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: 28.06.2018 - 04.07.2018

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/ Vegetative/ spike formation**	Idukki, Kozhikode, Wayanad (Kerala), Kodagu (Karnataka), Tamil Nadu	**Scale insects** (*Protopulvinaria longivalvata, Lepidosaphes piperis*) (Field)	Low	**Foot rot** (*Phytophthora* spp.)	Low	**Nematodes** (*Radopholus similis, Meloidogyne incognita*) (Nursery)	**Field:** **Foliar infection and foot rot** After the receipt of 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 litres/ vine (drench) also may to be given.
			Root mealybug (*Planococcus* sp.) (Field)	Medium	**Anthracnose** (*Colletotrichum* spp.)	Low		
			Mealybug (*Planococcus* sp., *Ferrisia virgata*)	Low	**Stunt disease** (*Cucumber mosaic virus, Piper yellow mottle virus*)	Low		
					Slow decline (*Meloidogyne incognita*,	Low		

			(Nursery) **Scale insect** (*Protopulvinaria longivalvata*) (Nursery)	Low	*Radopholus similis*) **Anthracnose** (*Colletotrichum* spp.) (Nursery) **Basal wilt** (*Sclerotium rolfsii*) (Nursery) **Viral infection** (Nursery)	Low Low Low		Anthracnose **Anthracnose** Prophylactic spraying with Bordeaux mixture (1%) or 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%). **Slow decline** Remove and destroy severely affected vines. Apply neem cake @ 500g/vine and biocontrol agents like *Pochonia chlamydosporia* or *Trichoderma harzianum* @ 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 infestation is noticed. **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.
Cardamom	**Vegetative/ Panicle initiation/ Capsule formation**	Idukki, Wayanad (Kerala), Kodagu (Karnataka)	**Thrips** (*Sciothrips cardamomi*) **Shoot borer** (*Conogethes punctiferalis*)	Low Low	**Azhukal/Capsule rot** (*Phytophthora nicotianae* var. *nicotianae* and *P. meadii*) **Leaf blight** (*Colletotrichum* spp.) ***Katte*/Mosaic** (*Cardamom mosaic virus*) **Chlorotic streak** (*Banana bract mosaic virus*)	Low Medium Low Low		**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%). **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. **Shoot borer** Spray quinalphos (0.075%). **Thrips** Spray quinalphos 25%EC (0.075%) after undertaking thrashing.
Ginger	**Planting**	Karnataka, Kerala	**Rhizome scale** (*Aspidiella hartii*)		**Soft rot** (*Pythium aphanidermatum* and *P. myriotylum*)	Low	**Nematodes** Root knot (*Meloidogyne* spp.), Burrowing (*Radopholus similis*) and Lesion (*Pratylenchus* spp.)	**Soft rot** As prophylactic measures: 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 metalaxyl-mancozeb (0.125%) for 30 minutes before planting. **Rhizome scale** Treat the seed rhizomes with quinalphos (0.075%) (for 20-30 minutes) before planting if the infestation persists. **Nematodes** As .prophylactic measures: Use nematode-free healthy seed

								rhizomes for planting. In root knot nematode endemic regions, the resistant variety IISR Mahima may be cultivated. The bioagent, *Pochonia chlamydosporia* may be incorporated in ginger beds (20 g/bed with 10^6 cfu/g) at the time of planting.
Turmeric	**Planting**	Andhra Pradesh, Telangana, Tamil Nadu, Odisha	**Rhizome scale** (*Aspidiella hartii*)		**Rhizome rot** (*Pythium aphanidermatum*)	Low	**Nematodes** Root knot (*Meloidogyne* spp.), Burrowing (*Radopholus similis*) and Lesion (*Pratylenchus* spp.)	**Rhizome rot** As prophylactic measures: 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. **Rhizome scale** Treat the seed rhizomes with quinalphos (0.075%) (for 20-30 minutes) before planting if the infestation persists. **Nematodes** As prophylactic measures: Use nematode-free healthy seed rhizomes for planting. In root knot nematode endemic regions, the resistant variety IISR Pragati may be cultivated. The bioagent, *Pochonia chlamydosporia* may be incorporated in ginger beds (20 g/bed with 10^6 cfu/g) at the time of planting.
Vanilla	**Vegetative**	Karnataka			**Root and stem rot**	Low		**Root and stem rot** Soil drenching with copper

					(*Fusarium oxysporum* f. sp. *vanillae*) **Viral diseases** (*Bean common mosaic virus*, *Bean yellow mosaic virus*, *Cucumber mosaic virus*, *Cymbidium mosaic virus*)	Low		oxychloride @ 0.25% followed by spray with carbendazim (0.25%) at monthly 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 neem oil (0.5%).
Nutmeg	**Bearing**	Kerala			**Leaf fall and fruit rot** (*Diplodia natalensis* and *Phytophthora* sp.)	Low		**Leaf fall and fruit rot** In endemic regions, spray Bordeaux mixture (1%) covering both foliage and fruits as a prophylactic measure.

29.6.18

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