

Enhancing Plant Defense for Pest and Disease Management

Anurag, Sujata and Maya Goel
Mojo Plantation, Kodagu
Karnataka

Mojo Plantation



Cardamom



Cardamom Stem Borer



Plant Extracts for Pest Control

- *Pongamia pinnata*
- *Annona reticulata*
- *Ocimum tenuiflora*
- *Nicotiana plumbaginifolia*
- *Lantana camara*
- *Vitex negundo*



Traditional Pest Management

- *Adathoda vasica*
- *Acorus calamus*
- *Alpina galanga*
- *Azadirachta indica*
- *Calotropis procera*
- *Cassia fistula*
- *Crotolaria retusa*

Mustard Magic

Mustard



Indian Mustard Flower (*Brassica juncea* L. Czern)

Mustard Plant



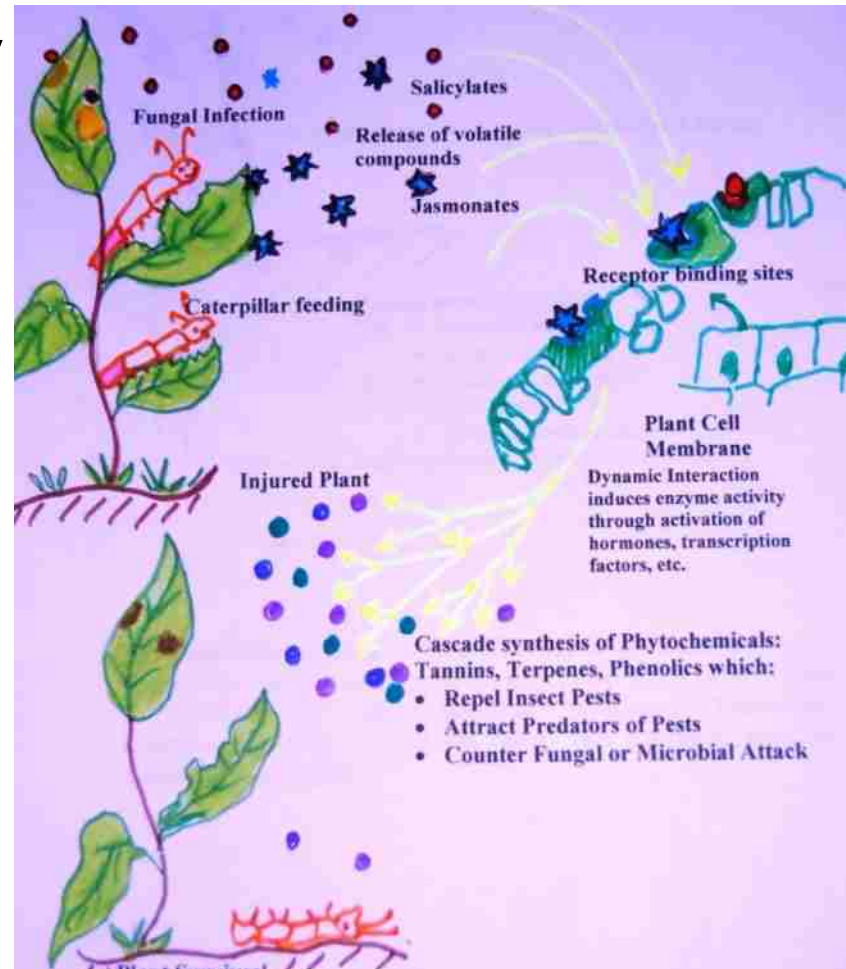
Post Harvest Mulch Residues into Soil



Soil Microbes Act upon Brassica tissues to Release Isothiocyanates Which acts as a "Biological Fumigant" and suppresses fungal pathogens like Rhizoctonia, Pythium, Sclerotinia. Soils stay healthy and disease-free.

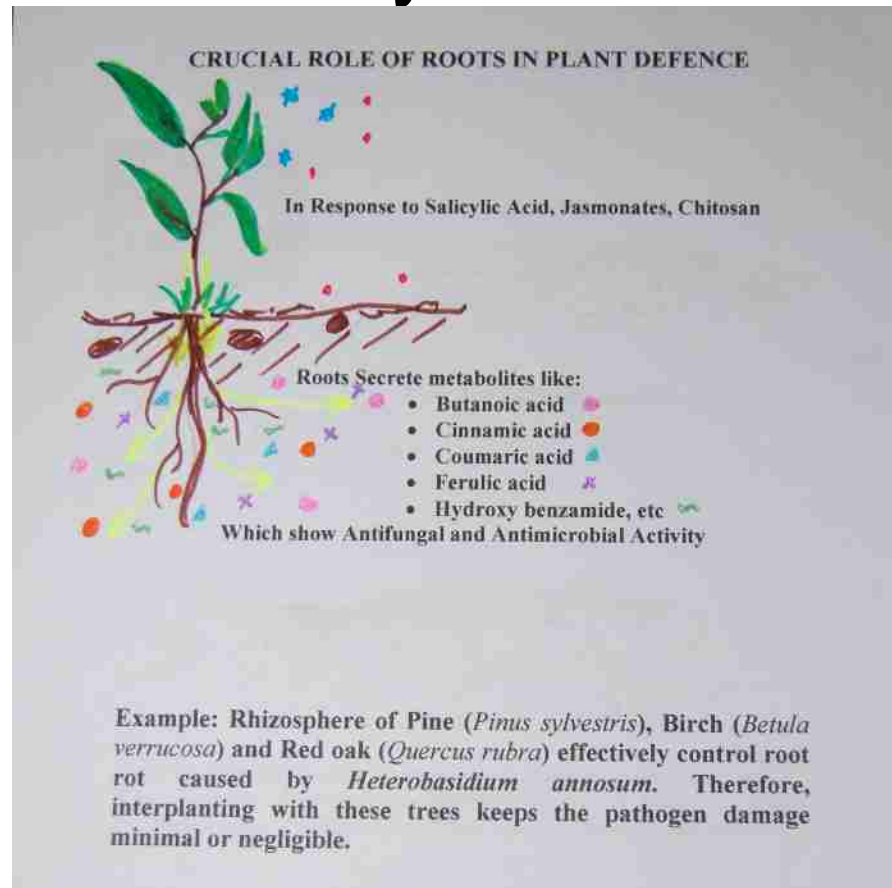
Induction of Defense Pathways

Jasmonate Pathway



Significance of Rhizosphere

Root Diversity is Protective



Biodiversity Creates a Foundation



Wasps and Spiders as Predators



Dragonflies and Fly



Logical Conclusions



- Multi-crop at all levels
- Keep cropped areas surrounded by fallow lands
- Encourage weed diversity. These are primary habitats for predators
- Encourage biodiversity through resource management
- Minimize sprays to nutritional and liquid manure applications
- ENABLE Nature to create a balance in your fields.