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: 24.08.2016 - 30.08.2016

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)	**Leaf gall thrips** (*Liothrips karnyi*) **Top shot borer** (*Cydia hemidoxa*) **Pollu beetle** (*Lanka ramakrihnai*) **Mealybug** (*Planococcus* sp.*, Ferrisia virgata*) (Nursery)	Medium Medium Low Low	**Stunt disease** (*Cucumber mosaic virus, Piper yellow mottle virus*) **Foliar infection (due to *Phytophthora capsici*)** **Anthracnose** (*Colletotrichum capsici*) **Foliar infection due to *Phytophthora capsici*** (Nursery)	Low Medium Low Low to Medium	**Nematodes** (*Radopholus similis, Meloidogyne incognita*) (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 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/

					Anthracnose (*Colletotrichum gloeosporioides*) (Nursery)	Low	vine (drench) or potassium phosphonate 0.3% @ 5-10 litres/ vine (drench) also may to be given. **Anthracnose** Prophylactic spraying with Bordeaux mixture (1%) or carbendazim + mancozeb (0.1%). **Leaf gall thrips**
					Basal wilt (*Sclerotium rolfsii*) (Nursery)	Low	Spray dimethoate (0.05%) during emergence of new flushes on young vines. **Top shot borer** Spray quinalphos (0.05%) on tender terminal shoots; repeat
					Viral infection (Nursery)	Low to Medium	spraying at monthly intervals to protect emerging new shoots. **Pollu beetle** Spray quinalphos (0.05%). **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** 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%). **Viral infections** Regular inspection and removal of infected plants. Regular monitoring for insects and spray with dimethoate (0.05%) whenever insect attack is noticed. **Mealy bug** Spray dimethoate (0.05%), once infestation 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) | **Panicle/Shoot borer** (*Conogethes punctiferalis*)

Thrips (*Sciothrips cardamomi*) | Low

Medium | **Leaf blight** (*Colletotrichum gloeosporioides*)

Katte/Mosaic (*Cardamom mosaic virus*)

Chlorotic streak (*Banana bract mosaic virus*)

Azhukal/Capsule rot (*Phytophthora nicotianae* var. *nicotianae* and *P. meadii*)

Damping off or seedling rot (*Pythium vexans, Rhizoctonia solani, Fusarium oxysporum*) (Primary Seedling Nursery) | Low

Medium

Low

Low

Low | | **Field:** **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. **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 |
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								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: Damping off or seedling rot** 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 formation	Karnataka			**Premature yellowing and bean shedding** (*Colletotrichum vanillae*)	Medium		**Premature yellowing and bean shedding** Provide 50% shade in the plantation. Spray carbendazim – mancozeb (0.25%) at 15 – 20 days interval.
					Bean rot (*Phytophthora meadii, Sclerotium* sp.)	Medium		**Bean rot** Regulate shade. Remove and destroy infected plant parts and mulch. Spray Bordeaux mixture (1%) and drench soil with copper oxychloride (0.25%) 2 – 3 times, In case of Scelrotium rot, spray carbendazim – mancozeb (0.25%) twice at 15 days interval.
					Viral diseases (*Bean common mosaic virus, Bean yellow mosaic virus, Cucumber mosaic virus, Cymbidium mosaic virus*)	Medium		**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%).
Ginger	Vegetative	Kerala, Karnataka, Tamil Nadu	**Leaf roller** (*Udaspes folus*)	Medium	**Soft rot** (*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.
					Leaf spot *Phyllosticta zingiberi*	Low to Medium		**Leaf spot** Spray Bordeaux mixture (1%) or mancozeb (0.2%) or carbendazim (0.2%) when the initial symptoms

								appear. Care should be taken that the spray solution should reach lower surface of the leaves also. **Leaf roller** Spraying malathion (0.1%) at 21 days intervals.
Turmeric	**Vegetative**	Kerala, Tamil Nadu, Andhra Pradesh, Telangana	**Leaf roller** (*Udaspes folus*) **Leaf feeding beetle** (*Lema* spp.)	Low	**Rhizome rot** (*Pythium aphanidermatum*) **Leaf spot** (*Colletotrichum capsici*)	Low Low		**Rhizome rot** Treating the seed rhizomes with mancozeb (0.3%) for 30 minutes prior at the time of planting. **Leaf spot** Spray carbendazim or mancozeb (0.2 %) or copper oxychloride (0.2%). **Leaf roller** Spraying malathion (0.1%) at 21 days intervals. **Leaf feeding beetle** Spray quinalphos (0.05%).