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: 04.10.2018 – 10.10.2018

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	**Mealybug** (*Planococcus* sp., *Ferrisia virgata*) (Nursery) **Scale insect** (*Protopulvinaria longivalvata*) (Nursery)	Low Low	**Foot rot** (*Phytophthora* spp.) **Anthracnose** (*Colletotrichum* spp.) **Stunt disease** (*Cucumber mosaic virus, Piper yellow mottle virus*) **Anthracnose** (*Colletotrichum* spp.) (Nursery) **Basal wilt** (*Sclerotium rolfsii*) (Nursery) **Viral infection** (Nursery)	Medium to Severe Medium Low Low Low Low	**Nematodes** (*Radopholus similis, Meloidogyne incognita*) (Nursery) **Physiological wilting/yellowing due to water stagnation**	**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 metalaxyl-mancozeb (0.125%) or potassium phosphonate (0.3%) @ 5-10 litres/vine. **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%).

								Nursery: **Anthracnose** Spray Bordeaux mixture (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 neem oil (0.5%) whenever infestation is noticed. **Mealy bug and scale insects** Spray neem oil (0.5%), once infestation is noticed. **Nematodes** Apply *Pochonia chlamydosporia* @ 1g/bag. **Physiological wilting/yellowing due to water stagnation** Provide adequate drainage.
Cardamom	**Vegetative/ Capsule formation**	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	**Thrips** (*Sciothrips cardamomi*) **Shoot borer** (*Conogethes punctiferalis*)	Medium to Severe Medium	**Azhukal/Capsule rot** (*Phytophthora nicotianae* var. *nicotianae* and *P. meadii*) **Rhizome rot** (*Pythium vexans*, *Rhizoctonia solani*, *Fusarium*	Medium to Severe Medium to Severe		**Azhukal/Capsule rot** If noticed, prevent water logging and 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%). **Rhizome rot**

					spp.) **Leaf blight** (*Colletotrichum* spp.) ***Katte*/Mosaic** (*Cardamom mosaic virus*) **Chlorotic streak** (*Banana bract mosaic virus*)	Low Low to medium Low		If noticed, prevent water logging and destroy disease affected portions and plant debris. Drench plant basins with copper oxychloride (0.25%) and spray with Bordeaux mixture (1%). Alternatively, potassium phosphonate (0.3%) or metalaxyl-mancozeb (0.125%) can be used for drenching and spraying. *Trichoderma harzianum* mass multiplied on suitable carrier media may be applied to plant basins @ 1 kg. **Leaf blight** Maintain optimum shade level by providing 40-60% filtered light. Spray carbendazim - mancozeb (0.1%) or carbendazim (0.2%) which may be repeated at 30 days interval depending on disease severity. ***Katte*/Mosaic and 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. Removal of natural hosts like *Colocasia* and *Caladium* to destroy breeding sites and check population build-up of the vector. **Shoot borer** Spray quinalphos (0.075%). **Thrips** Spray quinalphos 25% (0.075%) after undertaking thrashing.

Ginger	**Vegetative**	Karnataka, Kerala	**Leaf roller** (*Udaspes folus*) **Shoot borer** (*Conogethes punctiferalis*)	Low Medium	**Soft rot** (*Pythium aphanidermatum* and *P. myriotylum*) **Bacterial wilt** (*Ralstonia solanaceraum*) **Leaf spot** (*Phyllosticta zingiberi*)	Low to Medium Medium Medium		**Soft rot** If noticed, remove affected clumps and drench affected and surrounding beds with mancozeb (0.3%) or metalaxyl mancozeb (0.125%) or copper oxychloride (0.2%). **Bacterial wilt** If noticed, confirm identity of the disease by "ooze test". Once confirmed, remove affected clumps and drench surrounding beds of infested areas with copper oxychloride (0.2%). Dispose the infected plants far from the cultivated area or destroyed by burning. **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. **Leaf roller** Spray malathion (0.1%) at 21 days interval. **Shoot borer** Prune and destroy freshly infested pseudostems and spray malathion (0.1%).
Turmeric	**Vegetative**	Andhra Pradesh, Telangana, Tamil Nadu, Odisha	**Leaf roller** (*Udaspes folus*)	Low	**Rhizome rot** (*Pythium aphanidermatum*)	Low to medium		**Rhizome rot** If noticed in the field, the beds should be drenched with copper oxychloride (0.2%) or metalaxyl - mancozeb (0.125%). **Leaf roller**

								Spray malathion (0.1%) at 21 days interval.
Vanilla	**Vegetative**	Karnataka			**Leaf spot** (*Colletotrichum vanillae*) **Stem rot** (*Fusarium oxysporum* f. sp. *vanillae*) **Viral diseases** (*Bean common mosaic virus*, *Bean yellow mosaic virus*, *Cucumber mosaic virus*, *Cymbidium mosaic virus*)	Low Low Low		**Leaf spot** Spray Bordeaux mixture (1%) at 15 – 20 days interval. **Stem rot** Remove and destroy infected plant parts. Apply *Trichoderma harzianum* and *Pseudomonas fluorescens* (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) by spraying neem oil (0.5%).
Nutmeg	**Bearing**	Kerala	**Borer** (*Xylosandrus* spp.)	Low	**Leaf fall and fruit rot** (*Diplodia natalensis* and *Phytophthora* sp.)	Medium		**Leaf fall and fruit rot** In endemic regions, spray Bordeaux mixture (1%) covering both foliage and fruits. **Borer** Adopt strict phytosanitation and crop hygiene measures. Prune and destroy severely affected plant parts.

3.10.18.

(Nodal Officer)
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03/10/18

Director/Head of Institution

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