



## SERANGGA PEMANGSA PEROSAK TANAMAN

### Serangga Pemangsa Semula Jadi Perosak Tanaman:

- Mengawal dan mengurangkan populasi perosak tanaman pada tahap yang rendah.
- Mudah terdedah kepada kesan toksik racun.
- Boleh diperbanyakkan dengan menaman tanaman berbunga berdekatan dengan ladang.

### PEMANGSA Memakan dan memburu serangga perosak tanaman



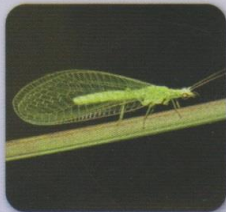
Nandong



Kumbang Kura-kura



Semut Api



Lacewing



Kesisang Mirid



*Poecilotrappera taeniata*



Labah-labah



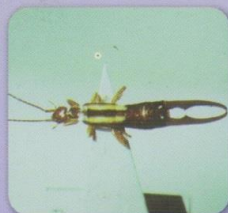
Kumbang Tanah



*Anatrichus pygmaeus*



Kumbang *Paederus*



Lelawi

### PARASIT / PARASITOID Bertelur di atas atau dalam badan / telur serangga perosak tanaman

\*Parasit / parasitoid ini tidak dapat dilihat dengan mata kasar



*Stenobracon nicevilleri*



*Temelucha philippinensis*



*Tomosvaryella subvirescens*



## NATURAL ENEMIES OF PLANT PESTS

### Natural Enemies:

- Control and suppress pest population at a minimum level.
- Easily exposed to insecticidal effect.
- Can be conserved by planting flowering plants around the farms.

### PREDATOR Eat and hunt plant pests



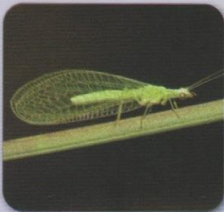
Dragonfly/Damselfly



Lady Beetle



Fire Ant



Lacewing



Mirid Bug



*Poecilotrappera taeniata*



Spider



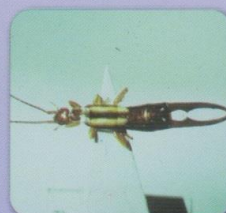
Ground Beetle



*Anatrichus pygmaeus*



*Paederus* Beetle



Earwig

### PARASITE / PARASITOID

Lay eggs on or in the body / eggs of plant pests  
\*Parasite / parasitoid is microscopic



*Stenobracon nicevilleri*



*Temelucha philippinensis*



*Tomosvaryella subvirescens*


**PANDUAN PENGGUNAAN RACUN PENYAKIT TANAMAN OGOS 2014**

Bahan Aktif	Nama Perdagangan	Penyerapan	Sukatan bagi 4.5 liter Air	Jarak Penggunaan	Tempoh Pemetikan Hasil Selepas Semburan
Azoxystrobin	Amistar	Meresap	2.5ml	7 hari	3 hari
Azoxystrobin + Difenoconazole	Amistartop	Meresap	5ml (sayur/buah) 7ml (padi)	7 hari (sayur/buah) 14 hari (padi/lada)	7 hari (sayur/buah) 14 hari (lada) 28 hari (padi)
Benomyl	Benlate CH Benomyl Benex	Meresap	5g 2g 2g	14 hari	14 hari
Bitertanol	Baycor	Meresap	7ml	14 hari	14 hari
Captan	ACM Captan Captan	Sentuhan	5g 10g	7 hari	7 hari
Carbendazim	Bavistin Bandazim Halex Carbendazim MaxZim	Meresap	3g 4.5g 5g 4.5g	21 hari 14 hari 14 hari 7 hari	21 hari 14 hari 14 hari 7 hari
Chlorothalonil	Daconil 2787 Daconil ACM Daconil 720 Rovaltac	Sentuhan	12g 12g 4ml 10g	7-10 hari 7-10 hari 7-10 hari 10 hari	10 hari
Copper Hydroxide	Kocide 101 Blue Pro Commande	Sentuhan	5g 10g 8g	7 hari 14 hari 14 hari	14 hari
Copper Oxychloride	Cupravit Coproanol Pipertox Copper Super	Sentuhan	8g 8g 8g 7g	21 hari 14 hari 14 hari 7 hari	21 hari 14 hari 14 hari 14 hari
Difenoconazole	Score Barb	Meresap	2.5ml 1.5ml	10 hari 10 hari	10 hari 7 hari
Difenoconazole + Propiconazole	Armure 300EC	Meresap	5-6.5ml	14 hari	28 hari
Epoxiconazole	Opus SC	Meresap	11 ml	14 hari	10 hari
Fosetyl- Aluminium	Aliette	Meresap	45g (Siram) 2.25kg (Cat) 22.5g (Sembur)	1 bulan 1 bulan 3 bulan	1 bulan 1 bulan 3 bulan
Iprodione	Rovral	Sentuhan	4.5g	7 hari	7 hari
Isoprothiolane	Fuji-one 40 EC	Meresap	10 ml	14 hari	14 hari
Mancozeb	Dithane M-45 Disan 45 Halex Mancozeb MZ-45	Sentuhan	10g 8g 9g 10g	10 hari 10 hari 10 hari 7 hari	10 hari 10 hari 14 hari 14 hari
Maneb	BM Maneb Trineb	Sentuhan	9g	14 hari	14 hari
Metalaxyl	Ridomil Serbamil	Meresap	40g (Cat) 36g (Siram)	3 bulan	3 bulan
Pencycuron	Monceren Beacon 25WP	Sentuhan	5g (Buah dan Sayur) 9g (Padi) 5g	7-10 hari 7-10 hari 7 hari	10 hari 10 hari 7 hari
Phosphorus Acid	Foli-R-Fos	Meresap	1ml/1ml air (Suntikan) 36ml (Semburan)	2 bulan 14 hari	2 bulan 14 hari
Prochloraz Manganese Chloride	Octave	Sentuhan	4.5g	30 hari	30 hari
Propineb	Anthracol Catalyst	Sentuhan	9g 6g	10 hari 7 hari	14 hari 7 hari
Tebuconazole	Folicur	Meresap	1ml	14 hari	14 hari
Tebuconazole + Trifloxystrobin	Nativo	Meresap	3.2g (Padi) 1g (Lada)	21 hari 3 hari	15 hari 3 hari
Tolclofos-methyl	Rizolex	Sentuhan	3g	30 hari	30 hari
Tricyclazole	Beam 75WP	Meresap	5 g	7-10 hari	30 hari
Trifloxystrobin	Flint	Meresap	1.2g	7 hari	3 hari
Zineb	Zinacol	Sentuhan	8g	14 hari	14 hari


**GUIDELINES ON FUNGICIDE APPLICATION AUGUST 2014**

Active Ingredient	Trade Name	Mode of Action	Rates per 4.5 litres of Water	Spraying Interval	Harvest Interval After Spraying
Azoxystrobin	Amistar	Systemic	2.5ml	7 days	3 days
Azoxystrobin + Difenconazole	Amistartop	Systemic	5ml (vegetable/fruit) 7ml (paddy)	7 days (vegetable/fruit) 14 days (paddy/chilli)	7 days (vegetable/fruit) 14 days (paddy/chilli) 28 days (paddy)
Benomyl	Benlate CH Benomyl Benex	Systemic	5g 2g 2g	14 days	14 days
Bitertanol	Baycor	Systemic	7ml	14 days	14 days
Captan	ACM Captan Captan	Contact	5g 10g	7 days	7 days
Carbendazim	Bavistin Bandazim Halex Carbendazim MaxZim	Systemic	3g 4.5g 5g 4.5g	21 days 14 days 14 days 7 days	21 days 14 days 14 days 7 days
Chlorothalonil	Daconil 2787 Daconil ACM Daconil 720 Rovaltac	Contact	12g 12g 4ml 10g	7-10 days 7-10 days 7-10 days 10 days	10 days
Copper Hydroxide	Kocide 101 Blue Pro Commande	Contact	5g 10g 8g	7 days 14 days 14 days	14 days
Copper Oxychloride	Cupravit Copranol Pipertox Copper Super	Contact	8g 8g 8g 7g	21 days 14 days 14 days 7 days	21 days 14 days 14 days 14 days
Difenconazole	Score Barb	Systemic	2.5ml 1.5ml	10 days 10 days	10 days 7 days
Difenconazole + Propiconazole	Armure 300EC	Systemic	5-6.5ml	14 days	28 days
Epoxiconazole	Opus SC	Systemic	11 ml	14 days	10 days
Fosetyl- Aluminium	Aliette	Systemic	45g (Drench) 2.25kg (Paint) 22.5g (Spray)	1 month 1 month 3 months	1 month 1 month 3 months
Iprodione	Rovral	Contact	4.5g	7 days	7 days
Isoprothiolane	Fuji-one 40 EC	Systemic	10 ml	14 days	14 days
Mancozeb	Dithane M-45 Disan 45 Halex Mancozeb MZ-45	Contact	10g 8g 9g 10g	10 days 10 days 10 days 7 days	10 days 10 days 14 days 14 days
Maneb	BM Maneb Trineb	Contact	9g	14 days	14 days
Metalaxyl	Ridomil Serbamil	Systemic	40g (Paint) 36g (Drench)	3 months	3 months
Pencycuron	Monceren Beacon 25WP	Contact	5g (Fruits and Vegetable) 9g (Paddy) 5g	7-10 days 7-10 days 7 days	10 days 10 days 7 days
Phosphorus Acid	Foli-R-Fos	Systemic	1ml/1ml water (Injection) 36ml (Spraying)	2 months 14 days	2 months 14 days
Prochloraz Manganese Chloride	Octave	Contact	4.5g	30 days	30 days
Propineb	Anthracol Paintalyst	Contact	9g 6g	10 days 7 days	14 days 7 days
Tebuconazole	Folicur	Systemic	1ml	14 days	14 days
Tebuconazole + Trifloxystrobin	Nativo	Systemic	3.2g (Paddy) 1g (Chilli)	21 days 3 days	15 days 3 days
Tolclofos-methyl	Rizolex	Contact	3g	30 days	30 days
Tricyclazole	Fuji-one 40 EC	Systemic	5g	7-10 days	30 days
Trifloxystrobin	Flint	Systemic	1.2g	7 days	3 days
Zineb	Zinacol	Contact	8g	14 days	14 days