

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: 18.10.2018 - 24.10.2018

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/spike setting	Idukki, Kozhikode, Wayanad (Kerala), Kodagu (Karnataka), Tamil Nadu	Mealybug (<i>Planococcus</i> sp., <i>Ferrisia</i> <i>virgata</i>) (Nursery) Scale insect (<i>Protospulvinaria</i> <i>longivalvata</i>) (Nursery)	Low to medium Low	Foot rot (<i>Phytophthora</i> spp.) Anthracnose (<i>Colletotrichum</i> spp.) Stunt disease (<i>Cucumber</i> <i>mosaic virus</i> , <i>Piper yellow</i> <i>mottle virus</i>) Mealybug (<i>Planococcus</i> sp., <i>Ferrisia</i> <i>virgata</i>) Anthracnose (<i>Colletotrichum</i> spp.) (Nursery) Basal wilt (<i>Sclerotium</i> <i>rolfsii</i>) (Nursery) Viral infection	Medium to Severe Medium Low Medium Low Low Low	Nematodes (<i>Radopholus</i> <i>similis</i> , <i>Meloidogyne</i> <i>incognita</i>) (Nursery)	Field: Foliar infection and foot rot Remove and destroy affected plant parts. Prevent water stagnation. Foliar spray with Bordeaux mixture (1%) and drench the vines at a radius of 45-50 cm with copper oxychloride (0.2%) @ 5-10 litres/vine. Drench and spray disease affected vines with metalaxyl-mancozeb (0.125%) or potassium phosphonate (0.3%) @ 5-10 litres/vine. Anthracnose Spray leaves of the affected vines with carbendazim - mancozeb (0.1%). 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%).

					(Nursery)		<p>Mealybug Drench neem oil (0.5%) or chlorpyrifos (0.075%).</p> <p>Nursery:</p> <p>Anthraxnose Spray Bordeaux mixture (1%).</p> <p>Basal wilt Remove and destroy affected cuttings along with defoliated leaves. After periodic sanitation, the cuttings 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 neem oil (0.5%) whenever infestation is noticed.</p> <p>Mealy bug and scale insects Spray neem oil (0.5%), once infestation is noticed.</p> <p>Nematodes Apply <i>Pochonia chlamydosporia</i> @ 1g/bag.</p>
Cardamom	Vegetative/ Capsule formation	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	Thrips (<i>Sciothrips cardamomi</i>) Shoot borer (<i>Conogethes punctiferalis</i>)	Medium to Severe Medium	Azhukal/Capsule rot (<i>Phytophthora nicotianae</i> var. <i>nicotianae</i> and <i>P. meadii</i>) Rhizome rot (<i>Pythium vexans</i> , <i>Rhizoctonia solani</i> , <i>Fusarium</i>	Medium Medium	<p>Azhukal/Capsule rot If noticed, prevent water logging and destroy disease affected portions and plant debris. Spray 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>Rhizome rot</p>

					spp.) Leaf blight <i>(Colletotrichum</i> spp.) Katte/Mosaic <i>(Cardamom</i> <i>mosaic virus)</i> Chlorotic streak <i>(Banana bract</i> <i>mosaic virus)</i>	Low Low to medium Low	<p>If noticed, prevent water logging and destroy disease affected portions and plant debris. Drench plant basins with copper oxychloride (0.25%) and spray with Bordeaux mixture (1%). Alternatively, potassium phosphonate (0.3%) or metalaxyl-mancozeb (0.125%) can be used for drenching and spraying. <i>Trichoderma harzianum</i> mass multiplied on suitable carrier media may be applied to plant basins @ 1 kg.</p> <p>Leaf blight Maintain optimum shade level by providing 40-60% filtered light. Spray carbendazim - mancozeb (0.1%) or carbendazim (0.2%) which may be repeated at 30 days interval depending on disease severity.</p> <p>Katte/Mosaic and Chlorotic streak Prompt inspection of plantation, detection and rouging of virus sources (infected plants/ volunteers). 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 build-up of the vector.</p> <p>Shoot borer Spray quinalphos (0.075%).</p> <p>Thrips Spray quinalphos 25% EC (0.075%) after undertaking thrashing.</p>
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Ginger	Vegetative	Karnataka, Kerala	Leaf roller (<i>Udaspes folus</i>) Shoot borer (<i>Conogethes punctiferalis</i>)	Low Medium	Leaf spot (<i>Phyllosticta zingiberi</i>)	Medium	Leaf spot Spray Bordeaux mixture (1%) or mancozeb (0.2%) or carbendazim (0.2%). Care should be taken that the spray solution should reach lower surface of the leaves. Leaf roller Spray malathion (0.1%) at 21 days interval. Shoot borer Prune and destroy freshly infested pseudostems and spray malathion (0.1%).
Turmeric	Vegetative	Andhra Pradesh, Telangana, Tamil Nadu, Odisha	Leaf roller (<i>Udaspes folus</i>)	Low	Leaf spot (<i>Colletotrichum capsici</i>)	Medium	Leaf spot Spray carbendazim or mancozeb (0.2%). Leaf roller Spray malathion (0.1%) at 21 days interval.
Vanilla	Vegetative	Karnataka			Leaf spot (<i>Colletotrichum vanillae</i>) Stem rot (<i>Fusarium oxysporum</i> f. sp. <i>vanillae</i>) Viral diseases (<i>Bean common mosaic virus</i> , <i>Bean yellow mosaic virus</i> , <i>Cucumber mosaic virus</i> , <i>mosaic virus</i> , <i>Cymbidium mosaic virus</i>)	Low Medium Low	Leaf spot Spray Bordeaux mixture (1%) at 15 – 20 days interval. Stem rot Remove and destroy infected plant parts. Apply <i>Trichoderma harzianum</i> and <i>Pseudomonas fluorescens</i> (cfu 10 ⁸) 50 g per vine. Viral diseases Regular inspection and removal of infected plants. The removed plants may be burnt or buried deep in soil. Control of vector (aphids) by spraying neem oil (0.5%).

Nutmeg	Bearing	Kerala	Borer (<i>Xylosandrus</i> spp.)	Low	Leaf fall and fruit rot (<i>Diplodia</i> <i>natalensis</i> and <i>Phytophthora</i> sp.)	Low	Leaf fall and fruit rot In endemic regions, spray Bordeaux mixture (1%) covering both foliage and fruits. Borer Adopt strict phytosanitation and crop hygiene measures. Prune and destroy severely affected plant parts.
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(Nodal Officer) 17.10.18

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