



Centurion
UNIVERSITY

DISEASES OF FIELD & HORTICULTURAL CROPS AND THEIR MANAGEMENT-I

Submitting to:
Dr. Aravind .T
ASST. PROFESSOR, MSSSOA,CUTM



Submitted by:
p.Vaishnavi
Redg no. : 200804130200
Section – e
BSc Ag



CULTURAL METHODS OF DISEASE MANAGEMENT

FIELD SANITATION

INTERCROPPING

ROUGHING

INM

ADDITION OF GREEN
MANURE

CONTENTS

CROP ROTATION

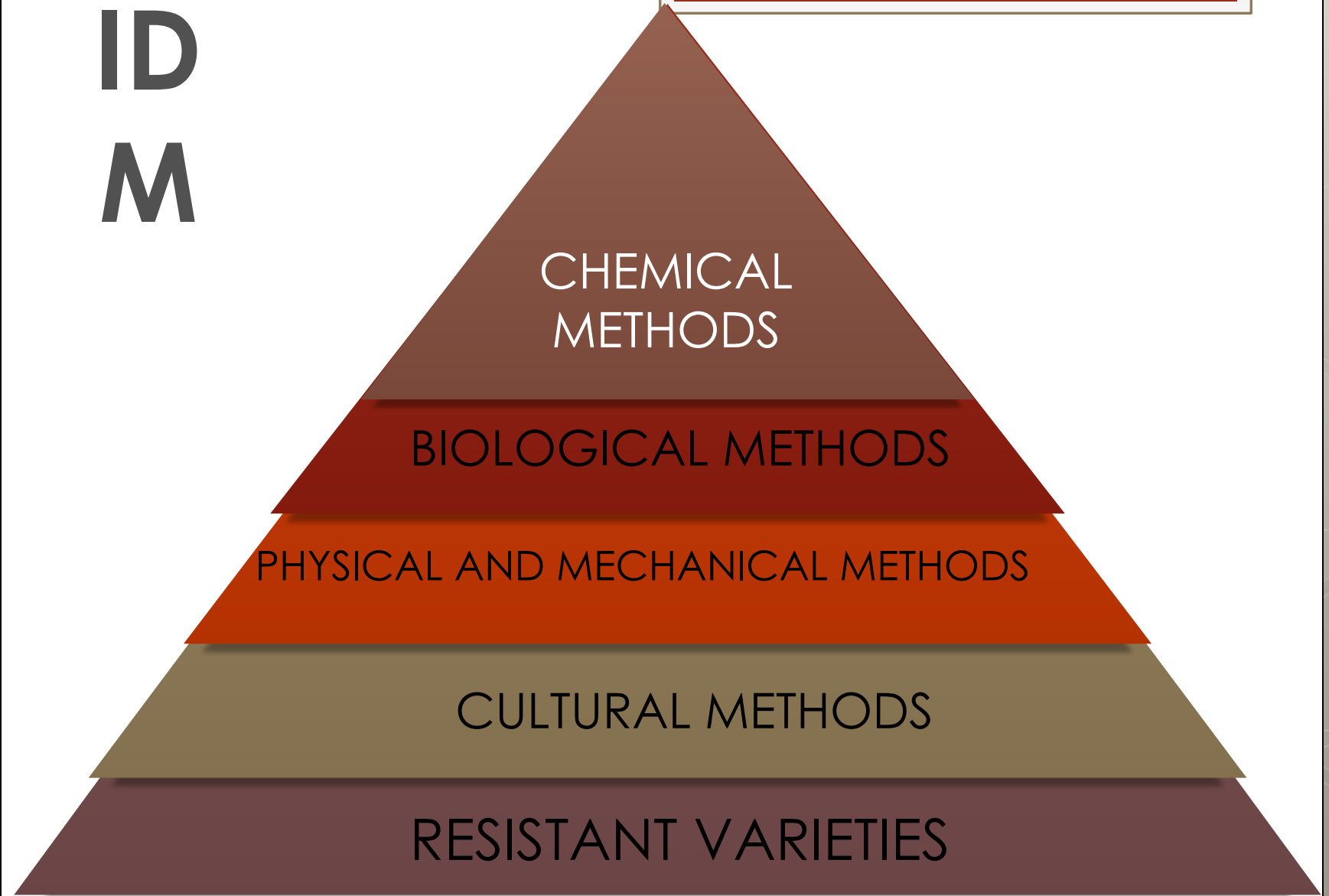
DEEP SUMMER
PLOUGHING

USING CERTIFIED SEEDS

BIO FUMIGATION

END SLIDE

ID
M



INTRODUCTION

- Cultural disease management practices are the measures undertaken by humans to prevent and control disease by manipulating plants.
- According to Stevens(1960) , the cultural methods of disease control involve agricultural cropping, harvesting and storage, tillage, crop rotation, soil management, growing of resistant varieties, planning of land use, and other related practices

FIELD SANITATION

- ❑ Destroy Sources of Disease Infection and Pest Infestation
- ❑ Disease free plant material
- ❑ Poor sanitation causes diseases



Brown spot in rice



**Charcoal rot in
maize**



ROUGHING

- The removal and destruction of alternate hosts and collateral host, diseased plants, or rogues. It can prevent further spread of disease, but is labour intensive



Green ear in bajra



Mosaic in ragi



INTERCROPPING:

- ❑ Inter-cropping or multiple cropping wherever possible.
- ❑ All the crops are not preferred by each pest species and certain crops act as repellents, thus keeping the pest species away from preferred crops resulting in reduction of pest incidence.

Green manure

- Green undecomposed plant material used as a manure” green manure”.
- Green manures are nothing but organic amendments.
- Potentially control strategy for soil borne pathogens.

Green Leaf Manure Crops

Cassia fistula



Leucaena leucocephala



Sesbania grandiflora



Calotropis gigantea



Gliricida sepium



Pongamia globra



Delonix regia



Peltophorum ferrugenum



Azadiracta indica



Mechanisms involved

1. Direct : breakdown of glucosinolates

2. Indirect : influence native microbial population



**AVENASIN
SAPONIN
ALLYSOTHIOCYNATES**

Crop rotation

- Growing of different crops in a specific piece of land in a year after year
- **Purpose**
 - • To control the soil borne pathogens
 - • To control the obligate pathogens, where pathogen can not survive away from the suitable host.



Fusarium wilt in red gram by sorghum/tobacco



Deep summer ploughing

- Ploughing the land during hot summer periods in early monsoon period.(crop residues)



INM

MANURES

COMPOST

GREEN MANURES

CROP RESIDUE

BIOFERTILIZERS

FERTILIZERS

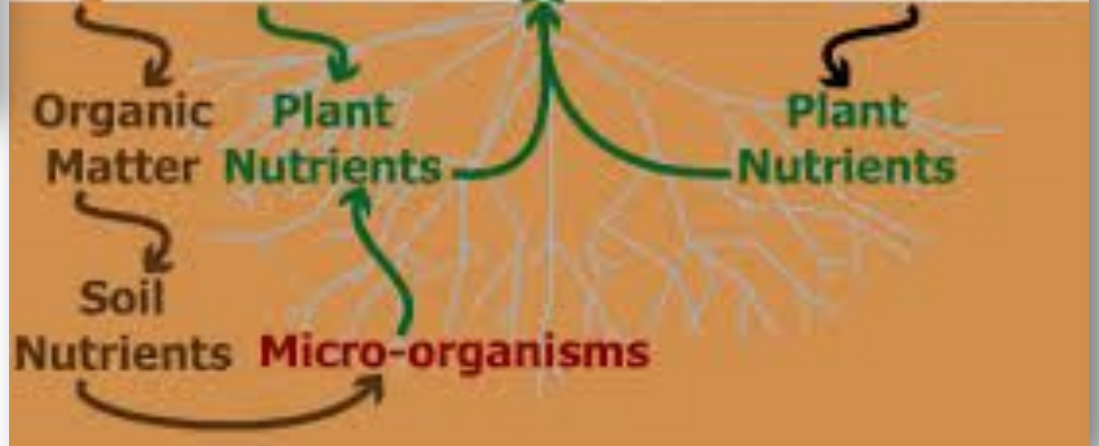


FEEDING THE SOIL

FEEDING THE PLANT

Organic Fertilizers

Chemical Fertilizers



Azospirillum



Azotobacter



USING CERTIFIED SEEDS

- ❑ high in genetic purity
- ❑ high in germination and vigor
- ❑ good quality



BIOFUMIGATION

1

- CRUCIFEROUS CROPS
- GLUCOSINOLATES

2

- ISOTHIOCYNATES

3

- TOXIC TO PATHOGENS



Thank you

