



Department of  
Agriculture and Food



**GRDC** Grains Research &  
Development Corporation

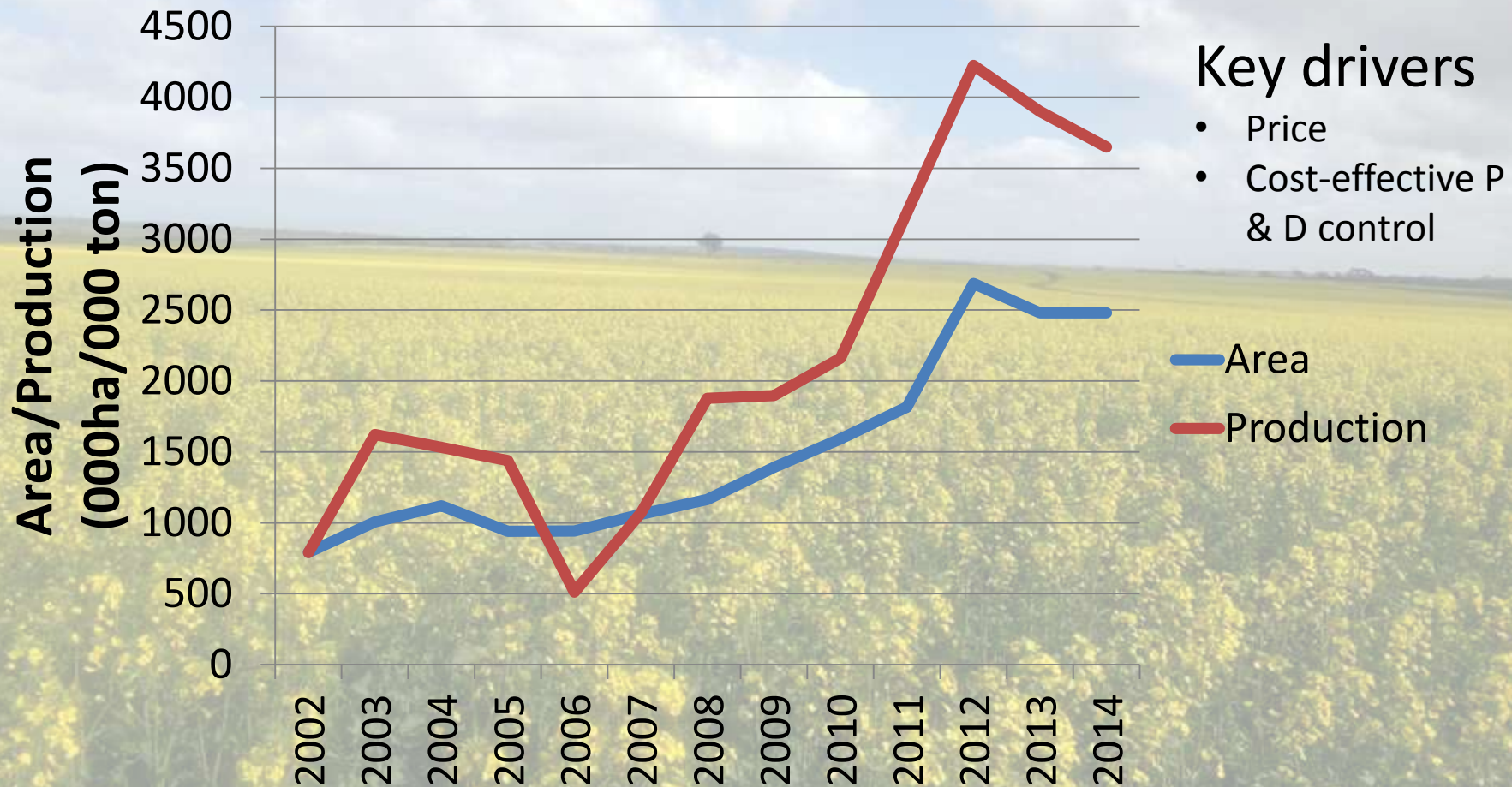
# Re-emerging disease issues in canola

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Supporting your success

# Canola Area and Production in Australia (2002-2014)



# Broad Aims

- Provide insights into types of other disease issues/threats
- Develop management strategies to mitigate losses
- Essential to ensure stability of the industry
- Constancy and quality of GOLDEN CANOLA

# Disease monitoring/surveys in WA, Vic, SA and NSW in 2013

- Early –mid season diseases
  - Downy mildew
  - White leaf spot
- Late season diseases
  - Alternaria leaf spot
  - Club root
  - Charcoal rot
  - Powdery mildew
  - Blackleg
  - Sclerotinia

# WA Disease monitoring activity

- Seedling stage – A total of 33 samples
  - 27 samples from Focus Paddocks
  - 3 trial sites (2 in Katanning and one in Esperance)
  - 3 samples from commercial crops
- Diseases observed
  - Downy mildew
    - White leaf spot
    - Damping-off/hypocotyl rot
    - Seedling blackleg



# WA Results-seedling monitoring

- Downy mildew
  - Percentage samples affected = 72%
  - Average incidence 40%, Range 0-100%
- White leaf spot
  - Percentage samples affected = 23%
  - Average incidence 7.7%, Range 0-60%
- Damping –off
  - Detected only in 2 samples

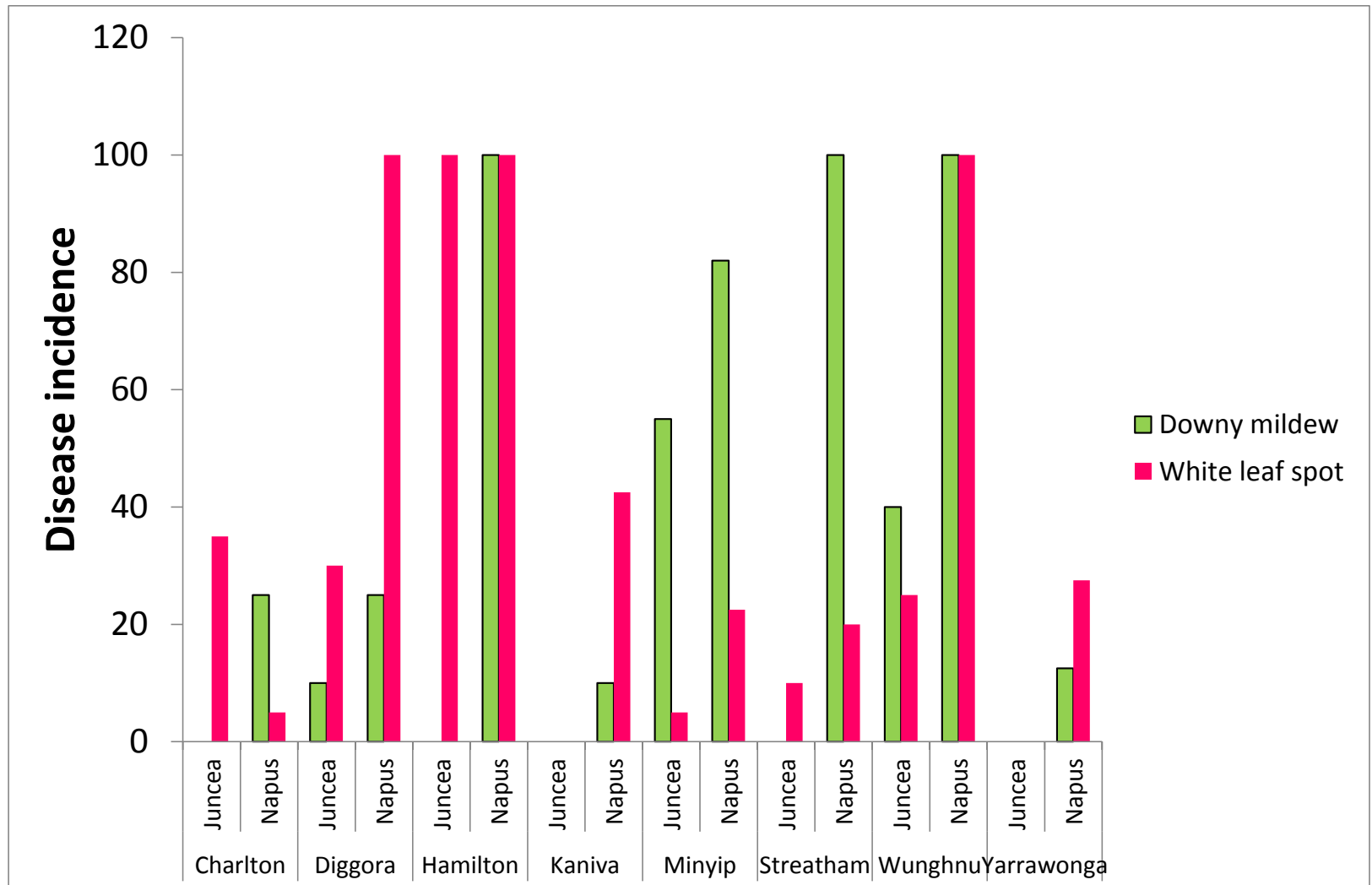


# Downy mildew in 2014

Thanks Ravjit,  
“I suspect we are going to have a bigger problem than what most expect from downy mildew this year. Maybe a copper spray will protect early emerging leaves to help plant get up and away?”



# Victoria-incidence of early seedling diseases (DM and WLS)





# Late season monitoring WA

- A total of 87 samples
  - 56 samples from commercial crops
  - 31 focus paddocks

Disease	Prevalence	Range	Average incidence
Powdery mildew	10%	0-85%	6%
Charcoal rot	6%	0-25%	0.7%
Club root	1 sample		5%
Blackleg pod infection	17%*		

\*A few commercial crops badly infected

# Charcoal rot



# Late season Diseases - Victoria

- Streatham and Hamilton – severe Alternaria

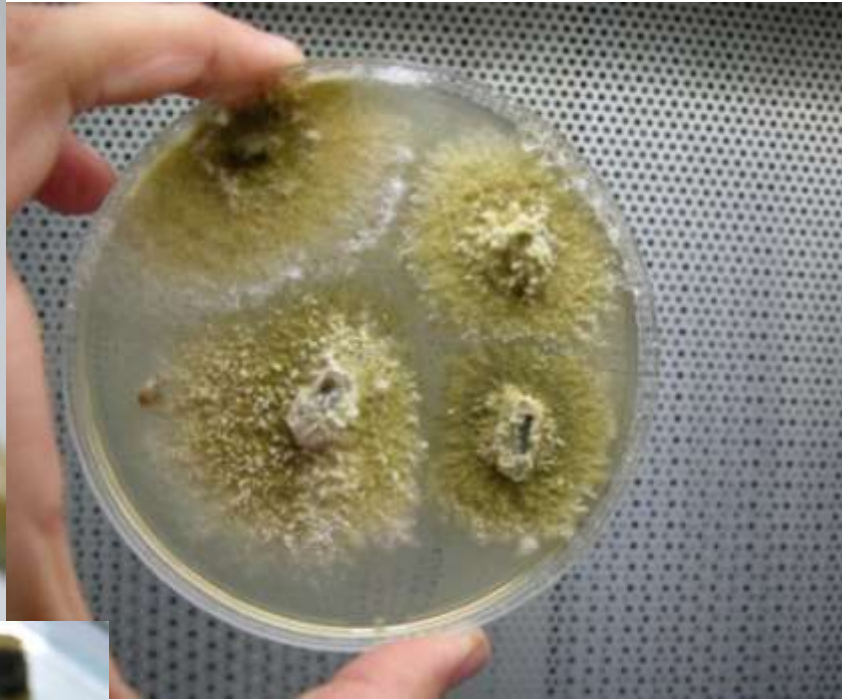


# Late season - South Australia

- *Arthurton* severe Alternaria causing yield loss
- *Bordertown* Alternaria
- *Mt Hope* No other disease
- *Riverton* Low level of Alternaria
- *Spalding* Low level of alternaria
- *Turretfield* Severe Alternaria, mild powdery mildew
- *Wanilla* Low level of Alternaria

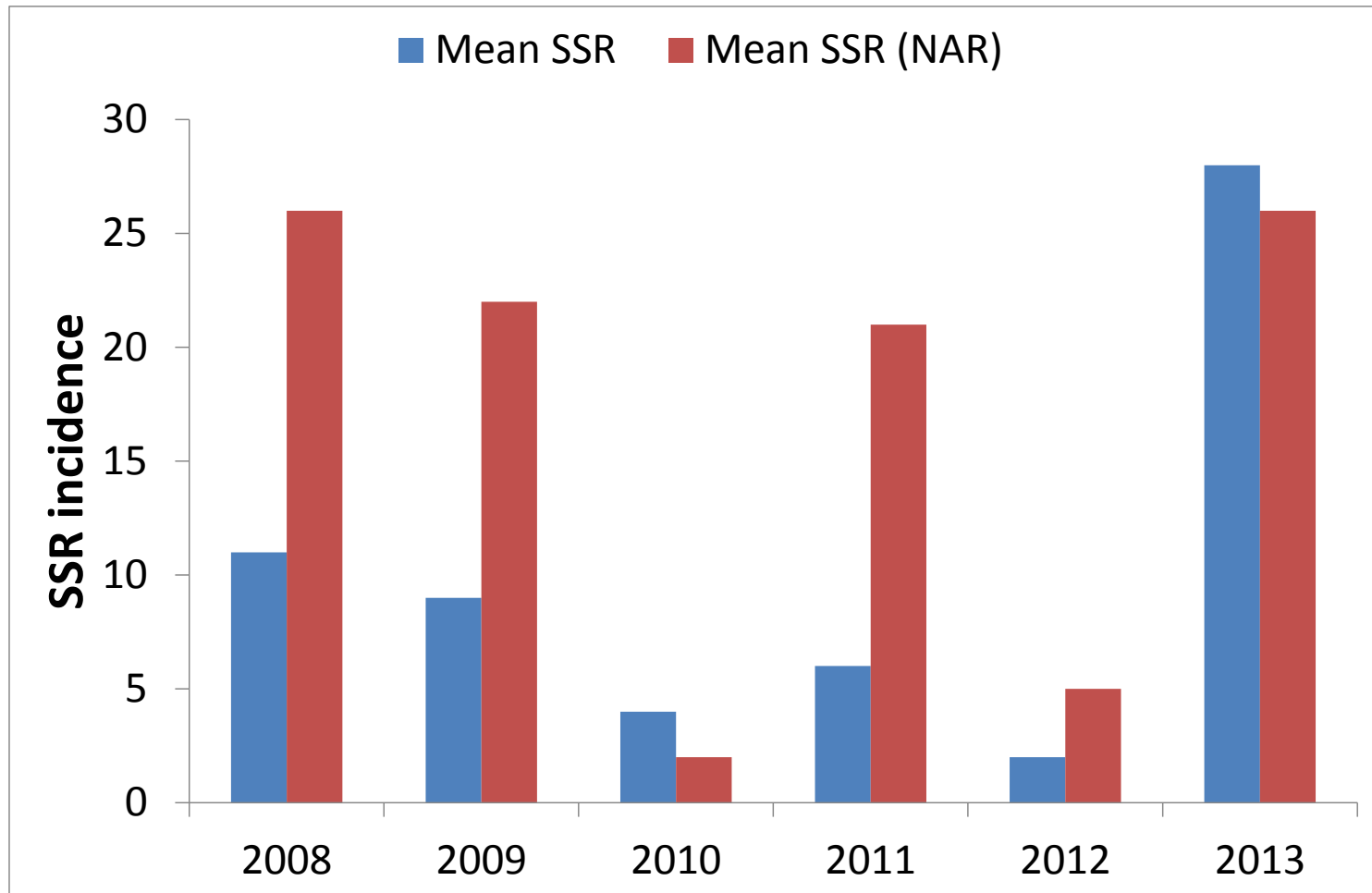
# Increased frequency of blackleg attacking floral parts





**Blackleg internal stem necrosis**

# Sclerotinia Stem rot incidence in WA



# Summary

- Emerging issues – early season
  - Downy mildew
    - Victoria and Western Australia
  - White leaf spot
    - Victoria, South Australia and Western Australia
- Late season diseases
  - Alternaria
    - Victoria, South Australia and Western Australia
- Remerging common disease issues
  - Blackleg pod infection
    - Western Australia and Victoria
  - Sclerotinia
    - Western Australia and New South Wales



# Thrust areas and future challenges

- Production constrains
- Define risk
- Cost effective control strategies
  - cultural, chemical, epidemiological, host resistance
- Can we produce SUPER CANOLA resistant to
  - DM, WLS, APS, BL, SSR and PM?

**Buy 1 get 6 free !!!!!!!**

GRDC provided funding for this research



**THANK YOU**

