Volume 3, Issue 11
November I 2025

Agri Roots
e- Magazine

www.agrirootsmagazine.in

ISSN: 2583-9071

Pests of Cardamom and Clove

ARTICLE ID: 0282

Chandan Kumar

B.Sc. Agriculture, School of Agriculture & Environmental Sciences, Shobhit Deemed-to-be University, Meerut-250110

Cardamom (*Elettaria cardamomum*) and clove (*Syzygium aromaticum*) are valuable spice crops widely cultivated in India and other tropical regions. They play a vital role in the agricultural economy due to their extensive use in culinary, pharmaceutical, and cosmetic industries. However, their productivity is frequently constrained by insect pests that attack the plants at various growth stages, leading to significant yield losses. Therefore, effective pest management is essential to maintain both quality and productivity.

Major Pests of Cardamom

1. Shoot and Capsule Borer (*Conogethes punctiferalis*)

Nature of Damage: Larvae bore into unopened panicles, flower buds, and tender capsules, causing drying and shedding.

Symptoms: Presence of holes on capsules and frass inside the boreholes.

Management

- Maintain field sanitation.
- Install pheromone traps.
- Spray Emamectin benzoate 5 SG @ 0.4 g/litre or Neem oil 3%.

2. Cardamom Thrips (*Sciothrips cardamomi*)

Nature of Damage: Nymphs and adults suck sap from tender leaves, panicles, and capsules, leading to scarring and malformation.

Symptoms: Silvery streaks on leaves and roughened capsule surfaces.

Management

- Regulate shade and ensure proper irrigation.
- Spray Lambda-cyhalothrin 0.005% or Neem seed kernel extract (5%).

3. Root Grubs (*Bashtrocheilus spp.* and *Leucopholis spp.*)

Nature of Damage: Grubs feed on roots, causing wilting and stunted growth.

Management

- Apply Chlorpyriphos 0.04% to the root zone.

- Use *Metarhizium anisopliae* as a biological control agent.

Major Pests of Clove

1. Stem Borer (*Sahyadrassus malabaricus*)

Nature of Damage: Larvae bore into the main stem and branches, weakening plant structure.

Symptoms: Holes on the trunk, extrusion of frass, and wilting of branches.

Management

- Clean and remove infested bark.
- Apply Chlorpyriphos 0.1% into boreholes and seal with mud.

2. Leaf Miner (*Acrocercops syngramma*)

Nature of Damage: Larvae mine leaf tissues, forming irregular patches.

Symptoms: Yellowish blotches and curling of leaves, reducing photosynthetic activity.

Management

- Prune infested leaves.
- Spray Azadirachtin-based (Neem) formulations.

3. Scale Insects (*Coccus viridis*, *Aspidiotus destructor*)

Nature of Damage: Nymphs and adults suck sap from leaves and twigs, leading to yellowing and sooty mold formation.

Management

- Apply horticultural oil 1%.
- Release biological predators such as *Cryptolaemus montrouzieri*.

Integrated Pest Management (IPM) Strategies

- Regular monitoring and early detection of pest infestations.
- Maintenance of adequate shade and soil moisture.
- Use of pest-resistant varieties where available.
- Adoption of biological control agents and botanical pesticides.
- Avoid indiscriminate use of chemical pesticides to prevent resistance and environmental hazards.

Conclusion

Pest management in cardamom and clove cultivation is crucial for ensuring sustainable production and maintaining export quality. Integrated Pest Management (IPM) practices, which combine cultural, biological, and chemical control measures, offer an environmentally safe and economically viable approach. Enhancing farmer awareness and training on pest identification and timely control measures can significantly reduce yield losses and improve spice productivity.

References

1. Anonymous (2021). *Package of Practices for Spices Crops*. Indian Institute of Spices Research (IISR), Calicut, Kerala.
2. Nair, R.V. & Venugopal, M.N. (2019). Insect Pests of Spices and Their Management. *Indian Journal of Entomology*, **81**(2): 201–210.
3. Saju, K.A. (2020). *Integrated Pest Management in Cardamom and Clove Plantations.* Kerala Agricultural University Publications.
4. Spices Board India (2022). *Pest and Disease Management in Spices.* Retrieved from www.indianspices.com