

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: 30.05.2019 – 05.06.2019

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/ Bearing stage	Idukki, Kozhikode, Wayanad (Kerala), Kodagu (Karnataka) ,Tamil Nadu	Scale insects ( <i>Protopulvinaria</i> <i>longivalvata</i> , <i>Lepidosaphes</i> <i>piperis</i> , <i>Unaspis</i> sp.) (Field)	Medium	Stunt disease ( <i>Cucumber</i> <i>mosaic virus</i> , <i>Piper yellow</i> <i>mottle virus</i> )	Medium	Nematodes ( <i>Radopholus</i> <i>similis</i> , <i>Meloidogyn</i> <i>e 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. Scale insects Spray neem oil (0.5%), once infestation is noticed. Root mealybug Drench neem oil (0.5%), once
			Root mealybug ( <i>Planococcus</i> sp.) (Field)	Medium	Slow decline ( <i>Meloidogyne</i> <i>incognita</i> , <i>Radopholus</i> <i>similis</i> )	Medium		
			Pollu beetle ( <i>Lanka</i> <i>ramakrishnai</i> ) (Field)	Low	Anthracnose ( <i>Colletotrichum</i> spp.) (Nursery)	Low		
			Mealybug ( <i>Planococcus</i> sp., <i>Ferrisia</i> <i>virgata</i> ) (Nursery)	Medium	Basal wilt ( <i>Sclerotium</i> <i>rolfsii</i> ) (Nursery)	Low		
					Viral infection (Nursery)	Medium		
					Foot rot	Low		

					(Nursery & Field) <i>Phytophthora capsici</i>			<p>infestation is noticed.</p> <p><b>Pollu beetle</b> Spray neem oil (0.5%), once infestation is noticed.</p> <p><b>Nursery:</b> <b>Anthracnose</b> Spray Bordeaux mixture (1%).</p> <p><b>Basal wilt</b> Remove and destroy affected cuttings along with defoliated leaves.</p> <p>After periodic sanitation, the cuttings should be drenched with carbendazim (0.2%) or Bordeaux mixture (1%).</p> <p><b>Viral infections</b> Regular inspection and removal of infected plants. Regular monitoring for insects and spray with neem oil (0.5%) whenever infestation is noticed.</p> <p><b>Mealy bug and scale insects</b> Spray neem oil (0.5%), once infestation is noticed.</p> <p><b>Foot rot</b> Removal and destruction of dead vines along with root system from the garden is essential as this reduces the buildup of inoculums</p> <p>Drench the vines at a radius of 45-50 cm with copper</p>
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								<p>oxychloride (0.2%) @ 5-10 litres/vine after the receipt of monsoon showers (May-June). A foliar spray with Bordeaux mixture (1%) is also to be given. Drenching and spraying need to be repeated during August-September. A third round of drenching may be given during October if the monsoon is prolonged.</p> <p>Apply <i>Trichoderma harzianum</i> around the base of the vine @ 50 g/vine (<math>10^{10}</math> cfu/g) at the onset of monsoon (May-June).</p> <p><b>Nematodes</b> Apply <i>Pochonia chlamydosporia</i> @ 1g/bag.</p>
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Cardamom	Flowering	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	Thrips ( <i>Sciothrips cardamomi</i> ) Shoot borer ( <i>Conogethes punctiferalis</i> )	Low  Low	Leaf blight ( <i>Colletotrichum spp.</i> ) Katte/Mosaic ( <i>Cardamom mosaic virus</i> ) Chlorotic streak ( <i>Banana bract mosaic virus</i> )	Medium  Medium  Low		<p><b>Leaf blight</b> Maintain optimum shade level by providing 40-60% filtered light.</p> <p><b>Katte/ Mosaic</b> 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 build-up of the vector.</p> <p><b>Chlorotic streak</b> 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><b>Shoot borer</b> Spray quinalphos (0.075%).</p> <p><b>Thrips</b> Spray quinalphos 25%EC (0.075%) after undertaking thrashing.</p>
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Vanilla	Vegetative	Karnataka			<p>Root and 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><b>Root and stem rot</b> Soil drenching with copper oxychloride @ 0.25% followed by spray with carbendazim (0.25%) at monthly interval.</p> <p><b>Viral diseases</b> 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> )	Low	Soft rot ( <i>Pythium aphanidermatum</i> , <i>P. myriotylum</i> )	Low	<p><b>Nematodes</b> Root Knot (<i>Meloidogyne</i> spp.), Burrowing nematode (<i>Radopholus similis</i>) and Lesion nematode (<i>Pratylenchus</i> sp.)</p>	<p><b>Rhizome scale</b> Treat the seed rhizomes with quinalphos (0.075%) for 20-30 minutes before planting.</p> <p><b>Soft rot</b> 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 meatalaxyl-mancozeb (0.125%) for 30 minutes before planting</p> <p><b>Nematodes</b> In root knot nematode endemic regions, IISR Mahima may be cultivated. Apply <i>Pochonia</i></p>

								<i>chlamydosporia</i> @ 20 g/bed (10 <sup>6</sup> cfu/g) at the time of planting.
Turmeric	Planting	Andhra Pradesh, Telangana, Tamil Nadu, Odisha	Rhizome scale ( <i>Aspidiella hartii</i> )	Low	Rhizome rot ( <i>Pythium aphanidermatum</i> )	Low	Nematodes Root Knot ( <i>Meloidogyne</i> spp.), Burrowing nematode ( <i>Radopholus similis</i> ) and Lesion nematode ( <i>Pratylenchus</i> sp.)	Rhizome scale Treat the seed rhizomes with quinalphos (0.075%) for 20-30 minutes before planting. Rhizome rot 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 Nematodes In root knot nematode endemic regions, IISR Pragati may be cultivated. Apply <i>Pochonia chlamydosporia</i> @ 20 g/bed (10 <sup>6</sup> cfu/g) at the time of planting.

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