

ICAR-National Research Centre for Integrated Pest Management, Pusa, New Delhi

Weekly Status Report on Insects Pests & Diseases of Crops

Name of Institute: ICAR - INDIAN INSTITUTE OF SPICES RESEARCH, KOZHIKODE 673 012, KERALA

Date: 27.10.2016 – 02.11.2016

Crop	Crop Stage	Location (with GPS)	Major Insect Pests		Major Plant Diseases		Other Pests (Nematodes, Rat, etc.) (Scientific Name)	Pest Advisories
			Name (Scientific Name)	Status (Low, Medium & Severe)	Name (Scientific Name)	Status (Low, Medium & Severe)		
Black pepper	(a) Bearing stage	Idukki, Kozhikode, Wayanad (Kerala), Kodagu (Karnataka), Tamil Nadu	Leaf gall thrips (<i>Liothrips karnyi</i>)	Low	Stunt disease (<i>Cucumber mosaic virus</i> , <i>Piper yellow mottle virus</i>)	Low	Nematodes (<i>Radopholus similis</i> , <i>Meloidogyne incognita</i>) (Nursery)	Field: Stunt disease Regular monitoring. Remove infected vines and destroy by burning or burying deep in soil. Control the vector (mealy bugs) by drenching chlorpyrifos (0.075%). Slow decline Remove and destroy severely affected vines. Drench the vines with carbosulfan (0.1%). Along with nematicide application, the basins may be drenched with either copper oxychloride (0.2%) or potassium phosphonate (0.3%) or metalaxyl-mancozeb (0.125%). Alternatively,
	(b) Nursery		Top shot borer (<i>Cydia hemidoxa</i>)	Low	Slow decline (<i>Meloidogyne incognita</i> , <i>Radopholus similis</i>)	Low		
			Pollu beetle (<i>Lanka ramakrishnai</i>)	Low	Anthracnose (<i>Colletotrichum gloeosporioides</i>)	Medium		
			Mealybug (<i>Planococcus</i> sp., <i>Ferrisia virgata</i>) (Nursery)	Low	Foliar infection due to <i>Phytophthora capsici</i> (Nursery)	Low		

					<p>Anthracnose (<i>Colletotrichum gloeosporioides</i>) (Nursery)</p> <p>Basal wilt (<i>Sclerotium rolfsii</i>) (Nursery)</p> <p>Viral infection (Nursery)</p>	<p>Low</p> <p>Low</p> <p>Low to Medium</p>	<p>biocontrol agents like <i>Pochonia chlamydosporia</i> or <i>Trichoderma harzianum</i> @ 50 g/vine may also be applied. Ensure sufficient soil moisture at the time of nematicide application.</p> <p>Anthracnose Spray Bordeaux mixture (1%) or carbendazim - mancozeb (0.1%).</p> <p>Leaf gall thrips Spray dimethoate (0.05%) during emergence of new flushes on young vines.</p> <p>Top shot borer Spray quinalphos (0.05%) on tender terminal shoots; repeat spraying at monthly intervals to protect emerging new shoots.</p> <p>Pollu beetle Spray quinalphos (0.05%).</p> <p>Nursery:</p> <p>Foliar infection due to <i>Phytophthora capsici</i> If foliar infection is noticed, spray Bordeaux mixture (1%) and drench with copper oxychloride (0.2 %). Alternatively, metalaxyl (0.01% - 1.25 g/litre) or potassium phosphonate (0.3% - 3 ml/litre) could also be used.</p> <p>Anthracnose Spray Bordeaux mixture (1%) alternating with carbendazim (0.1%).</p> <p>Basal wilt Remove and destroy affected cuttings along with defoliated leaves. After periodic sanitation, the cuttings</p>
--	--	--	--	--	--	--	--

							<p>should be drenched with carbendazim (0.2%) or Bordeaux mixture (1%).</p> <p>Viral infections Regular inspection and removal of infected plants. Regular monitoring for insects and spray with dimethoate (0.05%) whenever infestation is noticed.</p> <p>Mealy bug Spray dimethoate (0.05%), once infestation is noticed.</p> <p>Nematodes Apply carbosulfan (0.1%) @ 50 ml/bag.</p>
Cardamom	Capsule maturation and harvesting	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	<p>Shoot borer (<i>Conogethes punctiferalis</i>)</p> <p>Thrips (<i>Sciothrips cardamomi</i>)</p>	<p>Medium</p> <p>Low</p>	<p>Leaf blight (<i>Colletotrichum gloeosporioides</i>)</p> <p>Katte/Mosaic (<i>Cardamom mosaic virus</i>)</p> <p>Chlorotic streak (<i>Banana bract mosaic virus</i>)</p>	<p>Medium</p> <p>Low</p> <p>Low</p>	<p>Shoot borer Spray quinalphos (0.075%).</p> <p>Thrips Under Karnataka conditions, spray Fipronil (0.005%) or Spinosad (0.0135%).</p> <p>Leaf blight Maintain optimum shade level by providing 40-60% filtered light. Spray Bordeaux mixture (1%) @ 0.5-1 litre/plant or carbendazim - mancozeb (0.1%) or carbendazim (0.2%).</p> <p>Katte/ Mosaic Prompt inspection of plantation, detection and rouging of virus sources (infected plants/ volunteers) to reduce re-infection. The removed plants may be burnt or buried deep in soil. Removal of natural hosts like <i>Colocasia</i> and <i>Caladium</i> to destroy breeding sites and check population</p>

							build-up of the vector. Chlorotic streak Prompt inspection of plantation, detection and rouging of virus sources (infected plants/ volunteers) to reduce re-infection. The removed plants may be burnt or buried deep in soil.
Vanilla	Bean development	Karnataka			Premature yellowing and bean shedding (<i>Colletotrichum vanillae</i>) Bean rot (<i>Phytophthora meadii</i> , <i>Sclerotium</i> sp.) Viral diseases (<i>Bean common mosaic virus</i> , <i>Bean yellow mosaic virus</i> , <i>Cucumber mosaic virus</i> , <i>Cymbidium mosaic virus</i>)	Medium Medium Medium	Premature yellowing and bean shedding Provide 50% shade in the plantation. Spray carbendazim – mancozeb (0.25%) at 15 – 20 days interval. Bean rot Regulate shade. Remove and destroy infected plant parts and mulch. Spray Bordeaux mixture (1%) and drench soil with copper oxychloride (0.25%) 2 – 3 times, In case of <i>Sclerotium</i> rot, spray carbendazim – mancozeb (0.25%) twice at 15 days interval. Viral diseases Regular inspection and removal of infected plants. The removed plants may be burnt or buried deep in soil. Control of vector (aphids) may be undertaken by spraying dimethoate (0.05%).
Ginger	Rhizome development and bulking	Kerala, Karnataka, Tamil Nadu	Shoot borer (<i>Conogethes punctiferalis</i>)	High	Leaf spot (<i>Phyllosticta zingiberi</i>) Bacterial wilt (<i>Ralstonia</i>	Medium Low	Leaf spot Spray Bordeaux mixture (1%) or mancozeb (0.2%) or carbendazim (0.2%) when the initial symptoms appear. Care should be taken that the

					<i>solanacearum</i> Biovar-3)		<p>spray solution should reach lower surface of the leaves also.</p> <p>Bacterial wilt Affected clumps may be removed carefully without spilling the soil once the disease appears in field. Dispose the removed plants far from the cultivated area or destroy by burning. The affected area and surrounding areas should be drenched with copper oxychloride (0.2%).</p> <p>Shoot borer Prune and destroy freshly infested pseudostems and spray malathion (0.1%).</p>
Turmeric	Rhizome development and bulking	Kerala, Tamil Nadu, Andhra Pradesh, Telangana	Shoot borer (<i>Conogethes punctiferalis</i>)	High	Leaf spot (<i>Colletotrichum capsici</i>)	Medium	<p>Leaf spot Spray carbendazim or mancozeb (0.2%) or copper oxychloride (0.2%).</p> <p>Shoot borer Spray malathion (0.1%) or lamda-cyhalothrin (0.0125%).</p>