

# Foliar diseases in protected crops

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Protected cropping (greenhouse) growers were surveyed to identify the main foliar diseases affecting their crops and the current management strategies used, to determine how disease management can be made more sustainable.

## METHODS

Thirty-one growers were surveyed in the Adelaide Plains (SA), five in Murray Bridge (SA) and seven in the Sydney Basin (NSW). The survey covered greenhouse type, crops grown, incidence and severity of diseases and disease management strategies, knowledge of disease cycles and favourable conditions for disease development. A total of 78 crops were surveyed comprising cucumbers, capsicums, eggplants and tomatoes.

## RESULTS

### Foliar Diseases

- Powdery mildew most common foliar disease in all crops
- Downy mildew in 60% of cucumber crops, not as severe as powdery mildew
- Botrytis not major problem, probably due to unseasonably dry weather in previous season

### Fungicides

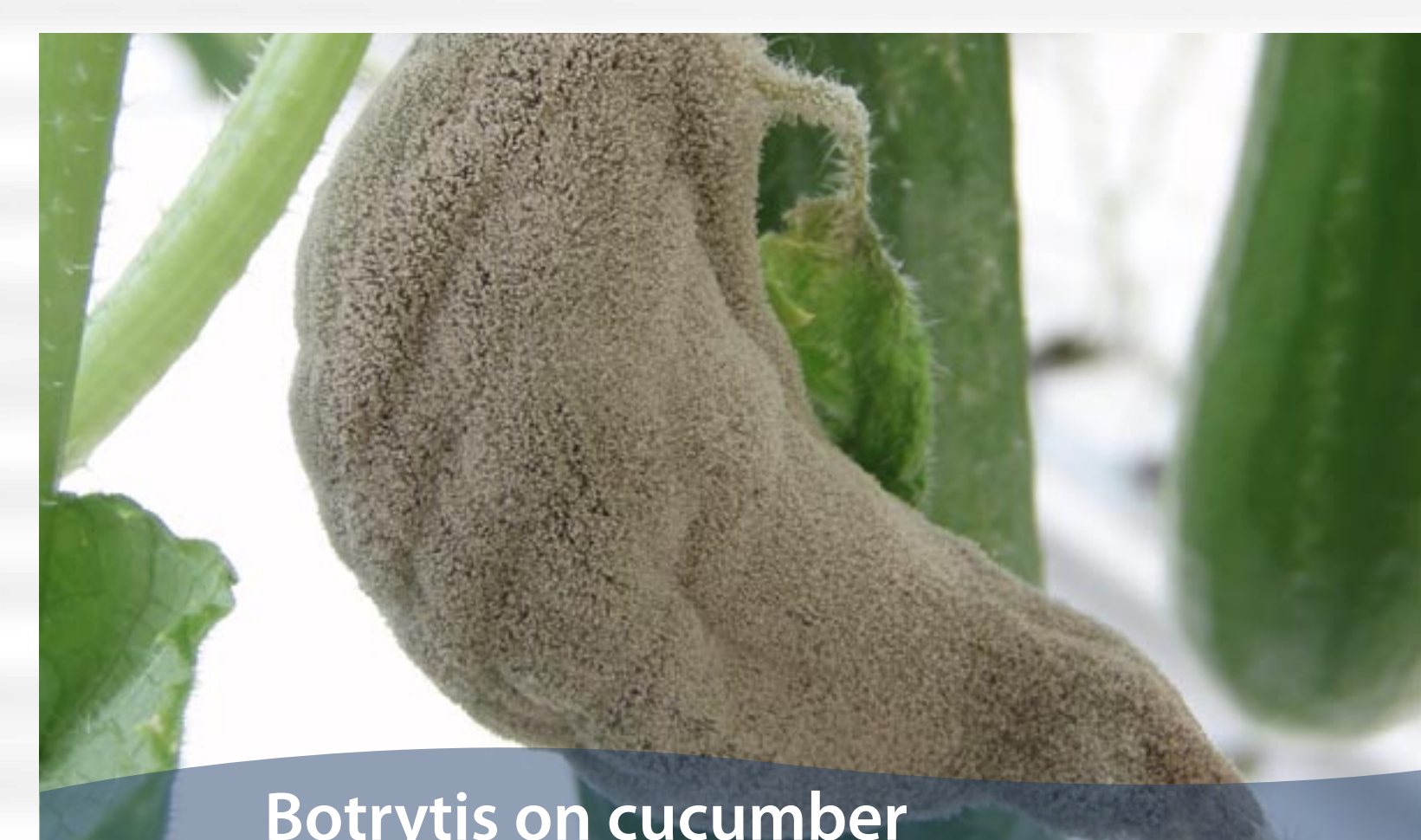
- Growers often spray every 7-10 days when disease pressure high
- Lack of registered fungicides severely restricts options for resistance management
- Disease management made more difficult by over-use and mis-use of fungicides
- 50% of growers thought they could improve their disease management with access to a wider range of fungicides and with training in fungicide selection and spray timing

### Cultural Management Methods

- All growers vent houses to reduce humidity and help prevent disease
- 77% of growers prune lower leaves to increase airflow and remove diseased material from plants
- Not all growers clear prunings from house which can provide inoculum source for re-infection of crop
- Sanitation on neighbouring properties was major concern for many growers

### Soil vs Hydroponics

- Hydroponic growers in the Sydney Basin reported less disease problems than soil growers in South Australia
- Extra investment in hydroponic compared to soil-grown crops may result in extra vigilance by growers
- Growers in Sydney Basin had good understanding of sanitation and hygiene



## CONCLUSION

Lack of registered fungicides was identified as one of the major threats to sustainability of the industry. There is a need to educate growers on how to integrate sustainable disease management practices into their existing systems.

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