

**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: 01.02.2019 – 07.02.2019

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>Protospulvinaria</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> )	Low	Nematodes ( <i>Radopholus</i> <i>similis</i> , <i>Meloidogyne</i> <i>incognita</i> ) (Nursery)	<b>Field:</b> <b>Stunt disease</b> 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%). <b>Slow decline</b> 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. <b>Scale insects</b> Spray neem oil (0.5%), once infestation is noticed. <b>Root mealybug</b> 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>ramkrishnai</i> ) (Field)	Medium	Anthracnose ( <i>Colletotrichum</i> spp.) (Nursery)	Low		
			Mealybug ( <i>Planococcus</i> sp., <i>Ferrisia</i> <i>virgata</i> ) (Nursery)	Low	Basal wilt ( <i>Sclerotium</i> <i>rolfsii</i> ) (Nursery) Viral infection (Nursery)	Low		

							<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. 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>Nematodes</b> Apply <i>Pochonia chlamydsporia</i> @ 1g/bag.</p>
<b>Cardamom</b>	<b>Harvesting</b>	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	<p><b>Thrips</b> (<i>Sciothrips cardamomi</i>)</p> <p><b>Shoot borer</b> (<i>Conogethes punctiferalis</i>)</p>	Low  Medium	<p><b>Leaf blight</b> (<i>Colletotrichum</i> spp.)</p> <p><b>Katte/Mosaic</b> (<i>Cardamom mosaic virus</i>)</p>	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</p>

					<p><b>Chlorotic streak</b> (<i>Banana bract mosaic virus</i>)</p>	Low	<p>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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**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: **01.02.2019 – 07.02.2019**

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> ) Slow decline ( <i>Meloidogyne</i> <i>incognita</i> , <i>Radopholus</i> <i>similis</i> )	Low	Nematodes ( <i>Radopholus</i> <i>similis</i> , <i>Meloidogyn</i> <i>e incognita</i> ) (Nursery)	<b>Field:</b> <b>Stunt disease</b> 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%). <b>Slow decline</b> Remove and destroy severely affected vines. Apply neem cake @ 500g/vine and biocontrol agents like <i>Pochonia</i> <i>chlamydo sporia</i> or <i>Trichoderma</i> <i>harzianum</i> @ 50 g/vine and metalaxyl-mancozeb (0.125%) may also be applied. <b>Scale insects</b> Spray neem oil (0.5%), once infestation is noticed. <b>Root mealybug</b> Drench neem oil (0.5%), once
			Root mealybug ( <i>Planococcus</i> sp.) (Field)	Medium	Anthracnose ( <i>Colletotrichum</i> spp.) (Nursery)	Low		
			Pollu beetle ( <i>Lanka</i> <i>ramkrishnai</i> ) (Field)	Medium	Basal wilt ( <i>Sclerotium</i> <i>rolfsii</i> ) (Nursery)	Low		
			Mealybug ( <i>Planococcus</i> sp., <i>Ferrisia</i> <i>virgata</i> ) (Nursery)	Low	Viral infection (Nursery)	Low		



							<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. 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>Nematodes</b> Apply <i>Pochonia chlamydosporia</i> @ 1g/bag.</p>
<b>Cardamom</b>	<b>Flowering</b>	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	<p><b>Thrips</b> (<i>Sciothrips cardamomi</i>)</p> <p><b>Shoot borer</b> (<i>Conogethes punctiferalis</i>)</p>	<p>Medium</p> <p>Medium</p>	<p><b>Leaf blight</b> (<i>Colletotrichum</i> spp.)</p> <p><b>Katte/Mosaic</b> (<i>Cardamom mosaic virus</i>)</p>	<p>Medium</p> <p>Low</p>	<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</p>

					<p><b>Chlorotic streak</b> (<i>Banana bract mosaic virus</i>)</p>	Low	<p>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	Bean maturing/ Harvesting	Karnataka			<p><b>Premature yellowing and bean shedding</b> (<i>Colletotrichum vanillae</i>)</p> <p><b>Root and stem rot</b> (<i>Fusarium oxysporum</i> f.sp. <i>vanillae</i>)</p> <p><b>Viral diseases</b> (<i>Bean common mosaic virus</i>, <i>Bean yellow mosaic virus</i>, <i>Cucumber mosaic virus</i>, <i>Cymbidium mosaic virus</i>)</p>	Medium  Low  Low	<p><b>Premature yellowing and bean shedding</b> Provide 50% shade in the plantation. Spray carbendazim – mancozeb (0.25%) at 15 – 20 days interval.</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 & Turmeric	Rhizome	Karnataka, Kerala	<b>Rhizome scale</b> ( <i>Aspidiella hartii</i> )	Low			<p><b>Rhizome scale</b> Harvest the rhizomes on time, discard severely infested rhizomes. Store seed rhizomes in sawdust + <i>Strychnos nuxvomica</i> leaves (dried) after seed treatment</p>

(Nodal Officer) C.M. Senthil Kumar  
Name: C.M. Senthil Kumar  
Designation: Senior Scientist (Agri. Ento.)

Director/Head of Institution



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**Weekly Status Report on Insects Pests & Diseases of Crops**

Name of Institute: ICAR - INDIAN INSTITUTE OF SPICES RESEARCH, KOZHIKODE 673 012, KERALA  
 Date: 15.02.2019 – 21.02.2019

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	<b>Scale insects</b> ( <i>Protospulvinaria</i> <i>longivalvata</i> , <i>Lepidosaphes</i> <i>piperis</i> , <i>Unaspis</i> sp.) (Field)	Medium	<b>Stunt disease</b> ( <i>Cucumber</i> <i>mosaic virus</i> , <i>Piper yellow</i> <i>mottle virus</i> )	Low	<b>Nematodes</b> ( <i>Radopholus</i> <i>similis</i> , <i>Meloidogyne</i> <i>incognita</i> ) (Nursery)	<b>Field:</b> <b>Stunt disease</b> 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%). <b>Slow decline</b> 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. <b>Scale insects</b> Spray neem oil (0.5%), once infestation is noticed. <b>Root mealybug</b> Drench neem oil (0.5%), once
			<b>Root mealybug</b> ( <i>Planococcus</i> sp.) (Field)	Medium	<b>Anthracnose</b> ( <i>Colletotrichum</i> spp.) (Nursery)	Medium		
			<b>Pollu beetle</b> ( <i>Lanka</i> <i>ramkrishnai</i> ) (Field)	Medium	<b>Basal wilt</b> ( <i>Sclerotium</i> <i>rolfsii</i> ) (Nursery)	Low		
			<b>Mealybug</b> ( <i>Planococcus</i> sp., <i>Ferrisia</i> <i>virgata</i> ) (Nursery)	Low	<b>Viral infection</b> (Nursery)	Low		

							<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. 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>Nematodes</b> Apply <i>Pochonia chlamydosporia</i> @ 1g/bag.</p>
<b>Cardamom</b>	<b>Flowering</b>	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	<p><b>Thrips</b> (<i>Sciothrips cardamomi</i>)</p> <p><b>Shoot borer</b> (<i>Conogethes punctiferalis</i>)</p>	<p>Medium</p> <p>Medium</p>	<p><b>Leaf blight</b> (<i>Colletotrichum</i> spp.)</p> <p><b>Katte/Mosaic</b> (<i>Cardamom mosaic virus</i>)</p>	<p>Medium</p> <p>Low</p>	<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</p>

					<p><b>Chlorotic streak</b> (<i>Banana bract mosaic virus</i>)</p>	Low	<p>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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 Director/Head of Institution

**निदेशक Director**  
 भाकूअनुप - भारतीय मसाला फसल अनुसंधान संस्थान  
 ICAR-Indian Institute of Spices Research  
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