

# Managing Pitch Canker in nurseries

Pine Fusarium working group

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# Pitch Canker

*Fusarium circinatum*



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# Management Objectives

- To minimize the spread of the disease
- To manage any outbreaks
- To contain the disease to the Nurseries
  
- Hygiene practices
- Chemical applications
- Long term

# Disease monitoring

- Random plant samples sent to FABI monthly
- A random block of 80 trays is laid out All plants, which are suspected of having *Fusarium* are collected and sent to FABI
- Random soil samples from under the beds are sent to FABI monthly
- Residue from the inside of sterilized trays, is sent to FABI for analysis
- Water and bark samples are collected by FABI every six months

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# Basic Hygiene Factors

- High staff awareness
- Water is pH corrected to 5.5 and chlorinated
- Plastic trays
- Trays are sterilized
- All new trays reserved for *P. patula*
- Old bark under the beds to be removed
- The area, under the bed sprayed with a sterilant monthly

# Basic Hygiene Factors

- Limit movement of staff and equipment in *P.patula* blocks
- Sterilize all equipment
- Where possible, blocks are allowed to dry out before the next crop

# Nursery monitoring programme

- Regular inspections of all *P. patula* plants
- Detail records of plants with symptoms recorded in a register, before rouging
- Diseased plants rouged



# Nursery rouging programme

- Plastic laid down in work area
- Trays are brought to the edge of the bed
- Rouged plants are placed in refuse bags which are sealed and delivered to the dump daily
- Area where infected plants are removed, is sprayed with sterilant
- Staff wash their hands and implements in a sterilant
- It would be preferable incinerate

# Preventative Fungicide Programme

For plants 3 months and older

- Only known effective chemical is Benlate or Benomyl
- Not approved by FSC for use in Nurseries
- Effectiveness of chemicals is being tested by research

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# Preventative Spray Programme

For plants 3 months and older

- Efficiency of the chemicals used not proven
  - Four chemicals are rotated in a spray programme
- Efficiency of drenches Vs sprays not known
  - Drench spray drench
- Monthly insecticide spray
- Programme is based on opinions rather than fact and will change as knowledge improves
- Has proved reasonably effective in some nurseries

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# Long term

- Seal floors
- Biological control measures (*Trichoderma*)
- Production of resistant families
- Seed testing programme
- Fusarium Working Group.

# Our goal



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