

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: **30.08.2018 - 05.09.2018**


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	Root mealybug (<i>Planococcus</i> sp.) (Field)	Low	Foot rot (<i>Phytophthora</i> spp.)	Medium to Severe	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 metalaxy1-mancozeb (0.125%) or potassium phosphonate (0.3%) @ 5-10 litres/vine (drench). 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%).
			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		
			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>)	Low		
				Low	Anthracnose (<i>Colletotrichum</i> spp.) (Nursery)	Low		
					Basal wilt (<i>Sclerotium</i> <i>rolfsii</i>) (Nursery)	Low		

					Viral infection (Nursery)	Low	<p>Slow decline Remove and destroy severely affected vines. Apply neem cake @ 500g/vine and biocontrol agents like <i>Pochonia chlamydosporia</i> or <i>Trichoderma harzianum</i> @ 50 g/vine and metalaxyl-mancozeb (0.125%) may also be applied.</p> <p>Root mealybug Drench neem oil (0.5%), once infestation is noticed.</p> <p>Nursery: Anthracnose 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/ Panicle	Idukki, Wayanad	Thrips (<i>Sciothrips</i>)	Medium	Azhukal/Capsule rot	Low to Medium	Azhukal/Capsule rot Trash and clean the plant basins.

	initiation/ Capsule formation	(Kerala), Kodagu (Karnataka)	<i>cardamomi</i> Shoot borer (<i>Conogethes punctiferalis</i>)	Low	(<i>Phytophthora nicotianae</i> var. <i>nicotianae</i> and <i>P. meadii</i>) Leaf blight (<i>Colletotrichum spp.</i>) Katte/Mosaic (<i>Cardamom mosaic virus</i>) Chlorotic streak (<i>Banana bract mosaic virus</i>)	Low Low Low	Prevent water logging. 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%). 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). 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. 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. Shoot borer Spray quinalphos (0.075%). Thrips Spray quinalphos 25% (0.075%) after undertaking thrashing.
Ginger	Vegetative	Karnataka, Kerala	Leaf roller (<i>Udaspes folus</i>) Shoot borer	Low Low	Soft rot (<i>Pythium aphanidermatum</i>)	Low to Medium	Soft rot Once disease is observed in field, remove affected clumps and drench

			(<i>Conogethes punctiferalis</i>)		and <i>myriotylum</i> P. Bacterial wilt (<i>Ralstonia solanaceraum</i>) Leaf spot (<i>Phyllosticta zingiberi</i>)	Low Medium	<p>affected and surrounding beds with mancozeb (0.3%) or metalaxyl mancozeb (0.125%) or copper oxychloride (0.2%).</p> <p>Bacterial wilt Confirm identity of the disease by "ooze test". After confirmation, affected clumps shall be removed carefully without spilling the soil in the field and drench surrounding beds of infested areas with copper oxychloride (0.2%). Care should be taken to dispose the removed plants far from the cultivated area or destroyed by burning.</p> <p>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.</p> <p>Leaf roller Spray malathion (0.1%) at 21 days interval.</p> <p>Shoot borer Prune and destroy freshly infested pseudostems and spray malathion (0.1%).</p>
Turmeric	Vegetative	Andhra Pradesh, Telangana, Tamil Nadu, Odisha	Leaf roller (<i>Udaspes folus</i>)	Low	Rhizome rot (<i>Pythium aphanidermatum</i>)	Low	<p>Rhizome rot Once noticed in the field, the beds should be drenched with copper oxychloride (0.2%) or metalaxyl - mancozeb (0.125%).</p> <p>Leaf roller Spray malathion (0.1%) at 21 days</p>

							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>Cymbidium mosaic virus</i>)	Low Low Low	Leaf spot Provide 50% shade in the plantation. 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) may be undertaken by spraying neem oil (0.5%).
Nutmeg	Bearing	Kerala			Leaf fall and fruit rot (<i>Diplodia natalensis</i> and <i>Phytophthora</i> sp.)	Medium	Leaf fall and fruit rot In endemic regions, spray Bordeaux mixture (1%) covering both foliage and fruits.


 (Nodal Officer)
 Name: Biju C.N.
 Designation: Sr Scientist
 (Plant Pathology)


 Director/Head of Institution
 निदेशक Director
 भारतीय मसाला फसल अनुसंधान संस्थान
 Indian Institute of Spices Research
 कालिकट Calicut-673 012
 केरल Kerala, भारत India