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FOOD CROPS

Maize

Sorghum

Rice

Sugar cane

Beans

Cassava

Sweet Potato

Maize (Corn) (*Zea Mays*)

Pest	Product	Formulation and Dosage	Where and when to apply
168 <i>Pratylenchus zeae</i>	Crop rotation		
169 <i>Melanotus communis</i>	7	G 5%: 60 kg/ha D 5%: 60 kg/ha G 5%: 40 kg/ha D 5%: 40 kg/ha	Broadcast to soil surface before planting and work into top 10-15 cm
170 <i>Hodotermes mossambicus</i>	7	G 5%: 100 kg/ha D 5%: 80 kg/ha WP 25%: 16 kg/ha G 5%: 100 kg/ha D 5%: 80 kg/ha WP 25%: 12 kg/ha	Broadcast on soil at least 2 weeks before planting. If possible, work the insecticide 10-20 cm deep into the soil
171 <i>Astylus atromaculatus</i>	12	D 5%: 30 kg/ha WP 50%: 2 kg/500 l water/ha WP 50%: 1 kg/500 l water/ha	On foliage when adults appear
172 <i>Diabrotica 12-punctata</i>	13	see also <i>Diabrotica</i> (No. 172)	Against larvae
173 <i>Heteronychus licas</i> (also species of <i>Nematocerus</i>)	7, 16 27 40	G 10%: 20 kg/ha G 10%: 10 kg/ha G 10%: 10 kg/ha Bait = D 10%: 1 kg + cracked maize 100 kg (mixture) 30-40 kg/ha WP 50%: 3 kg/500 l water/ha ES 20%: 1 kg/500 l water/ha	Row- or broadcast-treatment to soil surface before planting and work into top 10-15 cm Broadcast over the area before the crop germinates Spray on seedlings when beetles appear

174	<i>Ditylenchus dipsaci</i>	39	ES 50%: 750 cc/1000 l/ha	On foliage and stalks of seedlings when first damage is visible
175	<i>Calandra callosa</i>	7	G 5%: 80 kg/ha	To soil surface when weevils appear
176	<i>Gryllulus domesticus</i>	10 16	D 5%: 30 kg/ha Bait = D 5%: 500 g + bran 25 kg (mixture) 25 kg/ha	Broadcast over the area when damage is visible
177	<i>Mylthimna (Cirphis) unipuncta</i>	12 13 22	D 5%: 30-40 kg/ha ES 25%: 2-2.5 l/500 l water/ha ES 25%: 5 l/500 l water/ha	Broadcast before planting and work into top 5-10 cm When central leaves are eaten and young caterpillars are found
178	<i>Diatraea cramboides</i>	31	Bait = WP 50%: 100 g + bran 20 kg (mixture) 20 kg/ha	Broadcast on the area
179	<i>Chilo suppressalis</i>	12 15 22 37 + 12	D 5%: 30 kg/ha WP 25%: 1.5 kg/500 l water/ha WP 25%: 5 kg/500 l water or D 5%: 30 kg/ha WP 25%: 1 kg + WP 50%: 5 kg/500 l water/ha (mixture)	When second or third generation borers are first observed, 3 times, 10-14 days apart
180	<i>Chilothea infuscatella</i>		see Chilo (No. 215) and Diatraea (No. 178)	
181	<i>Elasmopalpus lignosellus</i>		see Scirpophaga (No. 275)	
182	<i>Dichocrocis punctiferalis</i>		see Elasmopalpus (No. 311) and Pyrausta (No. 183)	
			see Diatraea (No. 178) and Dichocrocis (No. 640)	

Pest	Product	Formulation and Dosage	Where and when to apply
183 <i>Ostrinia (Pyrausta) nubilalis</i>	32	WP 25%: 1 kg/750 l water/ha	When first damage is visible (granules are placed by hand or machine in the leaf sheaths). Repeat after 10 days
	12	D 5%: 40 kg/ha	
		G 5%: 20 kg/ha	
	15	ES 50%: 4 l/750 l water/ha	
	53	ES 25%: 1.5 l/750 l water/ha	
	30.1	WP 50%: 3 kg/750 l water/ha ES 60%: 1 l/750 l water/ha	
184 <i>Chilo zonellus</i>	12	D 5%: 30 kg/ha	On foliage and stalks when plants start showing dead hearts. Repeat after two weeks
		see also <i>Ostrinia</i> (No. 183) and <i>Busseola</i> (No. 185)	
185 <i>Busseola fusca</i>	12	G 5%: 30-40 kg/ha	On stalks and leaf sheaths the first when the first signs of damage appear. Repeat in 2 weeks. The insecticide must be applied into the open funnel of the young plant, before the larvae have penetrated into the succulent portion of the stalks
	31	G 2.5%: 7.5 kg/ha	
	15	D 2%: 20 kg/ha	
	21	ES or WP 25%: 1.5-2 kg/750 l water/ha WP 25%: 1.5-2 kg/750 l water/ha	
		see also <i>Pyrausta</i> (No. 183)	
186 <i>Sesamia vuteria</i>		see <i>Busseola</i> (No. 185) and <i>Emmalocera</i> (No. 278)	
187 <i>Epilachna similis</i>	12	D 5%: 25-30 kg/ha	On foliage when beetles appear
	53	WP 50%: 1 kg/500 l water/ha	
188 <i>Cnaphalocrocis medinalis</i>	12	D 5%: 25-30 kg/ha	On foliage when pests appear
		see also <i>Epilachna</i> (No. 187)	
189 <i>Blissus leucopterus</i>	22	ES 25%: 10 kg/500 l water/ha	To base of plants, where bugs congregate

- 190 *Peregrinus maidis*
 9 On foliage when insects appear in great numbers
 40 D 5%: 20-30 kg/ha
 WP 25%: 1 kg/500 l water/ha
 ES 25%: 1 l/500 l water/ha
 27, 28, 30, 33, 34, 37, 39, 42, 47, 48
 ES 40%: 1 l/500 l water/ha
 35
- 191 *Cicadulina mbila*
 see *Peregrinus* (No. 190)
- 192 *Baldulus maidis*
 see *Peregrinus* (No. 190)
- 193 *Rhopalosiphon maidis*
 9 When aphid colonies are found on folded leaves in centre of plant. Repeat after 2 weeks
 27 D 10%: 20 kg/ha
 ES 60%: 500 g/500 l water/ha
 28 ES 40%: 500-750 cc/500 l water/ha
 35.2 WP 70%: 400 g/500 l water/ha
 39, 42, 48, 33.10 ES 20%: 750-1000 cc/500 l water/ha
 52 S 6%: 500 cc/500 l water/ha
- 194 *Prodenia*
 (*Spodoptera*) *litura*
 12 WP 50%: 2.5 kg/750 l water/ha
 D 10%: 15-20 kg/ha
 G 5%: 15 kg/ha
 13 ES 20%: 1.5 kg/750 l water/ha
 22 D 5%: 40 kg/ha
 39 ES 25%: 1 kg/750 l water/ha
 53 WP 50%: 2.5 kg/750 l water/ha
- 195 *Laphygma exigua*
 see *Heliothis* (No. 197)
- 196 *Poecilophila maculatissima*
 see *Heliothis* (No. 197)
- 197 *Heliothis obsoleta*
 12, 22 Directed at ear zone when young larvae appear. Repeat after 1-2 weeks
 53 D 5%: 30 kg/ha

Sorghum, Kaffir-corn, Juar, Guinea corn (*Sorghum guineense* and *S. bicolor*) See also Pests of Maize

Pest	Product	Formulation and Dosage	Where and when to apply
198 <i>Chrotogonus trachypterus</i>	9 see also Gryllulus (No. 176)	D 10%: 20-25 kg/ha	When hoppers appear in large numbers
199 <i>Proceras argyrolepidus</i>	see Pyrausta (No. 183) and Chilo (No. 184)		When plants show dead hearts
200 <i>Saccharicoccus sacchari</i>	33, 34, 39, 49 see Pyrausta (No. 183) and Chilo (No. 184)	ES 25%: 1-1.5 l/750 l water	When colonies appear on stalks
201 <i>Chilo zonellus</i> or other species	see Pyrausta (No. 183) and Chilo (No. 184)		
202 <i>Diatraea cramboides</i>	see Diatraea (No. 178)		
203 <i>Sesamia cretica</i> (<i>Spodoptera</i> spp.)	see Busseola (No. 185) or Prodenia (No. 194)		Spray on leaves and stalks when first signs of damage are visible
204 <i>Anatrichus erinaceus</i>	39	ES 50%: 500 cc/750 l water/ha	On first signs of damage
205 <i>Atherigona soccata</i>	27, 39	WP or ES 25%: 1-1.5 kg/750 l water	Spray on leaves and stalks when first signs of attack are visible. Repeat after 10 days
206 <i>Chaetocnema</i> sp.	12	D 5%: 20-25 kg/ha	When leaves show feeding marks
207 <i>Hieroglyphus nigrorepletus</i>	9 13	D 10%: 25-30 kg/ha ES 20%: 1.2 l/600 l water	On foliage when young hoppers appear
208 <i>Schizaphis graminum</i>	9 26, 33, 39, 42, 47, 48 52	D 10%: 25-30 kg/ha ES 20%: 500-1000 cc/500 l water S 6%: 500-1000 cc/500 l water	Spray on leaves when aphids appear

209 <i>Paratetranychus indicus</i>	33, 33.10, 39, 43, 72	ES 20%: 1 l/750 l water	Spray on leaves at the first signs of damage. Repeat after 1 week
210 <i>Celama sorghiella</i>	29 41	ES 25%: 6 l/500 l water/ha ES 25%: 2 l/500 l water/ha	On first signs of damage
211 <i>Contarinia sorghicola</i>	12	D 5%: 30 kg/ha	One application on flowering, one on full flower. 2nd. application at fortnightly intervals
	27	ES 50%: 1.2 l/300 l water/ha	Apply on heads when 90% of them have emerged from the boot. Repeat application within 4 days. Do not feed treated forage to livestock for 14 days following last application

Rice (*Oryza sativa* and *O. glaberrima*)

Pest	Product	Formulation and Dosage	Where and when to apply
212 <i>Sesarma africanum</i> <i>Paratelphusa convexa</i>	9	G 5%: 40-50 kg/ha	Broadcast over the area when first signs of damage are observed
213 <i>Radopholus oryzae</i>	Crop rotation		
214 <i>Chilo auricilia</i>	see Chilo (No. 215)		
215 <i>Chilo suppressalis</i> (<i>Maliarpha separatella</i> , <i>Diopsis thoracica</i>)	9 15, 27 39 27.1, 42 9 27	WP 50%: 7.5 kg/750 l water/ha ES 25%: 750-900 cc/750 l water/ha D 1.5%: 50 kg/ha ES 50%: 375-400 cc/750 l water/ha ES 50%: 250-500 cc/750 l water/ha G 6%: 45-50 kg/ha G 10%: 20 kg/ha	On leaves and stalks when infestation occurs, 2-3 sprays at fortnightly intervals Over plants broadcast
216 <i>Scirpophaga innotata</i>	see Chilo (No. 215)		
217 <i>Schoenobius bipunctifer</i>	see Chilo (No. 215)		
218 <i>Proceras polychrysa</i>	see Chilo (No. 215)		
219 <i>Elasmopalpus lignosellus</i>	see Chilo (No. 215) and <i>Pyrausta</i> (No. 183)		
220 <i>Sesamia inferens</i>	15 see also <i>Busseola</i> (No. 185)	ES 20%: 1-2 l/750 l water/ha	When infestation occurs or when moths are on the wing. Repeat at fortnightly intervals
221 <i>Calligypona marginata</i>	27, 39	D 1%: 20-25 kg/ha ES 20%: 750-1000 cc/750 l water/ha	When plant hoppers appear in large numbers

222	<i>Hispa armigera</i> (<i>Trichispa sericea</i>)	12 9 27.1, 42	WP 50%: 2.25 kg/750 l water WP 50%: 750 g/750 l water ES 50%: 0.9-1.2 l/750 l water/ha	When leaves show first mines. Repeat at fortnightly intervals
223	<i>Leptispa pygmaea</i>		see Hispa (No. 222)	When leaves begin to curl up
224	<i>Lema oryzae</i>		see Hispa (No. 222)	
225	<i>Cnaphalocrocis medinalis</i>	9	D 10%: 20-25 kg/ha	When caterpillars are seen on the underside of leaves
226	<i>Nymphula depunctalis</i>	12	WP 50%: 2.25 kg/750 l water	When pests appear
227	<i>Sesamia cretica</i>	27	G 10%: 20-25 kg/ha	Over plants broadcast when infestation occurs
228	<i>Mocis repanda</i>		see Mythimna (No. 177)	
229	<i>Laphygma frugiperda</i>		see Mythimna (No. 177) and Laphygma (No. 287)	
230	<i>Mythimna (Cirphis) unipuncta</i>	9 12 39 25	D 10%: 20-25 kg/ha WP 50%: 2.25 kg/750 l water/ha D 1%: 20-25 kg/ha ES 50%: 1000 cc/750 l water/ha	On foliage, when caterpillars appear
231	<i>Spodoptera mauritia</i>		see Mythimna (No. 230)	As soon as young caterpillars are seen on seedlings in nursery or on standing crop
232	<i>Parnara guttata</i>		see Mythimna (No. 230)	
233	<i>Chlorops oryzae</i>	27 28 27.1, 33.10, 39, 42	ES 25%: 800-1000 cc/1000 l water ES 40%: 500-800 cc/1000 l water ES 50%: 500 cc/1000 l water	When the flies appear or when first signs of damage appear
234	<i>Agromyza oryzae</i>		see Chlorops (No. 233)	
235	<i>Atherigona exigua</i>	39, 42	ES 50%: 500 cc/1000 l water	On foliage when first signs of damage appear

Pest	Product	Formulation and Dosage	Where and when to apply
236 <i>Thrips oryzae</i>	27, 39 27.1, 42	D 1%: 15-20 kg/ha ES 50%: 0.4-0.6 l/750 l water/ha	When leaves start to curl up and turn yellow
237 <i>Nilaparvata lugens</i>	9 12 27 27.1, 39, 42	D 5-10%: 20-25 kg/ha D 5%: 20-25 kg/ha D 1%: 20-25 kg/ha G 10%: 20 kg/ha ES 50%: 500 cc/1000 l water/ha	When pests appear. Repeat after 15 days if necessary
238 <i>Calligypona furcifera</i>	see Nilaparvata (No. 237)		On first signs of damage
239 <i>Nisia atrovonosa</i>	see Nilaparvata (No. 237)		When pests appear
240 <i>Tettigella spectra</i>	9 see also Nilaparvata (No. 237)	D 10%: 25-30 kg/ha	When jassids appear on stems
241 <i>Nephotettix bipunctatus</i>	see Chilo (No. 215)		When jassids appear
242 <i>Snazuma dorsalis</i>	see Nilaparvata (No. 237)		
243 <i>Aphelenchoides besseyi</i>	39	ES 20%: 1-1.5 l/1000 l water	As soon as leaves show brown patches
244 <i>Epicauta</i> sp.	12	D 5%: 20-25 kg/ha	On grains when beetles appear
245 <i>Hieroglyphus banian</i>	9	D 5%: 20-25 kg/ha	On breeding grounds against hoppers
246 <i>Pachydroplosis oryzae</i>	39, 42	ES 50%: 500-1000 cc/750 l water/ha	When the first signs of damage are visible
247 <i>Hydrellia griseola</i>	27	ES 25%: 1 l/750 l water/ha	When initial infestation occurs and leaves start withering

- 248 *Scotinophora lurida* **9** **D 10%: 20-25 kg/ha**
27, 28, 39 **ES 25%: 1-1.5 l/750 l water/ha**
 see Scotinophora (No. 248)
 When large numbers of the bugs appear on the stem and shoots
- 249 *Solubea poecila* see Scotinophora (No. 248)
- 250 *Nezara viridula* see Scotinophora (No. 248)
- 251 *Cletus trigonis* see Leptocoris (No. 252)
- 252 *Leptocoris varicornis* **7** **D 5%: 20 kg/ha**
27, 39 **D 1%: 20 kg/ha**
9 **D 10%: 20 kg/ha**
30.2 **D 5%: 20 kg/ha**
35 **ES 50%: 1000 cc/250 l water/ha**
37 **ES 50%: 500 cc/250 l water/ha**
42 **ES 50%: 500 cc/250 l water/ha**
53 **D 5%: 20 kg/ha**
53 **WP 50%: 2 kg/250 l water/ha**
 Application on the ear heads; when ear-heads are in milk stage and the bugs appear in large numbers
- 253 *Lagynotomus* see Leptocoris (No. 252)
assimulans

Sugar cane (*Saccharum officinarum*)

Pest	Product	Formulation and Dosage	Where and when to apply
254 <i>Meloidogyne</i> sp.	Crop rotation 143	L: 175 l/ha	Pre-plant treatment (see also Tea: No. 101)
255 <i>Radopholus similis</i>	Crop rotation see <i>Meloidogyne</i> (No. 254)		
256 <i>Hoplolaimus coronatus</i>	Crop rotation see <i>Meloidogyne</i> (No. 254)		
257 <i>Odontotermes obesus</i>	7	D 2.5%: 30 kg/ha D 5%: 40 kg/ha WP 50%: 500 g/100 l water WP 50%: 750 g/100 l water WP 50%: 250 g/100 l water	At two foot intervals in furrows over the cane setts at the time of planting Dip the setts do. do.
258 Wireworms, various species: <i>Lacon variabilis</i> <i>Lacon humilis</i> <i>Heteroderes laurenti</i> <i>Melanotus Tam-suyensis</i>	7 9 10 see also <i>Melanotus</i> (No. 169)	G 5%: 60 kg/ha D 5%: 60 kg/ha D 10%: 30 kg/ha ES 20%: 1 l/100 l water	Place insecticide in a narrow strip immediately above the setts On seed pieces in open furrows at time of planting
259 <i>Phytalus smithi</i>	see <i>Lepidiota</i> (No. 260)		
260 <i>Lepidiota frenchi</i>	10	D 20%: 80-100 kg/ha	Apply dust above the setts at planting time
261 <i>Dermolepida albohirtum</i>	see <i>Lepidiota</i> (No. 260)		

262	<i>Tomaspis varia</i>		see <i>Tomaspis</i> (No. 263)	
263	<i>Tomaspis saccharina</i>	26, 28 27, 39	ES 20%: 400 cc/100 l water D 1-2%: 50 kg/ha	Dip the setts Apply on cane seed pieces in open furrows at time of planting
264	<i>Heteronychus ticas</i>	7, 9, 13	WP 50%: 400 g/100 l water see also <i>Heteronychus</i> (No. 173)	Treat the young shoots when pests appear (apply to rows)
265	<i>Heteronychus plebejus</i>	9	G 10%: 50 kg/ha see also <i>Heteronychus</i> (No. 264)	To soil surface
266	<i>Eutheola rugiceps</i>	7 9	G 5%: 60 kg/ha D 10%: 50 kg/ha see also <i>Heteronychus</i> (No. 264)	To soil surface and work in Treat the young shoots, especially the lower parts
267	<i>Anacentrinus subnudus</i>		see <i>Rhabdocnemis</i> (No. 268)	
268	<i>Rhabdocnemis obscura</i>	13	WP 50%: 250-300 g/100 l water	Treat the stalks, especially the lower parts
269	<i>Ereunetis flavistriata</i>	13 39	ES 20%: 300 cc/100 l water ES 50%: 50 cc/100 l water	Apply to stems when first signs of damage are visible. Repeat after 2-3 weeks
270	<i>Acheta bimaculata</i>	13	ES 20%: 400 cc/100 l water see also <i>Gryllulus</i> (No. 176)	Apply on the lower part of stems
271	<i>Saccharicoccus sacchari</i>	39, 48	ES 20%: 1.5-2 l/1000 l water	Apply to stems and leaves
272	<i>Castnia licus</i>	15 39	ES 20%: 1000 cc/750 l water/ha ES 50%: 500-750 cc/750 l water/ha	On stems and leaves when first signs of damage are visible

Pest	Product	Formulation and Dosage	Where and when to apply
273 <i>Diatraea saccharalis</i>	15	G 2%: 15-20 kg/ha	Broadcast the insecticides over cane fields at 3-weekly intervals as soon after joints begin to form or when 1-2% of stalks are infested with young larvae
	21	G 5%: 15-20 kg/ha	
	22.5	G 5%: 20 kg/ha	
	53	G 10%: 20-30 kg/ha	
	34	G 7%: 20-25 kg/ha	
274 <i>Metamasius hemipterus</i>	13	ES 20%: 5 l/500-750 l water	Apply to stems when pests appear
275 <i>Scirpophaga nivella</i>	12	WP 50%: 6 kg/750 l water/ha	Preventive measure: on seedlings as soon as mining of midribs is seen (apply 8 times at weekly intervals)
	15, 22	ES or WP 20%: 1-1.5 kg/750 l water/ha	
	9, 22	D 10%: 50 kg/ha	
	30.1 42	see also <i>Diatraea</i> (No. 273) ES 60%: 0.5-1.5 l/1000 l water/ha ES 50%: 0.8-2 l/1000 l water/ha	
276 <i>Chilothea infuscatella</i>			see <i>Scirpophaga</i> (No. 275)
277 <i>Proceras sacchariphagus</i>			see <i>Scirpophaga</i> (No. 275)
278 <i>Emmalocera depressella</i>	12	WP 50%: 7.5 kg/1000 l water	Apply to stems at fortnightly intervals starting from seedling stage to node formation stage
	22	WP or ES 20%: 5 kg/1000 l water	
	15	ES 20%: 1.5-2 l/1000 l water	
279 <i>Eucosma schistaceana</i>			see <i>Emmalocera</i> (No. 278)
280 <i>Elasmopalpus lignosellus</i>			see <i>Chilo</i> (No. 215) and <i>Pyrausta</i> (No. 183)
281 <i>Phragmitiphila truncata</i>			see <i>Emmalocera</i> (No. 278)

282	<i>Sesamia vuteria</i>	see Emmalocera (No. 278)		On first signs of damage. Apply 4 times at fortnightly intervals
283	<i>Xyleborus perforans</i>	12	WP 50%: 4 kg/1000 l water	On stems when pests appear
		13	WP 50%: 2 kg/1000 l water	
284	<i>Diaprepes abbreviatus</i>	13, 15	WP 20%: 2 kg/1000 l water	On foliage when weevils appear
285	<i>Hispa wakkeri</i>	39	ES 20%: 1 l/1000 l water	On foliage when beetles appear
			see also Hispa (No. 222)	
286	<i>Omiodes accepta</i>		see Hispa (No. 285)	
287	<i>Laphygma frugiperda</i>	12	WP 50%: 3 kg/1000 l water	On leaves when young caterpillars appear
		53	WP 50%: 2 kg/1000 l water	
288	<i>Mythimna (Cirphis) unipuncta</i>		see Mythimna (No. 230) and Laphygma (No. 287)	
289	<i>Macropes excavatus</i>	9	WP 20%: 1.5 kg/600 l water/ha	When first signs of damage are visible. Spray nozzle has to be carefully directed towards the central leaves
			see also Peregrinus (No. 190)	
290	<i>Perkinsiella saccharicida</i>	9	D 5%: 30-60 kg/ha	When pests appear or when leaves and buds start to turn yellow
		27, 28, 30, 39	ES 20%: 1-1.5 l/1000 l water	
291	<i>Saccharosydne saccharivora</i>		see Perkinsiella (No. 290)	
292	<i>Proutista moesta</i>		see Perkinsiella (No. 290)	
293	<i>Pyrrilla perpusilla</i>	9	D 5%: 30-60 kg/ha	When leaf margins start yellowing and larvae are seen
		15	ES 20%: 1.5 l/1000 l water	
		26	ES 20%: 1-1.5 l/1000 l water	
		39	ES 50%: 200-300 cc/1000 l water	

Pest	Product	Formulation and Dosage	Where and when to apply
294 <i>Cicadulina mbila</i>	see Peregrinus (No. 190)		
295 <i>Aleurolobus barodensis</i>	27, 33, 33.10, 34, 39, 43	ES 20%: 1-1.5 l/1000 l water	When leaves start wilting and withering
296 <i>Sipha flava</i>	26, 27, 28, 35, 39, 42, 46, 47, 48, 49 52	ES 20%: 1-1.5 l/1000 l water S 6%: 1-1.5 l/1000 l water	When aphids appear and when leaves start wilting
297 <i>Rhopalosiphon sacchari</i>	see Sipha (No. 296)		
298 <i>Rhopalosiphon maidis</i>	see Sipha (No. 296) and Rhopalosiphon (No. 193)		
299 <i>Hysteroneura setariae</i>	see Sipha (No. 296)		
300 <i>Oregma lanigera</i>	39	ES 50%: 500-750 cc/1000 l water	At first appearance of pests
301 <i>Pulbinaria iceryi</i>	39	ES 50%: 500-750 cc/1000 l water	When pests appear; repeat fortnightly
302 <i>Tarsonemus Bancrofti</i>	26 27	ES 20%: 1-1.5 l/1000 l water ES 25%: 1.2 l/1000 l water	When first signs of damage are visible; repeat at weekly intervals
303 <i>Paratetranychus exsicicator</i>	26, 33, 39, 42, 72	ES 20%: 1-1.5 l/1000 l water	At first appearance of pests and when leaves start wilting; repeat at weekly/fortnightly intervals

304 <i>Meloidogyne</i> sp.	Crop rotation 152	G 10%: 250-350 kg/ha	Application 2-3 weeks before planting. Broadcast on soil surface and work in
305 <i>Pagria signata</i>	143, 146 7	G 10%: 175 kg/ha L: 70-90 cc/sq.m G 5%: 40-50 kg/ha WP 40%: 750-1000 g/500 l water/ha	Row-treatment Injection at a depth of 25-30 cm To soil surface and work in before planting On soil where plants are set
306 <i>Colaspis flavida</i>	see Pagria (No. 305)		
307 <i>Hodotermes</i> <i>mossambicus</i>	see Hodotermes (No. 170)		
308 <i>Agromyza phaseoli</i>	7 13 27, 28, 33, 10, 39	WP 40%: 50 g/100 kg seed WP 50%: 40 g/100 kg seed ES 20%: 500 cc/500 l water	Dress the seed before planting On foliage, when leaf-miners are visible
309 <i>Phytonomus</i> <i>nigrirostris</i>	35 39	D 5%: 35-40 kg/ha D 1%: 35-40 kg/ha	On foliage and stems when first signs of damage are seen
310 <i>Alcides leucogramma</i>	see Phytonomus (No. 309)		
311 <i>Elasmopalpus</i> <i>lignosellus</i>	7 13 27 31 39	ES 20%: 5 l/500 l water G 5%: 15-20 kg/ha G 10%: 7.5-10 kg/ha ES 20%: 500-750 cc/500 l water ES 25%: 500-750 cc/500 l water	Apply the emulsion as 10-15 cm wide strip over plants when in 2-leaf stage On foliage and stems when first signs of damage are visible As curative measure: apply on stems
312 <i>Nezara viridula</i>	see Physomerus (No. 313) and Nezara (No. 691)		

Pest	Product	Formulation and Dosage	Where and when to apply
313 <i>Physomerus grossipes</i>	35	D 4%: 30-35 kg/ha	When pests appear
314 <i>Aphis fabae</i>	2	ES 6%: 1 kg/500 l water/ha	On foliage when aphids appear. Repeat after 10 days
	26, 27, 28, 39, 41, 42, 48	ES 20%: 0.5 kg/500 l water/ha	
	29, 35	ES 20%: 1.5 kg/500 l water/ha	
	29	D 5%: 25 kg/ha	
	35.2	WP 70%: 0.5 kg/500 l water/ha	
	39, 41	D 2%: 25 kg/ha	
	52	S 6%: 0.5 kg/500 l water/ha	
315 <i>Epicauta vittata</i>	12	D 5%: 30-40 kg/ha	On foliage when pests appear
316 <i>Epilachna varivestis</i>	18	WP 25%: 6 kg/500 l water/ha	Apply the granule just below seed at planting time
	23.5	D 5%: 35 kg/ha	
	27	ES 25%: 2 kg/500 l water/ha	
	30.3	ES 25%: 2 kg/500 l water/ha	
	35	G 5%: 20 kg/ha	
317 <i>Cerotoma ruficornis</i>	53	ES 50%: 2-2.5 kg/500 l water/ha	On foliage when beetles appear
		WP 50%: 2 kg/500 l water/ha	
318 <i>Thosea sinensis</i>		see Epilachna (No. 316) and Epilachna (No. 187)	On leaves when caterpillars appear
	12	WP 50%: 1-2 kg/500 l water	
319 <i>Acherontia styx</i>	27, 34, 37, 39	ES 20%: 500-750 cc/500 l water	On leaves when caterpillars appear
	11	D 5%: 35-40 kg/ha	
	27, 39	WP 50%: 2 kg/500 l water ES 20%: 750-1000 cc/500 l water	
		see also Thosea (No. 318)	
320 <i>Diacrisia obliqua</i>		see Thosea (No. 318)	
321 <i>Prodenia litura</i>		see Thosea (No. 318) and Prodenia (No. 837)	

322	<i>Valanga nigricornis</i>	13	ES 20%: 1 l/500 l water	When grasshoppers appear
323	<i>Hercothrips fasciatus</i>	26, 27, 28, 39, 42	ES 20%: 750 cc/750 l water	On first signs of damage
324	<i>Corythucha gossypii</i>	24, 27, 29, 34, 37, 39, 40	ES 20%: 500 cc/500 l water	As leaves start to curl downwards
325	<i>Empoasca fabalis</i>	12 39	WP 50%: 1.5 kg/500 l water ES 50%: 250 cc/500 l water	As soon as leaves show necrotic patches
326	<i>Erythroneura</i> (<i>Typhlocyba</i>) sp.			see Empoasca (No. 325)
327	<i>Tetranychus urticae</i>	26, 32, 38, 39, 42, 47, 48, 71, 72 49 68.2	ES 20%: 500-750 cc/500 l water D 5%: 25-30 kg/ha ES 20%: 3.5 kg/750 l water/ha	When leaves appear mottled; repeat after 1 week
328	<i>Fundella cistipennis</i>	12 53	D 5%: 30-35 kg/ha WP 50%: 3-4 kg/1000 l water WP 50%: 1.5 kg/1000 l water	On foliage, as soon as first signs of damage are seen or before young caterpillars penetrate the pods. Repeat after 2 weeks if necessary
329	<i>Lamprosema indicata</i>			see Fundella (No. 328)
330	<i>Laspeyresia</i> <i>glycinivorella</i>			see Fundella (No. 328)
331	<i>Maruca testulalis</i>			see Fundella (No. 328)
332	<i>Etiella zinckenella</i>			see Fundella (No. 328)
333	<i>Ecpantheria albicornis</i>			see Fundella (No. 328)

Pest	Product	Formulation and Dosage	Where and when to apply
334 <i>Peridroma</i> (<i>Lycophotia</i>) <i>saucia</i>	12 22 53	WP 50%: 3-4 kg/1000 l water WP 50%: 4 kg/1000 l water WP 50%: 2 kg/1000 l water	On foliage and pods when first signs of damage are seen
335 <i>Syngrapha (Plusia)</i> <i>egena</i>	see	Peridroma (No. 334)	
336 <i>Megacoelum</i> <i>modestum</i>	12	D 5%: 30-35 kg/ha	On foliage when pests appear

337	<i>Pratylenchus brachyurus</i>	Crop rotation			
338	<i>Leucopholis rorida</i>	10	D or G 10%: 60-80 kg/ha see also Lachnosterna (No. 354)		To soil surface and work in 7.5-12 cm (apply before planting)
339	<i>Coelosternus granicollis</i>	13	WP 50%: 300-500 g/100 l water		On stem and leaves when pests appear; repeat after 2 weeks if necessary
340	<i>Lagochirus obsoletus</i>		see Coelosternus (No. 339)		
341	<i>Carpolonchaea chalybea</i>	9 28 39	WP 20%: 1 kg/100 l water ES 40%: 200 cc/100 l water ES 20%: 150 cc/100 l water		Preventive measure: On stem and foli- age when flies are on the wing When first signs of damage are visible
342	<i>Aonidomytilus albus</i>	27, 33.6 39, 43	ES 60%: 150 cc/100 l water ES 20%: 200 cc/100 l water		When scales appear; repeat after 2 weeks
343	<i>Erinnyis ello</i>		see Herse (No. 372)		As soon as young caterpillars are found
344	<i>Zonocerus elegans</i>		see Zonocerus (No. 35) and Zonocerus (No. 705)		On foliage when grasshoppers appear
345	<i>Scirtothrips manihoti</i>	12	WP 50%: 200 g/100 l water see also Dendrothripoides (No. 377)		On foliage when first signs of damage are seen
346	<i>Corynothrips stenopterus</i>		see Scirtothrips (No. 345) and Dendrothripoides (No. 377)		
347	<i>Erythroneura cassavae</i>	27, 39	ES 20%: 100 cc/100 l water		On foliage when pests appear
348	<i>Bemisia nigeriensis</i>	27, 30, 39, 46 35	ES 20%: 100-150 cc/100 l water ES 20%: 200-250 cc/100 l water		On foliage when pests appear; repeat after 2 weeks

Pest	Product	Formulation and Dosage	Where and when to apply
349 <i>Planococcus citri</i>	see Planococcus (No. 100)		
350 <i>Saissetia coffeae</i>	see Saissetia (No. 455)		
351 <i>Tetranychus urticae</i>	see Tetranychus (No. 327) and (No. 820)		On first signs of damage
352 <i>Dasynus manihotis</i>	12	D 10%: 30-40 kg/ha	When bugs appear
	35	ES 20%: 300-400 cc/100 l water	
	see also Physomerus (No. 313)		

353	<i>Radopholus similis</i>	Crop rotation see also Radopholus (No. 2)			
354	<i>Lachnosterna</i> sp.	7 10	D or G 10%: 20-30 kg/ha D or G 10%: 60-80 kg/ha		To soil surface and work in 10-15 cm. Apply before planting or after harvest
355	<i>Heteroderes laurenti</i>	10	D or G 10%: 20 kg/ha see also Lachnosterna (No. 354)		To soil surface before planting, work in 10-15 cm
356	<i>Chrysochus chinensis</i>		see Lachnosterna (No. 354) and Diabrotica (No. 172)		
357	<i>Paria viridicyaneus</i>		see Lachnosterna (No. 354) and Diabrotica (No. 172)		
358	<i>Alicidodes orientalis</i>	13	D 2%: 40-50 kg/ha see also Cylas (No. 359)		On emerging foliage and stems; repeat at fortnightly intervals
359	<i>Cylas formicarius</i>	13	D 2%: 40-50 kg/ha WP 50%: 2 kg/500 l water ES 20%: 500 cc/100 l water		To soil surface at base of plants in strips 15-20 cm wide; repeat after 3-4 weeks Spray 1-3 times at a rate of 500 l/ha on soil Dip the slips for 5 minutes in the emulsion In Stores: Sweep out store and dust all internal surfaces with dust
360	<i>Eusecepes batatae</i>	10	D 10%: 100-120 kg/ha see also Cylas (No. 359)		In field where sweet potatoes had been planted before: to soil surface and work in 15-20 cm. Apply before plant- ing or after harvest
361	<i>Blosyrus ipomoeae</i>	13	D 2%: 50-60 kg/ha WP 50%: 2 kg/500 l water/ha		After planting to soil surface and on young foliage

Pest	Product	Formulation and Dosage	Where and when to apply
362 <i>Aegeria</i> sp.	12 13, 15, 53 34	WP 50%: 2.4 kg/500 l water/ha WP 50%: 800-1000 g/500 l water/ha ES 25%: 1.2-1.6 l/500 l water/ha	On foliage, when first signs of damage are seen; if necessary repeat at fortnightly intervals
363 <i>Omphisa anastomosalis</i>	see <i>Aegeria</i> (No. 362)		
364 <i>Megastis grandalis</i>	see <i>Aegeria</i> (No. 362)		
365 <i>Coreocoris fuscus</i>	see <i>Physomerus</i> (No. 313) and <i>Dasyneus</i> (No. 352)		When bugs appear
366 <i>Chaetocnema confinis</i>	12	WP 50%: 1.6 kg/500 l water	On foliage when pests appear
367 <i>Aspidomorpha areata</i>	see <i>Chaetocnema</i> (No. 366)		
368 <i>Cassida bivittata</i>	see <i>Chaetocnema</i> (No. 366)		
369 <i>Oidaematophorus monodactylus</i>	see <i>Chaetocnema</i> (No. 366)		On foliage when first signs of damage are seen
370 <i>Lecithocera effera</i>	see <i>Chaetocnema</i> (No. 366) and <i>Aedia</i> (No. 374)		
371 <i>Bedellia orchilella</i>	27, 34, 37, 39	ES 20%: 100 cc/100 l water	On foliage when first signs of damage are seen
372 <i>Herse cingulata</i>	11 39	D 10% WP 50%: 2 kg/500 l water ES 50%: 600 cc/500 l water	On foliage when young caterpillars appear
373 <i>Theretra japonica</i>	see <i>Herse</i> (No. 372) and <i>Aedia</i> (No. 374)		
374 <i>Aedia (Anophia) leucomelas</i>	13	WP 20%: 1.2-1.6 kg/500 l water	On foliage when young caterpillars appear

see Acraea (No. 374)

ypsilon

- 376 *Zonocerus variegatus* see Zonocerus (No. 35)
- 377 *Dendrothripoides ipomoeae* **39, 48**
D 1%: 30 kg/ha
ES 20%: 800 cc/500 l water
 see Selenothrips (No. 85)
- 378 *Physomerus grossipes* see Physomerus (No. 313) and Dasynus (No. 352)
- 379 *Halticus tibialis* see Physomerus (No. 313) and Dasynus (No. 352)
- 380 *Tetranychus urticae* see Tetranychus (Nos. 327, 820)
- 380a *Acraea acerata* **12**
D 10%: 20 kg/ha
 On foliage when first signs of damage are seen
 Repeat after 2 weeks if necessary

