

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: 08.06.2017 to 14.06.2017

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	Nursery/ Vegetative	Idukki, Kozhikode, Wayanad (Kerala), Kodagu (Karnataka), Tamil Nadu	Mealybug (<i>Planococcus</i> sp., <i>Ferrisia</i> <i>virgata</i>) (Nursery)	Low	Stunt disease (<i>Cucumber</i> <i>mosaic virus</i> , <i>Piper yellow</i> <i>mottle virus</i>)	Low to medium	Nematodes (<i>Radopholus</i> <i>similis</i> , <i>Meloidogyne</i> <i>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 neem oil (0.5%). Slow decline Remove and destroy severely affected vines. Apply neem cake @ 500g/vine and biocontrol agents like <i>Pochonia</i> <i>chlamydosporia</i> or <i>Trichoderma</i> <i>harzianum</i> @ 50 g/vine and metalaxyl-mancozeb (0.125%) may also be applied. Foot rot After the receipt of few monsoon showers, all the vines are to be
			Scale insect (<i>Protopulvinari</i> <i>a longivalvata</i>) (Nursery)	Low	Slow decline (<i>Meloidogyne</i> <i>incognita</i> , <i>Radopholus</i> <i>similis</i>)	Medium		
					Foot rot (<i>Phytophthora</i> spp.)			
					Anthracnose (<i>Colletotrichum</i> <i>gloeosporioides</i>) (Nursery)	Low		
					Viral infection	Low		

					(Nursery)		<p>drenched at a radius of 45-50 cm with copper oxychloride 0.2% @ 5-10 litres/vine. A foliar spray with Bordeaux mixture 1% is also to be given. Alternatively, drenching and spraying with potassium phosphonate 0.3% @ 5-10 litres/ vine (drench) or potassium phosphonate 0.3% @ 5-10 litres/ vine (drench) also may to be given.</p> <p>Nursery: Anthracnose Spray Bordeaux mixture (1%). Viral infections Regular inspection and removal of infected plants. Regular monitoring for insects and spray with neem oil (0.5%) whenever infestation is noticed. Mealy bug and scale insect Spray neem oil (0.5%), once infestation is noticed. Nematodes Apply <i>Pochonia chlamydosporia</i> @ 1g/bag.</p>
Cardamom	Vegetative/ Panicle initiation/ Capsule formation	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	Thrips (<i>Sciothrips cardamomi</i>)	Medium	Leaf blight (<i>Colletotrichum gloeosporioides</i>) Azhukal/Capsule rot (<i>Phytophthora nicotianae</i> var. <i>nicotianae</i> and <i>P. meadii</i>)	Medium	<p>Leaf blight Maintain optimum shade level by providing 40-60% filtered light. 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</p>

					<p>Katte/Mosaic (<i>Cardamom mosaic virus</i>)</p> <p>Chlorotic streak (<i>Banana bract mosaic virus</i>)</p>	<p>Low</p> <p>Low</p>	<p>or buried deep in soil. Removal of natural hosts like <i>Colocasia</i> and <i>Caladium</i> to destroy breeding sites and check population build-up of the vector.</p> <p>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.</p> <p>Azhukal/Capsule rot Trashing and cleaning of the plant basin need to be carried out. Regulate thick shade. Prevent water logging by providing adequate drainage. Destroy disease affected portions and plant debris.</p> <p>Prophylactic sprays with Bordeaux mixture (1%). Alternatively, fosetyl-aluminium (0.2%) or potassium phosphonate (0.3%) can be used. Drench plant basin with copper oxychloride (0.2%).</p> <p>Thrips Spray quinalphos (0.075%).</p>
--	--	--	--	--	---	-----------------------	--

Vanilla	Vegetative	Karnataka			<p>Leaf spot (<i>Colletotrichum vanillae</i>)</p> <p>Stem rot (<i>Fusarium oxysporum</i> f. sp. <i>vanillae</i>)</p> <p>Viral diseases (<i>Bean common mosaic virus</i>, <i>Bean yellow mosaic virus</i>, <i>Cucumber mosaic virus</i>, <i>Cymbidium mosaic virus</i>)</p>	<p>Low</p> <p>Low</p> <p>Low</p>		<p>Leaf spot Provide 50% shade in the plantation. Spray Bordeaux mixture (1%) at 15 – 20 days interval.</p> <p>Stem rot Remove and destroy infected plant parts. Apply <i>Trichoderma harzianum</i> and <i>Pseudomonas fluorescens</i> (cfu 10⁸) 50 g per vine.</p> <p>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 neem oil (0.5%).</p>
Ginger	Planting	Karnataka, Kerala	Rhizome scale (<i>Aspidiella hartii</i>)		<p>Soft rot (<i>Pythium aphanidermatum</i> and <i>P. myriotylum</i>)</p>		<p>Nematodes Root knot (<i>Meloidogyne</i> spp.), Burrowing (<i>Radopholus similis</i>) and Lesion (<i>Pratylenchus</i> spp.)</p>	<p>Soft rot As prophylactic measures: Use disease-free seed rhizomes for planting. Select well drained soil for planting and provide adequate drainage to prevent water stagnation. Treat seed rhizomes with mancozeb (0.3%) or metalaxyl-mancozeb (0.125%) for 30 minutes before planting and drench at 30 and 60 days after planting.</p> <p>Rhizome scale Treat the seed rhizomes with quinalphos (0.075%) (for 20-30 minutes) before planting if the infestation persists.</p>

								<p>Nematodes As prophylactic measures: Use nematode-free healthy seed rhizomes for planting. In root knot nematode endemic regions, the resistant variety IISR Mahima may be cultivated. The bioagent, <i>Pochonia chlamydosporia</i> may be incorporated in ginger beds (20 g/bed with 10⁶ cfu/g) at the time of planting.</p>
Turmeric	Planting	Andhra Pradesh, Telangana, Tamil Nadu, Odisha	Rhizome scale (<i>Aspidiella hartii</i>)		Rhizome rot (<i>Pythium aphanidermatum</i>)		<p>Nematodes Root knot (<i>Meloidogyne</i> spp.), Burrowing (<i>Radopholus similis</i>) and Lesion (<i>Pratylenchus</i> spp.)</p>	<p>Soft rot As prophylactic measures: Use disease-free seed rhizomes for planting. Select well drained soil for planting and provide adequate drainage to prevent water stagnation. Treat seed rhizomes with mancozeb (0.3%) for 30 minutes before planting and drench at 30 and 60 days after planting.</p> <p>Rhizome scale Treat the seed rhizomes with quinalphos (0.075%) (for 20-30 minutes) before planting if the infestation persists.</p> <p>Nematodes As prophylactic measures: Use nematode-free healthy seed rhizomes for planting. In root knot nematode endemic regions, the resistant variety IISR Mahima may be cultivated. The bioagent, <i>Pochonia chlamydosporia</i> may be</p>

								incorporated in ginger beds (20 g/bed with 10 ⁶ cfu/g) at the time of planting.
Nutmeg	Bearing	Kerala			Leaf fall and fruit rot (<i>Diplodia natalensis</i> and <i>Phytophthora</i> sp.)			Leaf fall and fruit rot In endemic regions, spray Bordeaux mixture (1%) covering both foliage and fruits as a prophylactic measure.