegetables and Chillies.

DOSAGE: 8 to 10 kg/ acre.

SPECIAL FEATURES: Highly effective in controlling Hairy Caterpillars with Quick Knockdown effect.

AVAILABLE PACKING: 25 kg

INSECTICIDES



MULTIPLY NAGMALA-D



ACTIVE INGREDIENT:

MALATHION 5% DP

MODE OF ACTION: Organophosphate, AchE inhibitors, IRAC group 1B, Insecticide with Contact, Stomach & Respiratory action.

TARGET PESTS: Hispa, Earhead Midge, ants, termites and Pod Borer in crops like Paddy, Sugarcane, Sorghum, Red Gram, etc.

DOSAGE: 5 to 8 kg /acre.

SPECIAL FEATURES: It is less toxic to mammals.

AVAILABLE PACKING: 1 kg, 5 kg, 10 kg & 25 kg

MULTIPLY CLASH-G



ACTIVE INGREDIENT:

CHLORPYRIFOS 10% GR

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Broad spectrum with Non-Systemic Contact and Stomach action.

TARGET PESTS: It is used to control Stem borer, Leaf roller and Gall midge of rice.

DOSAGE: 5 to 10 kg/ acre

SPECIAL FEATURES: Kills insects upon Contact by affecting the normal function of the nervous system.

AVAILABLE PACKING: 1 kg & 5 kg



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INSECTICIDES

MULTIPLEX NAGPYRIPOS



ACTIVE INGREDIENT:
CHLORPYRIPHOS 20% EC

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Non-Systemic, Broad-spectrum Contact, Stomach and Respiratory action.

TARGET PESTS: It is commonly used in the control of Termites, Shoot & Fruit Borer, Stem borers and Leaf eating caterpillars, Hispa, Leaf roller, Gall midge, Black bug, Pod borer, Cut worm, Early shoot borer, Pyrilla, Bollworm, Whitefly, Aphids, Rootgrub, Diamond Back Moth, Leaf hopper, and Ground beetle on a wide range of Field crops, Pulses, Oil seeds, Vegetables and Fruit crops.

DOSAGE: 2 to 3 ml/ litre of water.

SPECIAL FEATURES: Due to fumigant action highly effective against internal borers and soil dwelling Insects

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre, 5 litres & 20 litres

MULTIPLEX NAGIN



ACTIVE INGREDIENT: QUINALPHOS 25% EC

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Contact & Stomach poison.

APPLICATION: Brown Plant Hopper, Hispa/ Blue beetle, Leaf roller, Stem borer, Mite, Shoot fly, Ear head caterpillar, Bihar Hairy Caterpillar, Stem fly, Pod borer, Pod fly, Weevil, Black bug, Tingid bug, Aphids, Jassids, Thrips, Whitefly, Scales, Semi looper, Leaf hopper, Leaf miner, Sawfly, Shoot and Fruit borer, Citrus butterfly and Bugs of Field crops, Pulses, Oil seeds, Vegetables and Fruit crops

DOSAGE: 2 to 2.5 ml/ litre of water.

SPECIAL FEATURES: Good penetration properties. Degrades very fast in plants.

AVAILABLE PACKING: 100 ml, 500 ml, 1 litre, 5 litres & 20 litres

INSECTICIDES



MULTIPLY NAGOR



ACTIVE INGREDIENT:

DIMETHOATE 30% EC

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Systemic, Contact & Stomach action.

TARGET PESTS: It is highly effective in controlling the sucking pests, Painted bug, Shoot fly, Midge, Semi looper, Sawfly, Leaf minor, Mites, Stem borer, *Helicoverpa*, *Spodoptera*, Diamond back moth and Leaf roller caterpillar pests of Vegetables, Fruits and Cereals.

DOSAGE: 2 ml/ litre of water.

SPECIAL FEATURES: It is highly compatible with other Insecticides and Fungicides.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres

MULTIPLY BORDER-50



ACTIVE INGREDIENT:

CHLORPYRIFOS 50 % EC

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Non-Systemic, Broad-spectrum Contact, Stomach and Respiratory action.

TARGET PESTS: It is commonly used in the control of Termites, Shoot & Fruit borer, Stem borers and Leaf eating caterpillars, Hispa, Leaf roller, Gall midge, Black bug, Pod borer, Cutworm, Early shoot and stalk borer, Pyrrilla, Bollworm, Whitefly, Aphids, Rootgrub, Diamond Back Moth, Leaf hopper, and Ground beetle on a wide range of Crops like Cotton, Pulses, Oilseeds, Paddy, Beans, Gram, Sugarcane, Brinjal, Cabbage, Onion, Apple, Citrus and Tobacco

DOSAGE: 1.5 to 2 ml/ litre of water.

SPECIAL FEATURES: Due to fumigant action highly effective against internal borer and soil dwelling Insects.

AVAILABLE PACKING: 500 ml, 1 litre & 5 litres



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INSECTICIDES

MULTIPLEX NAGETHION



ACTIVE INGREDIENT: ETHION 50% EC

MODE OF ACTION: It is an Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Non-Systemic with predominantly Contact and Stomach

TARGET PESTS: Pink Mites, Purple Mites, Scarlet Mites, Red Spider Mites, Thrips, Aphids, Whitefly, Tea mosquito bug, Caterpillar, Pod borer, Girdle beetle, Stem fly and Termites in crops like Tea, Cotton, Chilli, Pigeon pea, Soyabean, etc.,

DOSAGE: 2ml/ litre of water.

SPECIAL FEATURES: Strong Insecticide, Acaricide and Termiticide with quick knock down, Ovicidal and residual action

AVAILABLE PACKING: 500 ml, 1 litre, 5 litres & 20 litres

MULTIPLEX NAGPROFEN



ACTIVE INGREDIENT: PROFENOPHOS 50% EC

MODE OF ACTION: Organophosphate Insecticide, AchE inhibitors, IRAC group 1B, Broad spectrum, Systemic with Contact & Stomach action

TARGET PESTS: Aphids, Jassids, Thrips, White fly and Boll worms in cotton and other crops.

DOSAGE: 2 to 2.5 ml/ litre of water

SPECIAL FEATURES: Acaricide, Ovicide cum Adulticide. Being broad spectrum it affords control over all sucking pests and foliar feeding larvae.

AVAILABLE PACKING: 500 ml & 1 litre

INSECTICIDES



MULTIPLY NAGPHOS



ACTIVE INGREDIENT:

MONOCROTOPHOS 36% SL

MODE OF ACTION: Organophosphate

Insecticide, AchE inhibitors, IRAC group 1B, Systemic and Contact action.

TARGET PESTS: Armyworm, Weevil, Bollworm, Fleahoppers, *Lygus* Plant Bugs, Mites, Cutworm, Borers, Tobacco Bud Worm, Tobacco Horn worm, BPH, GLH, Yellow Stem borer, Pod Borer, Aphid, Jassid, Thrips, Whitefly, Mealy Bug, Leaf Roller, Shoot fly, Leaf miner, Early Shoot Borer, Pyrilla, Scale Insects & Stalk Borer in crops like paddy, pulses, cotton, vegetables & fruit crops.

DOSAGE: 2 ml/ litre of water.

SPECIAL FEATURES: Broad spectrum Systematic insecticide with quick knock down effect to control various sucking and chewing pests

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre, 5 litres & 10 litres

MULTIPLY NAGACE



ACTIVE INGREDIENT: ACEPHATE 75% SP

MODE OF ACTION: Organophosphate, AchE inhibitors, IRAC group 1B, Contact and Systemic action.

TARGET PESTS: It is particularly effective on severe infestations of sucking and chewing insects of Tobacco, Sugarcane, Cotton, Safflower, Chillies, Vegetables, Fruits and Cereals. It is also effective against Green & Brown Leafhoppers and Brown plant hoppers. It has low toxicity to mammals and does not harm beneficial insects.

DOSAGE: 1.5 to 2 g/ litre of water

SPECIAL FEATURES: Has ovicidal action and can be alternatively used with Synthetic Pyrethroid for controlling resistance development in Insects.

AVAILABLE PACKING: 100g, 250 g, 500 g & 1 kg



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INSECTICIDES

MULTIPLEX VIGILANT



ACTIVE INGREDIENT:

LAMBDA-CYHALOTHRIN 4.9% CS

MODE OF ACTION: Synthetic Pyrethroid Insecticide, Sodium channel modulators, IRAC group 3, Non-Systemic, Contact & Stomach action.

TARGET PESTS: It is recommended for the control of Bollworms in Cotton, Stem borer and leaf folder in Paddy, Shoot and Fruit borer in Brinjal, Fruit borer in Okra and Tomato, Thrips and flea beetle in grapes, Thrips and Pod borer in Chilli and Stem fly, Semi looper in Soya bean, Thrips and Fruit borers on Pomegranate crop.

DOSAGE: 1 ml/ litre of water

SPECIAL FEATURES: It has insect repellent properties with little fumigant action.

AVAILABLE PACKING: 250 ml, 500 ml & 1 Ltr.

MULTIPLEX NAGFEN-D



ACTIVE INGREDIENT:

FENVALERATE 0.4% DP

MODE OF ACTION: Synthetic pyrethroid Insecticide, Sodium channel modulators, IRAC group 3, Non-Systemic, Contact & Stomach action.

TARGET PESTS: All Chewing, Sucking and Boring insects on a wide variety of Crops

DOSAGE: 8 to 10 kg/ acre.

SPECIAL FEATURES: Used as an Animal Ecto parasiticide and is highly useful for control of Termites in Agriculture and Forestry. Also give Protection against caterpillars and mites.

AVAILABLE PACKING: 500 g, 1 kg, 5 kg, 10 kg & 25 kg

INSECTICIDES



MULTIPLY NAGLAMBDA-5



ACTIVE INGREDIENT:

LAMBDA CYHALOTHRIN 5% EC

MODE OF ACTION: Synthetic pyrethroid Insecticide, Sodium channel modulators, IRAC group 3, Non-Systemic, Contact & Stomach action.

TARGET PESTS: Fruit flies, plant hoppers, Thrips, Jassid, Bollworms, Leaf hopper, Stem borer, Gall midge, Hispa, Brown Plant Hoppers, Whorl maggot, Shoot & Fruit borer in crops like Cotton, Paddy, Brinjal, Tomato *etc.*,

DOSAGE: 1 ml/ litre of water.

SPECIAL FEATURES: Broad spectrum, Acaricide, It has insect repellent properties with little fumigant action.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres

MULTIPLY NAGMETHRIN



ACTIVE INGREDIENT:

ALPHAMETHRIN 10% EC

MODE OF ACTION: Synthetic Pyrethroid, Sodium channel modulators, IRAC group 3, Contact and Stomach.

TARGET PESTS: It is effective against lepidopteran pests like Bollworm, Diamond Backmoth, Fruit Borer, Shoot Borer, Early Shoot Borer, Shoot fly and Bihar Hairy Caterpillar and sucking pests in Cotton, Cabbage, Okra, Brinjal, Sugarcane, Wheat, Sunflower *etc.*,

DOSAGE: 1.5 to 2 ml/1 litre of water

SPECIAL FEATURES: Controls all Lepidopteran pest through quick knockdown effect. Also exhibits Ovicidal and Antifeedant action.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres



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INSECTICIDES

MULTIPLEX TWIST



ACTIVE INGREDIENT:

BIFENTHRIN 10% EC

MODE OF ACTION: Broad spectrum synthetic pyrethroid, Sodium channel modulators, IRAC group 3, Contact and Stomach action against insects

TARGET PESTS: It is effective against sucking & chewing types pests like bollworms, white fly, leaf folder, green leaf hopper, stem borer and termites in cotton, paddy sugarcane *etc.*

DOSAGE: 0.5 to 1 ml/ litre of water

SPECIAL FEATURES: Acaricide, It does not have any phytotoxic effect on plants.

AVAILABLE PACKING: 250 ml, 500 ml & 1 litre

MULTIPLEX NAGCYPER-10



ACTIVE INGREDIENT:

CYPERMETHRIN 10% EC

MODE OF ACTION: Synthetic Pyrethroid group, Sodium channel modulators, IRAC group 3, Non-Systemic, Contact & Stomach action.

TARGET PESTS: Bollworm, Diamond Backmoth, Fruit Borer, Shoot Borer, Early Shoot Borer, Shoot fly and Bihar Hairy Caterpillar in crops like Cotton, Cabbage, Okra, Brinjal, Sugarcane, Wheat, Sunflower, *etc.*,

DOSAGE: 1.5 to 2 ml/ litre of water.

SPECIAL FEATURES: It gives quick knockdown effect.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres

INSECTICIDES



MULTIPLY NAGFEN



ACTIVE INGREDIENT:

FENVALERATE 20% EC

MODE OF ACTION: Synthetic Pyrethroid Insecticide, Sodium channel modulators, IRAC group 3, Non-Systemic, Contact & Stomach action.

TARGET PESTS: Aphids, Jassids, American Boll worm, Diamond Back Moth, Thrips, Shoot & Fruit Borer on a wide variety of Crops.

DOSAGE: 2 ml/ litre of water.

SPECIAL FEATURES: It is Photostable and has quick action against several Chewing, Sucking and Boring insects. Acaricide, can be applied to the pests which has gained resistance against Organo chlorines, Organo phosphates and carbamate insecticide.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1litre & 5 litres

MULTIPLY NAGCYPER



ACTIVE INGREDIENT:

CYPERMETHRIN 25% EC

MODE OF ACTION: Synthetic pyrethroid group, Sodium channel modulators, IRAC group 3, Non-Systemic, Contact & Stomach action.

TARGET PESTS: Bollworm, Diamond Backmoth, Fruit Borer, Shoot Borer, Early Shoot Borer, Shoot fly and Bihar Hairy Caterpillar in crops like Cotton, Cabbage, Okra, Brinjal, Sugarcane, Wheat, Sunflower, etc.,

DOSAGE: 1 to 1.25 ml/ litre of water

SPECIAL FEATURES: It gives quick knockdown effect.

AVAILABLE PACKING:

100 ml, 250 ml, 500 ml, 1 litre & 5 litres



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INSECTICIDES

MULTIPLEX NAYANATARA



ACTIVE INGREDIENT:

THIAMETHOXAM 30% FS

MODE OF ACTION: Neonicotinoids group, (nAChR) competitive modulators, IRAC group 4A, Broad spectrum insecticide having Systemic, Contact and Stomach action, Translaminar.

TARGET PESTS: Recommended as seed treatment to control jassid, aphids, whitefly, Shoot fly, Termites, Thrips, Hoppers, Whorl maggot and stem fly.

DOSAGE: 1 ml per litre.

SPECIAL FEATURES: Long lasting effect against sucking pests. Advisable to alternate with other group of insecticides to avoid resistance problem in long run.

AVAILABLE PACKING: 250 ml, 500 ml and 1 litre.

MULTIPLEX BRIGHTSTAR



ACTIVE INGREDIENT:

IMIDACLOPRID 30.5% SC

MODE OF ACTION: Neonicotinoids group, (nAChR) competitive modulators, IRAC group 4A, Broad spectrum insecticide having Systemic, Contact and Stomach action, Translaminar.

TARGET PESTS: Jassids, Aphids, Thrips, Hopper, Whitefly, Brown Plant Hopper, White Back Plant Hopper, Green Leaf Hopper, Soil Pests & Termites in crops like Cotton, chilli, okra, paddy, sugarcane, mango, etc.,

DOSAGE: 0.3 ml/ litre of water.

SPECIAL FEATURES: It is a new generation Termiticide and can be used for Pre-construction and Post-construction anti-termite treatment.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml & 1 litre.

INSECTICIDES



MULTIPLIX NAGMIDA



ACTIVE INGREDIENT:

IMIDACLOPRID 17.8% SL

MODE OF ACTION: Neonicotinoids group, (nAChR) competitive modulators, IRAC group 4A, Systemic and Translaminar action

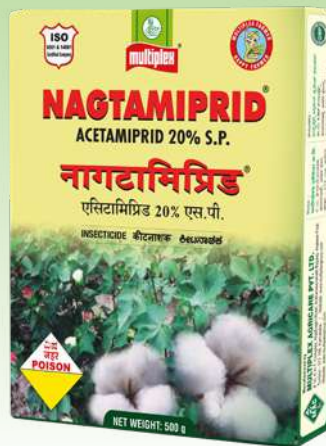
TARGET PESTS: Jassids, Aphids, Thrips, Hopper, Whitefly, Brown Plant Hopper, White Back Plant Hopper, Green Leaf Hopper, Soil Pests & Termites in crops like Cotton, chilli, okra, paddy, sugarcane, mango, etc.,

DOSAGE: 0.5 ml/ litre of water.

SPECIAL FEATURES: Long duration control over pests as compared to conventional insecticides. It is not phytotoxic on any crops if used at recommended doses.

AVAILABLE PACKING: 50 ml, 100 ml, 250 ml, 500 ml, 1 litre & 5 litres

MULTIPLIX NAGTAMIPRID



ACTIVE INGREDIENT:

ACETAMIPRID 20% SP

MODE OF ACTION: It is a Neonicotinoids group, (nAChR) competitive modulators, IRAC group 4A, Systemic action having the ability to control the insects which gained resistance against other insecticides

TARGET PESTS: Sucking pests like Aphids, Jassids, thrips, Colorado Potato Beetle, Flea hoppers, Fruit Moth, Leafhoppers, Leaf Miners and Plant Bugs, also effective against White Flies in cotton, chilli and other crops.

DOSAGE: 0.5 g/ litre of water.

SPECIAL FEATURES: It persists in crops and hence could control the hiding insects for a longer time. It is highly effective insecticide as it has Ovicidal, Adulticidal and Larvicidal.

AVAILABLE PACKING: 20 g, 100 g, 250 g & 500 g



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INSECTICIDES

MULTIPLEX NAVTARA



ACTIVE INGREDIENT:

THIAMETHOXAM 25% WG

MODE OF ACTION: Neonicotinoids group, (nAChR) competitive modulators, IRAC group 4A, Broad spectrum insecticide having Systemic, Contact & Stomach action

TARGET PESTS: Thrips, Aphids, Jassids, Whitefly, mealy bugs, Stem Borer, Gall Midge, Leaf Folder, White Backed Plant hoppers, Brown Plant hoppers, Green Leaf Hopper in crops like paddy, cotton, vegetables, *etc.*

DOSAGE: 0.3 to 0.5 g/litre of water.

SPECIAL FEATURES: Long lasting effect (up to 20 days) against Sucking Insects, affects central nervous system, and eventually paralyzes the muscles of the insects.

AVAILABLE PACKING: 5 g, 100 g, 250 g, 500 g & 1 kg

MULTIPLEX HOTSTAR



ACTIVE INGREDIENT:

IMIDACLOPRID 70% WG

MODE OF ACTION: Neonicotinoids group, (nAChR) competitive modulators, IRAC group 4A, Systemic action.

TARGET PESTS: Jassids, Aphids, Thrips, Termite, Hopper, Whitefly, Brown Plant Hopper, White Back Plant Hopper, Green Leaf Hopper, Soil Pests & Termites in crops like Cotton, chilli, cucumber, okra, paddy, sugarcane, mango, *etc.*,

DOSAGE: 0.2 to 0.25 g/ litre of water

SPECIAL FEATURES: It is a new generation Termiticide. Used for seed treatment for control of sucking pests.

AVAILABLE PACKING: 30 g, 75 g, 150 g & 300 g

INSECTICIDES



MULTIPLY YODHA



ACTIVE INGREDIENT:

EMAMECTIN BENZOATE 5% SG

MODE OF ACTION: Chloride channel activators group insecticide with Contact & Stomach action

TARGET PESTS: Bollworm, Stem Borer, DBM, Leaf Folder, Fruit & Shoot Borer, pod borer, thrips and mites in crops like cotton, okra, cabbage, brinjal, chickpea, chilli and grapes.

DOSAGE: 0.5 g/ litre of water.

SPECIAL FEATURES: Due to translaminar action by which it also controls the caterpillars present on the lower surface of the leaves. Act as Good larvicide and anti-feedent.

AVAILABLE PACKING: 10 g, 50 g, 100 g, 250 g, 500 g & 1 kg

MULTIPLY SUPER YODHA



ACTIVE INGREDIENT:

EMAMECTIN BENZOATE 1.9% EC

MODE OF ACTION: Avermectin group, Glutamate-gated chloride channel (GluCl) allosteric modulator, IRAC group 6, Contact and Stomach.

TARGET PESTS: It is used when the incidence of larvae of Bollworm, stem borer, DBM, Leaf Folder, Fruit & Shoot borer, pod borer, thrips and mites is first observed in crops like cotton, okra, cabbage, brinjal, chickpea, chilli, and grapes.

DOSAGE: 0.5 ml per litre of water

SPECIAL FEATURES: Super Yodha is a highly potent insecticide and also acts as Acaricide. Target insect pests quickly stop eating and dies. It is an eco-friendly insecticide.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml and 1 litre.



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INSECTICIDES

MULTIPLEX PROFENCY



ACTIVE INGREDIENT: PROFENOPHOS 40% + CYPERMETHRIN 4% EC

MODE OF ACTION: It is a combination product of Organophosphate and pyrethroid compound insecticide. Non-systematic with contact and stomach action.

TARGET PEST: It is used to control Bollworm of cotton.

DOSAGE: 2 ml per litre.

SPECIAL FEATURES: It is a proven to be Ovicidal and acts as effective Acaricide. Excellent trans-laminar action which kills target pest on both lower and upper surface of leaves.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml & 1 litre.

MULTIPLEX SHOOT



ACTIVE INGREDIENT: CHLORPYRIPHOS 50% + CYPERMETHRIN 5% EC

MODE OF ACTION: Mixture of organophosphate & synthetic pyrethroid groups. Broad spectrum systemic and contact insecticide.

TARGET PESTS: Aphid, Jassid, Thrips, Whitefly, American bollworm, Spotted bollworm, Pink bollworm and *Spodoptera litura* in Cotton and other crops.

DOSAGE: 2 ml/ litre of water.

SPECIAL FEATURES: Shoot has strong effect on insect nervous system and could penetrate the thick wall of larva made up of waxes and lipids and killing target pest with quick knockdown effect.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres

INSECTICIDES



MULTIPLY PYZINE



ACTIVE INGREDIENT:

PYMETROZINE 50% WG

MODE OF ACTION: Chordotonal organ TRPV channel modulators belongs to Pyridine azomethine derivatives of IRAC group 9B. Contact, Stomach, Translaminar and Systemic.

TARGET PESTS: Brown Plant Hoppers in Paddy and White flies

DOSAGE: 1 to 1.5g/ liter of water.

SPECIAL FEATURES: Permanent feeding inhibition, prevents the aphid from transmitting virus material into the plan.

AVAILABLE PACKING: 120 g, 250 g, 500 g & 1 kg

MULTIPLY PYRIPON-E



ACTIVE INGREDIENT:

PYRIPROXYFEN 10% EC

MODE OF ACTION: Juvenile hormone mimics belongs to Pyriproxyfen of IRAC group 7C. Stomach, Contact and Systemic.

TARGET PESTS: Sucking pests on Cotton and Chilli, Whitefly, Jassids on Okra and Brinjal.

DOSAGE: 1 to 2 ml/ liter of water.

SPECIAL FEATURES: It acts on multi points of insect developmental life cycle like egg, larvae and adult.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml and 1 litre.



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INSECTICIDES

MULTIPLEX RAISE



ACTIVE INGREDIENT: CHLORANTRANILIPROLE 18.5% SC

MODE OF ACTION: Ryanodine receptor modulators belongs to Diamide of IRAC group 28. Broad spectrum, Systemic and Contact insecticide

TARGET PESTS: Used against on lepidopteran pests like Stem borer, Leaf folder, Diamond back moth, American bollworm, Spotted bollworm, Tobacco caterpillar, Termite, Early shoot borer, Top borer, Fruit borer, Green Semi looper, Stem fly and Girdle beetle

DOSAGE: 0.3 to 0.5ml/ liter of water.

SPECIAL FEATURES: Chlorantraniliprole is active on chewing pest insects primarily by ingestion and secondarily by Contact

AVAILABLE PACKING: 10 ml, 30 ml, 60 ml & 150 ml



FUNGICIDES

Fungicides are chemical compounds used to kill or inhibit Fungi or Fungal spores from causing diseases in crops. Fungus cause serious damage in agriculture resulting in severe loss in yield, quality and profit. Fungicides can either be Contact, Translaminar or Systemic. Contact fungicides are not taken up into the plant tissue and hence protection is at only where the spray solution is deposited. Translaminar fungicides redistribute themselves from the upper sprayed leaf surface to the lower unsprayed surface. Systemic fungicides are taken up and distributed throughout the plant body.

COMMON FUNGAL DISEASES OF CROPS



Damping Off

Wilt



Gummy Stem Blight



Citrus Gummosis



Cercospora Leaf Spots



Anthracnose



Downy Mildew



Powdery Mildew



Leaf Rust



Early Blight



Late Blight



Leaf Blast



multiplex

FUNGICIDES

MULTIPLEX TOUGH



ACTIVE INGREDIENT: SULPHUR 80% WDG

MODE OF ACTION: Chemicals with multi-site activity with FRAC code M02, Inorganic broad-spectrum Non systemic, Contact and protective fungicide.

TARGET DISEASES: Powdery Mildew, Rust, Tikka leaf spot in crops like grapes, apple, mango, citrus, cow pea, moong, urid, pea, chillies, okra, groundnut, etc.

DOSAGE: 2 g/ litre of water.

SPECIAL FEATURES: It has triple action as fungicide, Secondary nutrient (Sulphur) and Acaricide. It has instant dispersion and high suspensibility in water; therefore, it doesn't cause scorching but should not be sprayed when temperature is high.

AVAILABLE PACKING: 500 g, 3 kg & 15 kg

MULTIPLEX NAGSULP-SC



ACTIVE INGREDIENT:
SULPHUR 55.16% SC

MODE OF ACTION: Inorganic group of Contact Fungicide, Chemicals with multi-site activity with FRAC code M02.

TARGET DISEASES: It is used for the control of powdery mildew in grapes and mango.

DOSAGE: 3 ml per litre of water

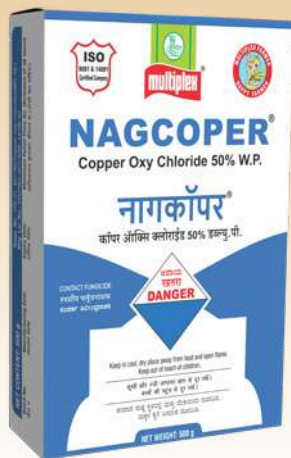
SPECIAL FEATURES: Protective and curative in action, acts as growth promoter, efficient fungicide and powerful acaricide.

AVAILABLE PACKING: 1 litre

FUNGICIDES



MULTIPLY NAGCOPER



ACTIVE INGREDIENT: COPPER OXY CHLORIDE
50% WP

MODE OF ACTION: Inorganic Copper fungicide and bactericide belongs to Multi-site Contact activity of FRAC code M01

TARGET DISEASES: Leaf Spot, Root rot, Fruit Rot, Black Rot, Rust, Clump, Scab, Anthracnose, Early Blight, Late Blight, Downy Mildew in crops like Grapes, Mango, Potato, Tomato, Tobacco, Coffee, other vegetables, Plantation and fruit crops.

DOSAGE: 2 to 3 g/ litre of water.

SPECIAL FEATURES: Copper inhibits synthesis of amino acids & proteins in target pathogens, eventually killing of pathogen and spores.

AVAILABLE PACKING: 100 g, 250g & 500 g.

MULTIPLY NAGCARZIM



ACTIVE INGREDIENT:
CARBENDAZIM 50% WP

MODE OF ACTION: Benzimidazole group belongs to FRAC code 1. Broad spectrum fungicide with Preventive, Curative and Systemic action.

TARGET DISEASES: Blast, Sheath Blight, Seedling Blight, Brown rot, Loose Smut, Powdery Mildew, Leaf Spot, Damping Off, Anthracnose, Scab in crops like paddy, maize, wheat, barley, sugarbeet, peas, clusterbean, cucurbits, roses, ber, grapes, tobacco, chilli and apple.

DOSAGE: 1.5 to 2 g/ litre of water.

SPECIAL FEATURES: After translocated in plant, it becomes fungitoxic by disrupting the cell division, inhibiting development of fungal mycelia & spores, eventually killing fungal pathogens.

AVAILABLE PACKING: 100 g, 250 g, 500 g & 1 kg.



multiplex

FUNGICIDES

MULTIPLEX VISHESH



ACTIVE INGREDIENT:

THIOPHANATE METHYL 70% WP

MODE OF ACTION: Broad-spectrum Systemic fungicide belongs to Thiophanates of IFAC group 1. Acts as both protective, curative, trans cuticular and intralaminar throughout the leaf tissue.

TARGET DISEASES: Powdery mildew of Papaya and Cucurbits, Fusarium wilt of Pigeon Pea, Brown rust and leaf blight of wheat, ring rot of tomato, anthracnose of bottle gourd and scab of apple powdery mildew, anthracnose rust of grapes.

DOSAGE: 2 gms per litre of water.

SPECIAL FEATURES: Prevents disease infection and lesion formation, act as a wound protectant for pruning cuts on trees. Should not be mixed with copper-based Molecules.

AVAILABLE PACKING: 100 g, 250 g, 500 g and 1 kg

MULTIPLEX NAGZOL



ACTIVE INGREDIENT:

HEXACONAZOLE 5% EC

MODE OF ACTION: Broad spectrum belongs to Triazoles fungicide of FRAC group 3, acting as protective, curative and eradicator with strong antisporeulant and translaminar action.

TARGET DISEASES: Powdery Mildew, Scab, Rust, Blast, Sheath Blight, Tikka Leaf Spot, Pod Rot in crops like paddy, grapes, chillies, Groundnut, cereals, millets, etc.

DOSAGE: 2 ml/ litre of water.

SPECIAL FEATURES: It is quickly absorbed and translocated within the leaf and plant system resulting in quick and effective disease control. It gives phytotonic effect and thereby enhances the yield.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres.

FUNGICIDES



MULTIPLY TREAT



ACTIVE INGREDIENT:

PROPICONAZOLE 25% EC

MODE OF ACTION: Broad spectrum belongs to Triazoles fungicide of FRAC group 3, acting as Protective, Curative and Eradicant with strong Antisporulant and Translaminar action.

TARGET DISEASES: Karnal Bunt, Leaf Rust, Brown Rust, Stripe Rust, Sheath Blight, Blister Blight, Tikka Leaf Spot, sigatoka leaf spot in crops like Wheat, Paddy, Groundnut, Coffee, Tea, Soyabean, etc.

DOSAGE: 1 ml/ liter of water.

SPECIAL FEATURES: It is quickly absorbed and translocated within the leaf and plant system within few hours resulting in quick and effective disease control.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml and 1 litre

MULTIPLY TECOZO



ACTIVE INGREDIENT:

TEBUCONAZOLE 25.9% EC

MODE OF ACTION: Systemic fungicides belongs to Triazoles fungicide of FRAC group 3. Protective and curative in action.

TARGET DISEASES: Powdery mildew and Fruit rot of chilli tikka leaf spot, rust of groundnut, blast and sheath blight of rice, purple blotch of onion, anthracnose of soya bean and leaf spot and anthracnose of black gram.

DOSAGE: 1 to 2 ml/ liter of water.

SPECIAL FEATURES: Easily Absorbed and translocated acropetally and accumulated to other parts of plant body. Disintegrates fungal cell wall by Sterol biosynthesis inhibition. inhibit the reproduction and growth of the fungus.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml and 1 litre.



multiplex

FUNGICIDES

MULTIPLEX SERGENT



ACTIVE INGREDIENT:

HEXACONAZOLE 5% SC

MODE OF ACTION: Triazoles fungicide of FRAC group 3 with Broad Spectrum Systemic, Protective and Curative Action.

TARGET DISEASES: Powdery Mildew, Scab, Rust, Blast, Sheath Blight, Tikka Leaf Spot, Pod Rot in crops like paddy, grapes, chillies, Groundnut, cereals, millets, etc.

DOSAGE: 2 ml/ litre of water.

SPECIAL FEATURES: It is quickly absorbed and translocated within the leaf and plant system resulting in quick and effective disease control. It gives Phytotonic effect and there by enhances the yields.

AVAILABLE PACKING: 250 ml, 500 ml, 1 litre & 5 litres

MULTIPLEX SAFARI



ACTIVE INGREDIENT:

TRICYCLAZOLE 75% WP

MODE OF ACTION: Systemic Fungicide belongs to Triazoles fungicide of FRAC group 3. Used as Preventive & Curative.

TARGET DISEASES: Leaf Blast & Neck Blast diseases in Paddy.

DOSAGE: 6 g/ litre of Water.

SPECIAL FEATURES: It is rapidly absorbed and translocated to all plant parts. It provides control against blast in Paddy at all the stages (Leaf blast, Stem blast and Panicle blast).

AVAILABLE PACKING: 120 g & 250 g

FUNGICIDES



MULTIPLY NAGZIRAM



ACTIVE INGREDIENT: ZIRAM 27% SC

MODE OF ACTION: Dithiocarbamate group fungicide with broad spectrum Contact action. It belongs to multi-site Contact activity of FRAC M03 group.

TARGET DISEASES: Blast, Leaf Spot, Rust, Early Blight, Anthracnose, Downy Mildew and Scab in crops like Paddy, Potato, Tomato, Beans, Groundnut, Grapes and Apple.

DOSAGE: 2 to 2.5 ml/ litre of water.

SPECIAL FEATURES: Protective & Curative Fungicide with Zinc supplement. It may be applied to the foliage of plants, but it is also used as a soil and seed treatment.

AVAILABLE PACKING: 500 ml, 1 litre & 5 litres.

MULTIPLY SPEED



ACTIVE INGREDIENT:

MANCOZEB 75 % WP

MODE OF ACTION: Dithiocarbamate group belongs to multi-site Contact activity of FRAC M03. Broad spectrum fungicide, Non-Systemic and Contact Fungicide.

TARGET DISEASES: Brown rust, black rust, Leaf blight, downy mildew, Blast, Leaf spot Early blight, Late blight, buck eye rot, Damping off, Fruit rot, Collar rot, Scab, sooty blotch, black rot, anthracnose, Cigar end rot, tip rot, sigatoka leaf spot in crops like cereals, vegetables & fruits.

DOSAGE: 2 to 3 g/ litre of water.

SPECIAL FEATURES: Acts as Manganese & Zinc supplement. Low risk of resistance development because of the multi-site mode of action. It is not compatible with Lime Sulphur and Bordeaux mixture or alkaline solutions.

AVAILABLE PACKING: 500 g & 1 kg



multiplex

FUNGICIDES

MULTIPLEX POP UP



ACTIVE INGREDIENT:

PROPINEB 70% WP

MODE OF ACTION: Broad Spectrum Dithiocarbamate group of Contact Fungicide belongs to multi-site Contact activity, FRAC M03. Protective and curative in action.

TARGET DISEASES: Alternaria leaf spot, Die back Brown Spots, Mildews, Scab, Rust, Early & Late blights in crops like cereals, vegetables & fruits.

DOSAGE: 2 g per liter of water First spray at the appearance of disease symptoms. Repeat spray at an interval of 7 to 10 days.

SPECIAL FEATURES: Interferes at different locations of the fungi disrupts the metabolism eventually killing of fungi. Also prevents development of resistance in the fungi.

AVAILABLE PACKING: 100 g, 250 g, 500 g and 1 kg

MULTIPLEX DUO-CARE



ACTIVE INGREDIENT: AZOXYSTROBIN 11% +

TEBUCONAZOLE 18.3% SC

MODE OF ACTION: Strong Systemic Broad-Spectrum Fungicide containing methoxy-acrylates and triazole group belongs to FRAC group 11 with Eradicant, Translaminar Preventive and Curative action.

TARGET DISEASES: Fruit rot, powdery mildew and dieback in chilli, purple blotch in onion and sheath blight in rice, Yellow rust in wheat and tomato, early and late blight in potato and downy and powdery mildew in grapes.

DOSAGE: 1 to 1.5 ml/ litre of water

SPECIAL FEATURES: Inhibits spore germination and mycelial growth. Rapidly absorbed onto the vegetative parts of the plant with translaminar movement and disperse rapidly in plant system.

AVAILABLE PACKING: 250 ml, 500 ml & 1 litre

FUNGICIDES



MULTIPLEX TECSULP



ACTIVE INGREDIENT: TEBUCONAZOLE 10% + SULPHUR 65% WG

MODE OF ACTION: Broad Spectrum Systemic & Contact fungicide which is a combination of Triazoles and Chemicals with multi-site activity with preventive and curative.

TARGET DISEASES: It controls powdery mildew, scab, smut, sugarcane red rot, sheath blight, die back, anthracnose, leaf spot, pod blight disease.

DOSAGE: 2 g per litre of water

SPECIAL FEATURES: Tebuconazole disrupts the structural cell wall. Sulphur has a multi-site action, which helps in entering the fungal cells through lipids in the plasma membrane and thereby getting reduction of hydrogen sulphide and killing the fungal cell or spore.

AVAILABLE PACKING: 250g, 500 g and 1 kg

MULTIPLEX M AND M



ACTIVE INGREDIENT: METALAXYL 8% + MANCOZEB 64% WP

MODE OF ACTION: Broad Spectrum Systemic & Contact fungicide consisting of Acylalanines and dithiocarbamates relatives group of fungicides with Preventive and Curative.

TARGET DISEASES: Downy mildew of grapevine, damping off, leaf blight and black shank disease in tobacco in nursery, late blight in potato, white rust and alternaria blight in mustard phytophthora foot rot in black pepper and downy mildew in pearl millet.

DOSAGE: 2 g/ litre of water

SPECIAL FEATURES: Quickly absorbed by plants and gives longer time protection against diseases effectively.

AVAILABLE PACKING: 100 g, 250 g, 500 g and 1 kg



multiplex

FUNGICIDES

MULTIPLEX ZIDDHI



ACTIVE INGREDIENT: CAPTAN 70% + HEXACONAZOLE 5% WP

MODE OF ACTION: Broad spectrum Systemic & Contact chemical belongs to Phthalimides and Triazoles groups.

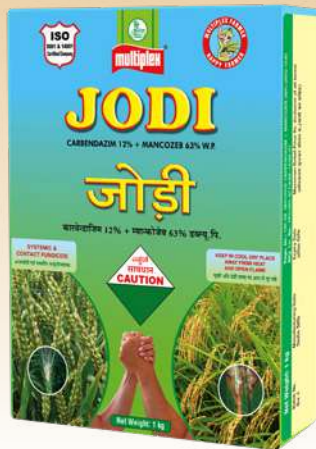
TARGET DISEASES: It is a contact fungicide used for the control of fruit rot (anthracnose) of chilli, early and late blight of potato, powdery mildew rust on black gram.

DOSAGE: 2 g/ litre of water.

SPECIAL FEATURES: It is Protective, Therapeutic, Eradicating and Antagonistic mode of action. This fungicide is also adaptable to soil and seed borne disease.

AVAILABLE PACKING: 100g, 250 g, 500 g and 1 kg

MULTIPLEX JODI



ACTIVE INGREDIENT: CARBENDAZIM 12% + MANCOZEB 63% WP

MODE OF ACTION: Mixture of Benzimidazole and Dithiocarbamate group of fungicide. Broad spectrum, Contact & Systemic action.

TARGET DISEASES: Blast, Leaf spot, Early blight, Late blight, Blister blight, Grey blight, Seedling Blight, Black scurf's of potatoes, Red rust, White rust, Die back, Black root, Loose smut, Powdery Mildew, Damping Off, Anthracnose, Scab in crops like Paddy, Groundnut, Potato, Cotton, Tea, Fruit crops, etc.

DOSAGE: 2 g/ litre of water.

SPECIAL FEATURES: Protective & curative action which controls many fungal diseases in wide range of crops. It also contains plant nutrients Zn & Mn, which improves vigour of the crop.

AVAILABLE PACKING: 100 g, 250 g, 500 g and 1 kg.

FUNGICIDES



MULTIPLY MULTICLEAR

FOR ARECANUT



ACTIVE INGREDIENT: It is a herbal extract enriched with salts of phosphorous and potassium.

TARGET DISEASES: Koleroga, Bud Rot, Late Blight, Downy Mildew, Damping off, Leaf spot disease in Arecanut & Vegetables.

DOSAGE: 4 to 5 ml/ litre of water and spray on the inflorescence and affected areas.

SPECIAL FEATURES: Efficient control of diseases. Also contains Copper and Boron for growth and improved yield.

AVAILABLE PACKING: 500 ml, 1 liter & 5 liters

MULTIPLY MULTICLEAR

FOR ALL CROPS



ACTIVE INGREDIENT: Potassium phosphite

MODE OF ACTION: Multiclear is taken up by plants, has a high degree of phloem mobility, and is translocated to different parts of the plant.

TARGET DISEASES: Die Back, damping off, Fungal wilts, Late blight, Downy Mildews, on Various vegetables and fruit crops caused by oomycetes fungus like phytophthora and Pythium species.

DOSAGE: 3 to 4 ml/ liter of water and spray on the inflorescence and affected areas

SPECIAL FEATURES: Multiclear inhibits growth and sporulation of oomycetes and induces disease resistance in the plants. Multiclear also induces mycorrhizal colonization increased.

AVAILABLE PACKING: 500 ml, 1 liter and 5 liters



BACTERICIDES

Bactericides are chemical substances that kill the Bacteria. Bacteria are microscopic, single celled prokaryotic organisms reproducing asexually by binary fission. They occur singly or in colonies. Plant pathogenic bacteria cause many kinds of diseases and symptoms like galls, wilts, leaf spots, specks, blight, soft rots as well as scabs and canker.

COMMON BACTERIAL DISEASES OF CROPS



← Citrus Canker →

Bacterial Wilt

Erwinia Rot

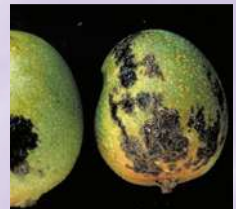


Carrot Soft Rot

Ginger Wilt

Potato Scab

Bacterial Leaf blight



Tomato Canker

← Bacterial Blight →

Mango Black Spot

BACTERICIDES



MULTIPLY MEGHASTAR



ACTIVE INGREDIENT:

VALIDAMYCIN 3% L

MODE OF ACTION: Belongs to Glucopyranosyl antibiotic group of FRAC 26. Anti-biotic and anti-fungal, Systemic bactericide and fungicide.

TARGET DISEASES: Sheath Blight in Paddy, Damping off in Vegetables & Fruits.

DOSAGE: 2 ml/ litre of water.

AVAILABLE PACKING: 250 ml, 500 ml & 1 litre

MULTIPLY BLACK OUT



ACTIVE INGREDIENT: 2 BROMO 2 NITRO-PROPANE- 1, 3 DIOL; 60% w/w

MODE OF ACTION: Anti-bacterial or anti biotic, Immunomodulator

TARGET DISEASES: Black Arm, Angular leaf Spot, Bacterial wilt, Bacterial wart, Bacterial leaf blight, Fire blight, Seedling blight, Twig blight, Crown Gall, Sheath Rot, Stem Rot and Tuber Soft Rot, Stem and Fruit Canker in crops like cotton, citrus, paddy, beetlevine, vegetables, flowers & fruit crops.

DOSAGE: 0.5 to 1 ml/ litre of water

SPECIAL FEATURES: As prophalactic, it act as immunomodulator by enhancing immune system by assisting in secretion of enzymes to produce secondary metabolites which in turns gains resistance against diseases causing pathogens. For best disease control, it can also be sprayed along with fungicides.

AVAILABLE PACKING: 100 ml & 250 ml



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BACTERICIDES

MULTIPLEX BACTINASH - 200



ACTIVE INGREDIENT: 2 BROMO 2 NITRO-PROPANE- 1, 3 DIOL; 95 % w/w

MODE OF ACTION: Anti-bacterial or anti-biotic, Immunomodulator

TARGET DISEASES: Black Arm, Angular leaf Spot, Bacterial wilt, Bacterial wart, Bacterial leaf blight, Fire blight, Seedling blight, Twig blight, Crown Gall, Sheath Rot, Stem Rot and Tuber Soft Rot, Stem and Fruit Canker in crops like vegetables, flowers & fruit crops.

DOSAGE: 0.3 to 0.5 g /litre of water

SPECIAL FEATURES: For best disease control can also be sprayed along with fungicides. Act as immunomodulator by enhancing immune system by assisting in secretion of enzymes to produce secondary metabolites which in turns gains resistance diseases causing pathogens.

AVAILABLE PACKING: 20 g, 50 g, 100g & 250 g



WEEDICIDES (Herbicides)

Weedicides (Herbicides) are chemical substances used to control unwanted plants. Selective herbicides kill specific weeds, while non-selective herbicides kill all plant material with which they come into Contact. Herbicides can also be grouped as Contact & Systemic herbicides, pre-emergent & post emergent herbicides based on activity, use, Chemical family and Mode of action.

COMMON WEEDS IN CROPS



Phalaris minor



Echinochloa crusgallis



Cyperus rotundus



Chenopodium album



Eleusine indica



Dactyloctenium aegyptium



Amaranthus viridis



Tridax procumbens



Parthenium hysterophorus



Cyperus iria



Trianthema portulacastrum



Cynadon dactylon



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WEEDICIDES (Herbicides)

MULTIPLEX KARTA



ACTIVE INGREDIENT:

PENDIMETHALIN 38.7% CS

MODE OF ACTION: It is Dinitroaniline class of Selective Pre-emergence herbicide

TARGET WEEDS: Effective against annual grasses and broad-leaved weeds in range of crops like Soya bean, Cotton, Chilli and Onion crop which controls susceptible, annual broad leaf weeds as they germinate. Pendimethalin does not control perennial or well-established weeds.

DOSAGE: 2 ml per litre of water.

SPECIAL FEATURES: It is an Effective Herbicide Which Disrupts Cell Division at the Time of Weed Seed Germination.

AVAILABLE PACKING: 700 ml and 3.5 litres.

MULTIPLEX FASTOUT



ACTIVE INGREDIENT:

PENDIMETHALIN 30% EC

MODE OF ACTION: It is Dinitroaniline class of Selective Pre-emergence herbicide.

TARGET WEEDS: Effective against annual grasses and broad-leaved weeds in range of crops like Soybean, Wheat, Groundnut, Cotton, Mustard.

DOSAGE: 4 to 5 ml/ litre of water.

SPECIAL FEATURES: It inhibits cell division and cell elongation eventually killing weeds.

AVAILABLE PACKING: 500 ml, 1 litre & 5 litres

WEEDICIDES (Herbicides)



MULTIPLY TARGET



ACTIVE INGREDIENT:

PRETILACHLOR 50% EC

MODE OF ACTION: Selective pre-emergence broad-spectrum herbicide. Acts as a growth inhibitor.

TARGET WEEDS: Effective against Grasses, Sedges & broad-leaved weeds like *Echinochloa crusgalli*, *Echinochloa colonum*, *Cyperus difformis*, *Cyperus iria*, *Fimbristylis miliacea*, *Eclipta alba*, *Ludwigia Pulviflora*, *Leptochloa chinensis*, *Monochorea vaginalis*, *Panicum repens* in agricultural crop (Transplanted Paddy).

DOSAGE: 2 to 3 ml/ litre of water.

SPECIAL FEATURES: It is applied before emergence of weeds. Spray evenly in standing water within 5 days after transplanting.

AVAILABLE PACKING: 500 ml, 1 litre & 5 litres

MULTIPLY KALHENAASH



ACTIVE INGREDIENT:

PRETILACHLOR 37% EW

MODE OF ACTION: Selective Pre-emergence broad spectrum herbicide. Act as a growth inhibitor.

TARGET WEEDS: It is a selective Pre-emergence herbicide i.e., recommended for the control of Grasses, Sedges, and some broad leaf weeds in transplanted rice.

DOSAGE: 2 to 3 ml per liter of water

SPECIAL FEATURES: It dissolves quickly and spreads fast and has an effective action by inhibiting cell division.

AVAILABLE PACKING: 600 ml and 3 litres



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WEEDICIDES (Herbicides)

MULTIPLEX PYROSULF



ACTIVE INGREDIENT:

PYRAZOSULFURON ETHYL 10% WP

MODE OF ACTION: Broad Spectrum Pre-emergent Systemic Herbicide

TARGET WEEDS: It controls *Cyperus iria*, *Cyperus difformis*, *Fimbristylis miliacea*, *Ludwigia praviiflora* and *Monochoria vaginalis*

DOSAGE: 1 gm per litre of water.

SPECIAL FEATURES: The herbicidal activity is derived by inhibition of Acetolactate synthase (ALS) which is essential for synthesis of amino acids.

AVAILABLE PACKING: 20 g and 80 g

MULTIPLEX REMOVE



ACTIVE INGREDIENT:

GLYPHOSATE 41% SL

MODE OF ACTION: Non- selective, Post emergence herbicide, effective against annual and perennial grasses.

TARGET WEEDS: Very effective against deep rooted and woody perennials, annual and biennial grasses, sedges and broad-leaved weeds like *Axonopus compressus*, *Cynodon dactylon*, *Imperata cylindrica*, *Polygonum perfoliatum*, *Paspalum sps*, *Arundinella*

DOSAGE: 10 ml /litre of water. To get effective control mix Urea @ 20 g/litre and spray when there is better moisture in the soil.

SPECIAL FEATURES: Plants treated with Glyphosate slowly die over a period of 5 to 8 days.

AVAILABLE PACKING: 500 ml, 1 litre & 5 litres

WEEDICIDES (Herbicides)



MULTIPLY NAGAT



ACTIVE INGREDIENT:

PARAQUAT DICHLORIDE 24% SL

MODE OF ACTION: Broad Spectrum Non-Selective Post emergence and Contact herbicide.

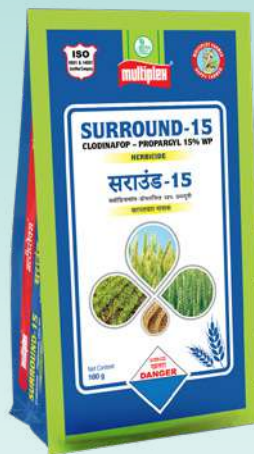
TARGET WEEDS: Very effective against Annual and Perennial Weeds like *Imperata cylindrica*, *Seteria sp.*, *Commelina benghalensis*, *Boerhavia diffusa*, *Paspalum conjugatum*, *Chenopodium sp.*, *Anagallis arvensis*, *Trianthema monogyna*, *Cyperus rotundus*, *Euphorbia hirta*, *Digitaria marginata*, *Eleusine indica*, *Boarhaavia hispida*, *Digera arvensis* and *Cyperus iria* in crops like Tea, Coffee, Rubber, Orchards of Fruit crops.

DOSAGE: 6 ml/ litre of water.

SPECIAL FEATURES: During photosynthesis superoxide generated, which damages plant cell membranes and cytoplasm eventually the killing the weeds .

AVAILABLE PACKING: 250 ml, 500 ml, 1 litre & 5 litres

MULTIPLY SURROUND-15



ACTIVE INGREDIENT:

CLODINAFOF - PROPARGYL 15% WP

MODE OF ACTION: Herbicide

TARGET WEEDS: It is a Post emergence selective herbicide recommended for control of *Phalaris minor* in Wheat crop.

DOSAGE: 16 g/ pump or 160 gm/ acre

SPECIAL FEATURES: This herbicide quickly degrades in the soil and has little or no soil activity.

There are no re-cropping restrictions.

AVAILABLE PACKING: 160 gms



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WEEDICIDES (Herbicides)

MULTIPLEX PYRIUM -10



ACTIVE INGREDIENT:

BISPYRIBAC SODIUM 10% SC

MODE OF ACTION: Broad spectrum Post Emergent Systemic Herbicide

TARGET WEEDS: It controls *Echinochloa crus-galli*, *Echinochloa colona*, *Ischaemum rugosum*, *Cyperus iria*, *Cyperus difformis*, *Fimbristylis miliacea*, *Ludwigia praviiflora* and *Monochoria vaginalis* infesting Paddy crop both in nursery and main field.

DOSAGE: 2 to 3 ml per liter of water

SPECIAL FEATURES: Good herbicide for paddy.

AVAILABLE PACKING: 10 ml, 50 ml, 100 ml, 200 ml, 500 ml and 1 litre

MULTIPLEX NAGRODAR



ACTIVE INGREDIENT:

2, 4-D AMINE SALT 58% SL

MODE OF ACTION: Selective and Systemic Pre & Post Emergence herbicide of Phenoxyacetic group.

TARGET WEEDS: *Trianthema monogyna*, *Amaranthus sp.*, *Tribulus terrestris*, *Boerhavia diffusa*, *Euphorbia hirta*, *Portulaca oleracea*, *Cyperus Sp.*, *Chenopodium album*, *Fumaria parviflora*, *Melilotur alba*, *Asphodlus tenuifolius*, *Convolvulus arvensis*, *Striga sp.*, *Trianthema portulacastrum*, *Tridax procumbens*, *Phyllanthus sp.*, *Digera arvensis*, *Dactyloctenium aegypticum*, *Commelina benghalensis*, *Convolvulus arvensis* and *Chenopodium album* in crops like Maize, Wheat, Sorghum, Sugarcane & Potato

DOSAGE: 2 ml /litre of water.

SPECIAL FEATURES: Acts as a growth inhibitor

AVAILABLE PACKING: 250 ml, 500 ml, 1 litre & 5 litres

WEEDICIDES (Herbicides)



MULTIPLY WEEDOUT



ACTIVE INGREDIENT:

SULFOSULFURAN 75% WG

MODE OF ACTION: Selective early Post-emergence Herbicide.

TARGET WEEDS: Effective against *Phalaris Minor*. It also controls broad-leaved weeds like *Chenopodium album* and *Melilotus alba* in crops like Wheat, Barley & Oats.

DOSAGE: 13.5 g/ acre

SPECIAL FEATURES: By inhibiting the synthesis of amino acids, it stops the metabolic process, within the weed plants.

AVAILABLE PACKING: 13.5 g

MULTIPLY FULFILL



ACTIVE INGREDIENT:

METSULFURON METHYL 20% WP

MODE OF ACTION: Selective Systemic Post-emergence herbicide

TARGET WEEDS: It is used for the control of predominantly broad leaf, weeds of Wheat, transplanted Rice and Sugarcane.

DOSAGE: 8 gm without surfactant, 8 gm with 200 ml surfactant.

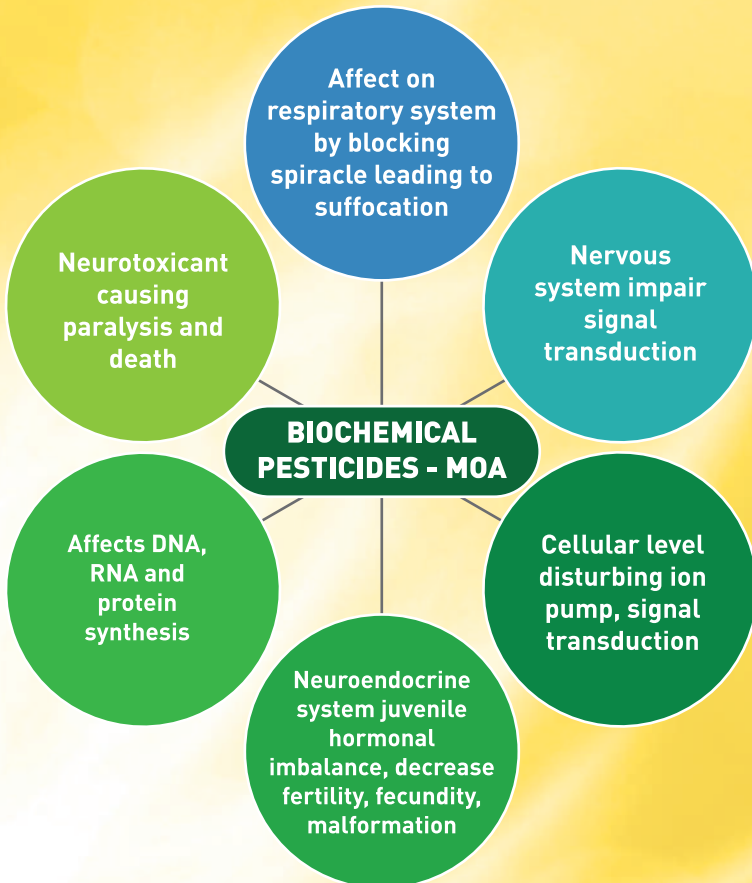
SPECIAL FEATURES: It is very effective and economical and inhibits cell division in the shoots and roots of the plant.

AVAILABLE PACKING: 8 gm without surfactant and 8 gm with 200 ml surfactant.



BIO-PESTICIDES

Bio-Pesticides are naturally occurring substances or organisms that control pests. These substances can also be formulated just like any chemical pesticide and have pesticidal activity. Bio-pesticides are classified as Microbial and Botanical or Phytochemical based on their nature or origin. Microbial Bio-pesticides are based on microorganisms whereas Botanical or Phytochemical Bio-pesticides are derived from plant and plant parts.



BIO-PESTICIDES



MULTIPLY STRIKE PLUS



ACTIVE INGREDIENT: It is a formulation of biologically derived substances containing fatty acid salt and selected essential oils, Botanical essence including synthetic, extracts and unrefined oils with unknown or uncertain MoA.

MODE OF ACTION: Insect repellent with contact action.

TARGET PESTS: Mites, Aphids, Whiteflies, Thrips, Mealy bugs and Plant hoppers on all crops.

DOSAGE: 3 to 5 ml / litre of Water.

SPECIAL FEATURES: Also effective against fungal diseases.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres

MULTIPLY BIO STRIKE



ACTIVE INGREDIENT: It is a broad spectrum bio-pesticide containing active ingredients derived from different plants.

MODE OF ACTION: Insect repellent, anti feedant with ovicidal and larvicidal action.

TARGET PESTS: Effective against large number of sucking and caterpillar pests such as Plant hoppers, Aphids, Psyllids, Whiteflies, Scale insects, Thrips, Gall midges, Fruit flies, Leaf eating insects, Stem borers, Pod/ Fruit borers in plantation, fruits, vegetables and cereals crops.

DOSAGE: 3 to 5 ml /liter of water at regular interval of 10 to 12 days for better results. When pest damage is severe mix 3 ml Bio strike with other chemical pesticides.

SPECIAL FEATURES: Also effective against fungal diseases.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres



multiplex

BIO-PESTICIDES

MULTIPLEX MULTINEMOR



ACTIVE INGREDIENT: AZADIRACTHIN 0.15% EC

MODE OF ACTION: It is a Contact, Systemic and Insect growth regulator.

TARGET PESTS: Plant hoppers, Leaf hoppers, DBM, Pod borers, Fruit borers, Caterpillars, Moths, Beetle, Plant bugs, Gall midges, Fruit flies, Grass hoppers, Locusts, Psyllids, Thrips, Aphids, Whiteflies and Scale insects in Fruits, Vegetables and Cereals, Pulses and Plantation crops.

DOSAGE: 1 to 2 ml/ litre of Water.

SPECIAL FEATURES: Ovicidal, Larvicidal, Antifeedant, repellent, Eco-friendly Bio-Pesticide without any residual effect and does not allow pests to develop resistance. Frequent sprays can be given as prophylactic measure.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre & 5 litres.

MULTIPLEX MULTINEEM



ACTIVE INGREDIENT: AZADIRACTHIN 0.03% EC

MODE OF ACTION: It is a contact, systemic and insect growth regulator.

TARGET PESTS: Plant hoppers, Leaf hoppers, Pod borers, Fruit borers, Caterpillars, Moths, Beetle, Plant bugs, Gall midges, Fruit flies, Grasshoppers, Locusts, Psyllids, Thrips, Aphids, Whiteflies and Scale insects in Fruits, Vegetables and Cereals, Pulses and Plantation crops.

DOSAGE: 3 to 5 ml/ litre of Water.

SPECIAL FEATURES: Contact, Systemic, Anti-feedant, Mating disruptor, Ovicidal, Repellent, Sterilant, Antifeedant, Eco-friendly Bio-Pesticide without any residual effect and does not allow pests to develop resistance. Frequent sprays can be given as prophylactic measure.

AVAILABLE PACKING: 100 ml, 250 ml, 500 ml, 1 litre, 5 litres & 20 Litres.



PHEROMONE TRAPS

Pheromones are chemical substances produced by special abdominal glands in insect and released into the environment which elicits a specific reaction in the receiving individual of the same species. They are compounds used by insects for intra-species communication i.e. they are species specific, may stimulate one gender or both genders. Generally, pheromones are produced by the females and are detected by males using olfactory sensilla on their antenna. Pheromone traps are designed based on the flight nature of particular insect pest. These traps are used for monitoring and mass trapping hence act as an effective management strategy in IPM.



Melon Fly



Fruit Fly



Fall army worm



Fruit & Shoot Borer



Red Palm Weevil



Tuta absoluta



Whitefly



Rhinoceros beetle

TYPE OF PHEROMONE TRAPS





multiplex[®]

PHEROMONE TRAPS

MULTIPLEX AAKARSHAN

(FOR FRUIT CROPS)



ACTIVE INGREDIENT: Methyl eugenol and inert components

CROPS: Mango, Guava, Sapota, Custurd apple (sithaphal), Citrus, Plums etc.

TARGET PESTS: *Bactrocera dorsalis*, *B. zonata*, *B. correcta*, *B. caryae* etc. Among these fruit flies *Bactrocera dorsalis* cause heavy fruit drop and by harvest can inflict 25 to 70% loss.

DAMAGE SYMPTOMS: Infested fruits show oviposition punctures and typically become prematurely soft (with air pockets). Later they rot and exit holes in rotten area can be seen. Presence of maggots confirms the symptoms.

TIME OF INSTALLATION: Traps should be installed when fruits are at marble size

NUMBER OF TRAPS: Six traps for one acre

SPECIAL FEATURES: Aakarshan is a unique pheromone trap which has rainfast, slow-release, lure - with a field life of up to 90 days resulting in 20% more trap catch efficiency.

AVAILABLE PACKING: (1x6)x10

SEPARATE LURES ALSO AVAILABLE: Packing: (1x30)x4

MULTIPLEX TUTAKARSH



ACTIVE INGREDIENT: 3E, 8Z, 11Z - Tetradecatrienyl acetate & 3E, 8Z Tetradecadienyl acetate

CROP: Tomato

TARGET PEST: The Tomato pinworm, *Tuta absoluta* is one of the major destructive invasive pests. It can cause up to 90 to 100% loss of yield and affect the fruit quality under greenhouses and field conditions.

DAMAGE SYMPTOMS: Puncture marks, abnormal shape, exit holes, rotting due to secondary infective agents. Plants are damaged by direct feeding on leaves, stems, buds, young fruit or ripe fruit and by the invasion of secondary pathogens which enter through the wounds made by the pest. It can cause up to 90 to 100% loss of yield and fruit quality under greenhouses and field conditions.

TIME OF INSTALLATION: Immediately after transplantation

NUMBER OF TRAPS: 16 traps for an acre

SPECIAL FEATURES: Multiplex "Tutakarsh" is a pheromone-based trap for monitoring and effective management of *Tuta absoluta*. In addition, the traps also attract thrips.

AVAILABLE PACKING: (1x8)x10

PHEROMONE TRAPS



MULTIPLY AAKARSHAN (FOR CUCURBITS)



ACTIVE INGREDIENT: 4-(4-Acetoxyphenyl)-2-butanone and inert components

CROPS: Cucumbers, Ridge gourd, Bitter gourd, Gherkins, Bottle gourd, Snake gourd, Beans, Chinese wax gourd, Luffa, Melons, Pumpkins, Squashes, Watermelon, etc.,

TARGET PESTS: *Bactrocera cucurbitae*, *B. caudata*, *B. tau* etc. Melon and cucurbit flies are major pests of cucurbitaceous vegetables found to cause 30 to 100% loss in yield.

DAMAGE SYMPTOMS: Infested fruits show oviposition punctures and typically become prematurely soft (with air pockets). Later they rot and exit holes in rotten area can be seen.

TIME OF INSTALLATION: The traps should be installed at flowering stage

NUMBER OF TRAPS: Eighteen traps for an acre

SPECIAL FEATURES: Aakarshan for cucurbits is a unique pheromone trap which has rainfast, slow-release, lure - with a field life of up to 90 days resulting in 20% more trap catch efficiency, than conventional lures.

AVAILABLE PACKING: (1x9)x12

SEPARATE LURES ALSO AVAILABLE: Packing: (1x30)x4

MULTIPLY DELTA TRAP



ACTIVE INGREDIENT: E-11-Hexadecenyl acetate and others

CROP: Brinjal

TARGET PEST: Brinjal Fruit and Shoot Borer *Leucinodes orbonalis*. Brinjal Fruit and Shoot Borer is a very serious pest of brinjal. It makes holes in shoots as well as in fruits and reduces yield by 40 to 80%.

DAMAGE SYMPTOMS: Larval feeding inside shoots results in wilting of the young shoot. The damaged shoots ultimately drop off, disturbing plant growth and reducing fruit number and size.

TIME OF INSTALLATION: At flowering stage

NUMBER OF TRAPS: Twelve traps for an acre

AVAILABLE PACKING: (1x6)x10



multiplex

PHEROMONE TRAPS

MULTIPLEX FALL-OUT



ACTIVE INGREDIENT: Z-7-Dodecenyl acetate and others

CROPS: Maize, sorghum, sugarcane, cotton etc.

TARGET PEST: Fall Armyworm (FAW), *Spodoptera frugiperda* is a major and serious insect pest on maize, infestation in India due to FAW ranges from 2 to 35 per cent on maize.

DAMAGE SYMPTOMS: Papery windows on leaf and defoliation, small to big holes on the leaves, large holes accompanied by larval droppings (excreta), saw dust like appearance seen on leaves, maize leaves are eaten and the whorl (funnel) may be a mass of holes, ragged edges and larval frass.

TIME OF INSTALLATION: 15 to 20 days after sowing of seeds

NUMBER OF TRAPS: Twelve traps for an acre

AVAILABLE PACKING: (1x6)x8

MULTIPLEX PINK-B



ACTIVE INGREDIENT: Z, Z-7, 11-Hexadecadienyl acetate and others

CROPS: Cotton, Okra etc.

TARGET PEST: *Pectinophora gossypiella* (Saunders), is one of the most serious pest of cotton which damages the seeds and fiber thereby causing huge economic loss. The total damage may reach 20 to 50% of the yield.

DAMAGE SYMPTOMS: Excreta found at the point of bored holes by larval feeding, failure of buds to open, flower infestation – formation of rosette flower, infestation of flower buds - premature drop, reduction of lint development and burrowed seed

TIME OF INSTALLATION: One week before flowering

NUMBER OF TRAPS: Twelve traps for an acre

AVAILABLE PACKING: (1x6)x8



PHEROMONE TRAPS

MULTIPLIX ATTRACT

(STICKY TRAP FOR SUCKING PESTS)



ACTIVE INGREDIENT: Non-drying glue based sticky trap

CROPS: All horticultural crops, Most of the agricultural crops, Plantation crops *etc.*

TARGET PESTS: Sucking pests like Thrips, Aphids, Whiteflies, Leaf hoppers, Tea mosquito bug *etc.*

DAMAGE SYMPTOMS: The damage causes the leaf colour to dull, turn yellow or gray, deformed and stunted growth and eventually brown.

NUMBER OF TRAPS: 40 traps for an acre

SPECIAL FEATURES: Easy to handle, best component for both organic farming and conventional farming, ideal for early detection and intervention of target pests, non poisonous and non drying glue - suitable for all weather conditions, highly attractive to target pests.

AVAILABLE PACKING: (1x20)x20 / (1x20)x10

ADVANTAGES OF USING PHEROMONE TRAPS

- ◆ Environment friendly
- ◆ Attract pest from long distances and dissipate rapidly
- ◆ No risk to human health and environment
- ◆ Important component of Integrated Pest Management
- ◆ Important component of Organic Farming



Introduction

Insecticide Resistance action committee (IRAC) promotes the use of a mode of Action (MoA) classification of insecticides allocated to specific groups based on their target site. Reviewed & re-issued periodically, the IRAC MoA classification is a guide to the selection of insecticides or acaricides in IRM programs.

Nerve & Muscle Targets

- Group 1** Acetylcholinesterase (AChE) inhibitors
 1A: Carbarnates (e.g. Thiodicarb)
 1B: Organophosphates (e.g. **Nagin, Nagin -D, Nagace, Clash -D, Clash -G, Nagpyriphos, Border 50, Nagor, Nagethion, Nagmala-D, Nagphos, Nagprofen**)
-
- Group 2** GABA-gated chloride channel blockers
 2A: Cycloclodiene Organochlorines (e.g. Endosulfan)
 2B: Phenylpyrazoles (e.g. Fipronil)
-
- Group 3** Sodium channel modulators
 3A: Pyrethrins, Pyrethroids (e.g. **Nagmethrin, Twist, Nagcyper 10, Nagcyper, Nagfen, Nagfen -D, Naglambda 5, Vigilant**)
 3B: DDT, Methoxychlor
-
- Group 4** Nicotinic acetylcholine receptor (nAChR) competitive modulators
 4A: Neonicotinoids (e.g. **Nagtamiprid, Navtara, Nagmida, Brightstar, Nayanatara, Hotstar**)
 4B: Nicotine
 4C: Sulfoximines (e.g. Sulfoxafloor)
 4D: Butenolides (e.g. Flupyradifurone)
-
- Group 5** Nicotinic acetylcholine receptor (nAChR) allosteric modulators
 5: Spinosyns (e.g. Spinosad, Spinetoram)
-
- Group 6** Glutamate-gated chloride channel (GluCl) allosteric modulators
 6: Avermectins, Milbemycins (e.g. **Yodha, Super Yodha**)
-
- Group 9** Chordotonal organ TRPV channel modulators
 9B: Pyridine azomethine derivatives (e.g. **Pyzine**)
-
- Group 14** Nicotinic acetylcholine receptor (nAChR) channel blockers
 14: Nereistoxin analogs (e.g. **Nagtap**)
-
- Group 19** Octopamine receptor agonists
 19: Amitraz
-
- Group 22** Voltage dependent sodium channel blockers
 22A: Oxadiazines (e.g. Indoxacarb)
 22B: Semicarbazones (e.g. Metaflumizone)
-
- Group 28** Ryanodine receptor modulators
 28: Diamides (e.g. **Raise**)
-
- Group 29** Chordotonal organ modulators – undefined target site
 29: Flonicamid

Midgut Targets

- Group 11** Microbial disruptors of insect midgut membranes
 11A: *Bacillus thuringiensis* (e.g. **Minchu, Minchu+**)
 11B: *Bacillus sphaericus*

Miscellaneous non-specific (Multi - site) inhibitors

Group 8 8A: alkyl halides, 8B: Chloropiricrin, 8C: Fluorides, 8D: Borates 8E: tartar emetic, 8F: Methyl isothiocyanate generators

MoA Sequences & alternations - Exceptions

IRAC recommends alternations, sequences or rations of compounds from different MoA groups to provide a sustainable and effective approach to IRM. three groups(8, 13 & UN) are exempt from the recommendations as they do not contain compounds acting at a common target site



of Action Classification



secticides as the basis for effective & sustainable insecticide resistance management (IRM). Insecticides are
classification list provides farmers, growers, advisors, extension staff, consultants & crop protection professionals with



Respiration Targets

- Group 12** Inhibitors of mitochondrial ATP synthesis
12A: Diafenthiuron
12B: Organotin miticides (e.g. Cyhexatin)
12C: Propargite
12D: Tetradifon
-
- Group 13** Uncouplers of oxidative phosphorylation via disruption of the proton gradient
13: Pyrroles (e.g. Chlorfenapyr), Dinitrophenols, (e.g. DNOC), Sulfuramid
-
- Group 20** Mitochondrial complex III electron transport inhibitors
20A: Hydramethylnon
20B: Acequinocyl
20C: Flucrypyrim
20D: Bifenazate
-
- Group 21** Mitochondrial complex I electron transport inhibitors
21A: METI acaricides & insecticides (e.g. Pyridaben)
21B: Rotenone (Derris)
-
- Group 24** Mitochondrial complex IV electron transport inhibitors
24A: Phosphides (e.g. Phosphine)
24B: Cyanides (e.g. Sodium cyanide)
-
- Group 25** Mitochondrial complex II electron transport inhibitors
25A: Beta-ketonitrile derivatives (e.g. Cyenopyrafen, Cyflumetofen)
25B: Carboxanilides, (e.g. Pyflubumide)

Growth & Development Targets

- Group 7** Juvenile hormone mimics
7A: Juvenile hormone analogues (e.g. Methoprene)
7B: Fenoxycarb
7C: Pyriproxyfen (**Pyripon-E**)
-
- Group 10** Mite growth inhibitors
10A: Clofentazine, Diflovidazin, Hexythiazox
10B: Etoxazole
-
- Group 15** Inhibitors of chitin biosynthesis, Type 0
15: Benzoylureas (e.g. Flufenoxuron, Novaluron)
-
- Group 16** Inhibitors of chitin biosynthesis, type 1
16: Buprofezin (**Polestar**)
-
- Group 17** Moulting disruptors, Dipteran
17: Cyromazine
-
- Group 18** Ecdysone receptor agonists
18: Diacylhydrazines (e.g. Methoxyfenozide, Tebufenozide)
-
- Group 23** Inhibitors of acetyl CoA carboxylase
23: Tetricin & Tetramic acid derivatives (e.g. Spirodiclofen)

Unknown

Group UN Compounds of unknown or uncertain mode of action (e.g. Azadiractin: **Multineem**, **Multinemor**, Benzoximate, Bromopropylate, Chinomethionat, Dicofol, Lime Sulfur, Pyridaly), Sulfur)

MULTIPLEX PESTICIDES & PHEROMONE TRAPS



Come Let's 
Grow Together



MULTIPLEX AGRICARE PVT. LTD.



MULTIPLEX BIO-TECH PVT. LTD.



KARNATAKA AGRO CHEMICALS

No. 180, 1st Main Road, Mahalakshmi Layout Extension, Bengaluru - 560 086. INDIA.

Ph: 080-2349 4406, 2349 7360, 2349 7464.

Email: multiplex@multiplexgroup.com | Website: www.multiplexgroup.com