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
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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	**(a)Vegetative/ Initiation of spikes** **(b) Nursery**	Idukki, Kozhikode, Wayanad (Kerala), Kodagu (Karnataka)	**Scale insects** (*Lepidosaphes piperis*, *Marsipococcus marsupialis*)	Low	**Yellowing (due to slow decline) – Nematodes**	Low	**Nematodes** (*Radopholus similis*, *Meloidogyne incognita*)	**Field:** **Scale insects** Clip off and destroy severely infested plant parts. Spray dimethoate (0.1%) after harvest. Repeat spraying after 21 days to control the infestation completely. (Initiate control measures during early stages of pest infestation). **Mealy bug** Mealybug infestation on aerial portion can be controlled by spraying dimethoate (0.1%) on affected vines. **Yellowing** Maintain adequate shade. Provide irrigation. **Stunt disease** Regular monitoring. Remove infected vines and destroy by
			Mealybug (*Planococcus* sp., *Ferrisia virgata*)	Low	**Stunt disease** (*Cucumber mosaic virus*, *Piper yellow mottle virus*)	Medium		
					Foliar infection (due to *Phytophthora capsici*)	Low		
					Foliar infection due to *Phytophthora*	Low to Medium		

					capsici (Nursery)			burning or burying deep in soil. Control the vector (mealy bugs) by drenching with chlorpyrifos (0.075%). **Foliar infection due to *Phytophthora capsici*** After the receipt of few monsoon showers, all the vines are to be 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 litr es/ vine (drench) also may to be given. **Nursery: Foliar infection due to *Phytophthora capsici*** If foliar infection is noticed, spray Bordeaux mixture (1%) and drench with copper oxychloride (0.2 %). Alternatively, metalaxyl 0.01% (1.25 g/litre) or potassium phosphonate 0.3% (3 ml/litre) could also be used. **Anthracnose** Spray Bordeaux mixture (1%) alternating with carbendazim (0.1%). **Basal wilt** The affected cuttings along with
					Anthracnose (*Colletotrichum gloeosporioides*) (Nursery)	Low		
					Basal wilt *Sclerotium rolfsii* (Nursery)	Low		
					Viral infection (Nursery)	Low to Medium		

								defoliated leaves should be removed and destroyed. After periodic sanitation, the cuttings should be drenched with carbendazim (0.2%) or Bordeaux mixture (1%). **Viral infections** Regular inspection and removal of infected plants. Regular inspection for insects and spray with dimethoate (0.05%) whenever insect attack is noticed. **Nematodes** Apply carbosulfan (0.1%) @ 50 mL/bag.

Cardamom	**(a) Vegetative/** **Panicle initiation/ Capsule formation** **(b) Primary seedling nursery**	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	**Shoot fly** (*Formosina flavipes)*	Low	**Leaf blight** (*Colletotrichum gloeosporioides*)	Low		**Field:** **Shoot fly** Remove and destroy the affected shoots at ground level. Spray quinalphos (0.05%). **Panicle/Shoot borer** Spray quinalphos (0.075%) coinciding with emergence of panicles and new shoots. **Thrips** Under Karnataka conditions, spray Fipronil (0.005%) or Spinosad (0.0135%) after undertaking thrashing. Ensure irrigation after thrashing. **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 or buried deep in soil. Removal of natural hosts like *Colocasia* and *Caladium* to destroy breeding sites and check population build-up of the vector.
			Panicle/Shoot borer (*Conogethes punctiferalis*)	Low	**Katte/Mosaic** (*Cardamom mosaic virus*)	Medium		
			Thrips (*Sciothrips cardamomi*)	Low	**Chlorotic streak** (*Banana bract mosaic virus*)	Low		

					Azhukal/Capsule rot (*Phytophthora nicotianae* var. *nicotianae* and *P. meadii*) **Damping off or seedling rot** (*Pythium vexans, Rhizoctonia solani, Fusarium oxysporum*) (Nursery)	Low		**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. **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. 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%). **Primary seedling nursery:** Prevent water stagnation by providing adequate drainage. Remove and destroy infected/dead seedlings. When initial symptoms are noticed, drench nursery beds with 0.2% copper oxychloride @ 3-5 litres/m^2. Repeat drenching two to three times at an interval of 15 days.
Vanilla	**Vegetative/ flowering/ bean**	Karnataka			**Premature yellowing and bean shedding**	Medium		**Premature yellowing and bean shedding** Provide 50% shade in the

	formation				(*Colletotrichum vanillae*)			plantation. Provide mist irrigation (4 – 6 hours during pollination). Spray carbendazim – mancozeb (0.25%) at 15 – 20 days interval. **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 dimethoate (0.05%).
					Viral diseases (*Bean common mosaic virus*, *Bean yellow mosaic virus*, *Cucumber mosaic virus*, *Cymbidium mosaic virus*)	Medium		
Ginger	**Vegetative**	Kerala, Karnataka, Tamil Nadu			**Soft rot** (*Pythium* spp – *P. aphanidermatum* and *P. myriotylum*)	Low		**Soft rot** Seed rhizomes are to be selected from disease free gardens. Treat seed rhizomes with mancozeb (0.3%) or metalaxyl mancozeb (0.125%) for 30 minutes before planting.
Turmeric	**Vegetative**	Tamil Nadu, Andhra Pradesh, Telangana			**Rhizome rot** (*Pythium aphanidermatum*)	Low		**Rhizome rot** Treating the seed rhizomes with mancozeb (0.3%) for 30 minutes prior at the time of planting.