DISEASE MANAGEMENT FOR COMMERCIAL VEGETABLES

ESSENTIAL MANAGEMENT TOOL:

DIAGNOSTIC INFORMATION FOR DECISION MAKING

PRE-PLANT DECISIONS

- SITE-SELECTION
- SOIL TREATMENT
- CHOICE OF CROP OR CULTIVAR
- LAY-OUT OF FIELD / BEDS
**SITE SELECTION**

PREVIOUS DISEASE HISTORY

SOIL TEST FOR NEMATODES

**SOIL TREATMENT**

BUSAN / VAPAM APPLIED VIA DRIP IRRIGATION PRIOR TO PLANTING FOR CONTROL OF NEMATODES AND CERTAIN PATHOGENS.

**SOIL TREATMENT**

TELONE SHANKED INTO NEW BED
CROP CHOICE

AVOIDANCE: Fusarium Wilt - Do not plant watermelon in fields with prior history.

CROP CHOICE

AVOIDANCE OF VIRUS VECTOR: Timing or transplants.

CROP CHOICE

VECTOR EXCLUSION: Row covers on before seedlings emerge.
CULTIVAR CHOICE

POTATO: RESISTANCE TO VERTICILLIUM WILT

LAY-OUT OF FIELD

AIR CIRCULATION, WATER DRAINAGE

LAY-OUT OF BEDS

SOUTHERN BLIGHT    BUCKEYE ROT
MULCHED TO PREVENT SOIL CONTACT AND / OR RAISED TO PROMOTE DRAINAGE
PLANTING DECISIONS

- "CLEAN" SEED
- HEALTHY TRANSPLANTS
- PLANTING DATE
- FUNGICIDE APPLICATION TO SOIL

CLEAN SEED

CABBAGE BLACK ROT SEED CONTAMINATION TOLERANCE: 0.01% FOR DIRECT SEED; 0% FOR TRANSPLANTS

HEALTHY TRANSPLANTS

GUMMY STEM BLIGHT
**PLANTING DATE**

By Dan Myers

**EARLIER:** TO ESCAPE HEAT-LOVING ROOT ROT PATHOGENS (E.G. *Pythium aphanidermatum* ON PEPPER)

**LATER:** TO REDUCE DAMPING-OFF

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**PLANTING DATE**

**FUNGICIDE APPLICATION**

**PYTHIUM DAMPING-OFF OF CANTALOUP:** FUNGICIDES APPLIED IN BAND OR IN-FURROW
DECISIONS DURING THE GROWING SEASON

- FUNGICIDE PROGRAM
- APPLICATION TIMING & METHOD
- FUNGICIDE ROTATION
- PESTICIDE CHOICES
- WEED CONTROL

FUNGICIDE PROGRAM

Relative Control Rating

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APPLICATION TIMING

BACTERIAL FRUIT BLOTCH OF WATERMELON: APPLY COPPER FUNGICIDES AT FLOWERING OR EARLIER

APPLICATION METHOD

AERIAL APPLICATION IS LESS EFFECTIVE THAN GROUND APPLICATION

APPLICATION METHOD

- VOLUME OF WATER
- NOZZLE TYPE
- USE ADJUVANTS (SPREADER, STICKER)
FUNGICIDE ROTATION

GUMMY STEM BLIGHT ON CANTALOUP

FUNGICIDE ROTATION

BLACK ROT OF CANTALOUP FRUIT CAUSED BY LACK OF CONTROL OF GUMMY STEM BLIGHT ON STEMS AND LEAVES DUE TO FUNGICIDE RESISTANCE

PESTICIDE CHOICES

DAMAGE FROM (ILLEGAL) USE OF BANVEL ON CHINESE CABBAGE
WEED CONTROL

PEPPER MOTTLE VIRUS IN SYMPTOM-LESS WEEDS

DECISIONS DURING THE GROWING SEASON

- IRRIGATION SCHEDULING
- SANITATION
- CLIMATE CONTROL
- HARVEST SCHEDULING

IRRIGATION SCHEDULING

PHYTOPHTHORA ROOT ROT
HARVEST SCHEDULING

PHYMATOTRICHOPSIS ROOT ROT MAY APPEAR IF HARVESTING IS DELAYED

DECISIONS AFTER HARVEST

• WASHING
• STORAGE
• TRANSPORT

WASHING

DISINFECTANT NEEDED IN WASH WATER TO PREVENT BACTERIAL SOFT ROT