Saltro™

For the control of blackleg in Canola

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Ken McKee, Syngenta Australia

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SALTRO® highlights

- **SALTRO protects canola seedlings** from blackleg infection, reducing stem cankers and maximising yield potential
- A best in class, **superior seed treatment** for the control of blackleg in canola, delivering 30% yield improvements compared to Jockey®
- **SALTRO is an unique SDHI fungicide**, delivering resistance management benefits
- **Unparalleled seed safety**, SALTRO doesn't effect seed germination and vigour of canola over time
- For the **broadest spectrum disease control** available, SALTRO plus MAXIM® XL improves seedling vigour, giving the crop the best start

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SALTRO plus MAXIM XL

- SALTRO plus MAXIM XL delivers the **broadest spectrum** canola seedling protection on the Australian market
- Combined, products further improve crop vigour, establishment and maximise the crops yield potential

Product	*Blackleg*	*Rhizoctonia*	*Pythium*
SALTRO			
MAXIM XL			

Control Suppression No control

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The product

- How SALTRO works

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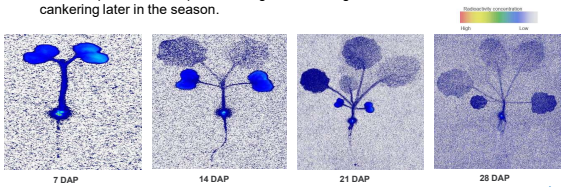
SALTRO protects cotyledons & early leaves from blackleg infection

- SALTRO is a systemic seed treatment:
  - The images below show the movement of SALTRO into the canola seedling via the xylem from root adsorption in the soil
  - The highest levels of SALTRO can be visualised in the cotyledons and lower leaves.
    - This is important for the protection against blackleg infection that causes stem cankering later in the season.



Whole plant protection up to the 4 leaf stage

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SALTRO is a new Seedcare mode of action in canola

- SALTRO® is a member of the Syngenta SDHI family
- There are no known incidences of resistance to SALTRO in canola
- *In 2015 a survey of 200 canola paddocks found 15% of canola paddocks contained blackleg that had a high frequency of resistance to fluquinconazole or flutriafol
- SALTRO is not cross resistant with Demethylation Inhibitors (e.g. DMI's) eg. Jockey (see photo below)

Photo source: Marcroft Grains Pathology – 2018, Benchmarking blackleg fungicide resistance

*Benchmarking blackleg fungicide resistance 2015
Angela Van de Wouw (Marcroft Grains Pathology and The University of Melbourne)

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Trial results

- Efficacy

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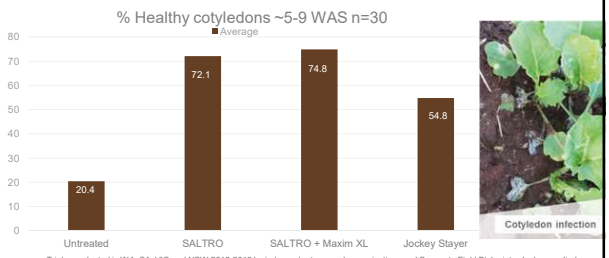
Superior blackleg control – Healthy cotyledons

Preventing Blackleg infection at the cotyledon stage is key to maximising yield potential



Trials conducted in WA, SA, VIC and NSW 2016-2018 by independent research organisations and Syngenta Field Biologists. Jockey applied at full registered rate

- Results with SALTRO significantly higher than untreated in 25 of 30 trials
- Results with SALTRO significantly higher than Jockey in 15 of 30 trials

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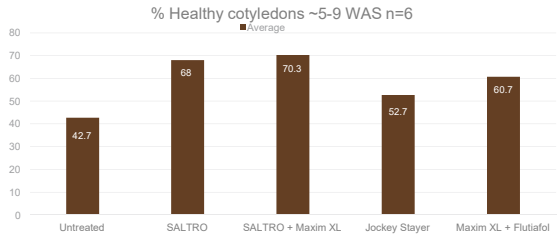
Superior blackleg control – Healthy cotyledons

Preventing Blackleg infection at the cotyledon stage is key to maximising yield potential



Trials conducted in WA, SA, and VIC 2018 by independent research organisations. Jockey and Maxim XL + Flutriafol applied at maximum registered rates

- Results with SALTRO significantly higher than untreated in 5 of 6 trials
- Results with SALTRO significantly higher than Jockey in 4 of 6 trials
- Results with SALTRO significantly higher than Maxim XL/Flutiafol in 2 of 6 trials

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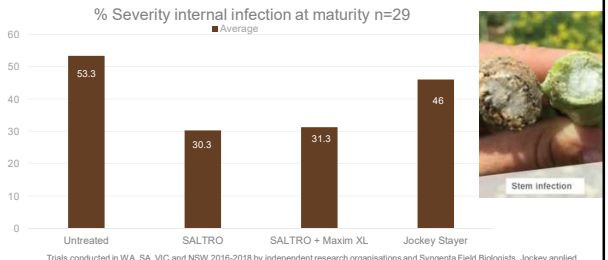
Superior blackleg control – Stem infection

- Protecting plants as a seedling from early infection reduces the development of Blackleg cankers



Trials conducted in WA, SA, VIC and NSW 2016-2018 by independent research organisations and Syngenta Field Biologists. Jockey applied at full registered rate

- Results with SALTRO significantly lower than untreated in 28 of 29 trials
- Results with SALTRO significantly lower than Jockey in 17 of 29 trials

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Superior blackleg control – Stem infection

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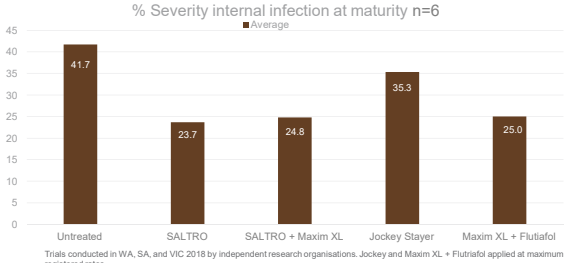

Trials conducted in WA, SA, and VIC 2018 by independent research organisations. Jockey and Maxim XL + Flutriafol applied at maximum registered rates

- Results with SALTRO significantly lower than untreated in 5 of 6 trials
- Results with SALTRO significantly lower than Jockey in 2 of 6 trials
- Results with SALTRO significantly lower than Maxim XL/Flutiafol in 1 of 6 trials

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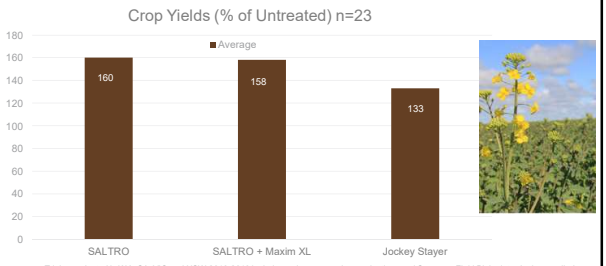
Maximising yield potential

NOTE: One trial removed to minimize distortion
SALTRO 3250% of untreated
Jockey Stayer 2250% of untreated



Trials conducted in WA, SA, VIC and NSW 2016-2018 by independent research organisations and Syngenta Field Biologists. Jockey applied at full registered rate

- Results with SALTRO significantly higher than untreated in 16 of 24 trials
- Results with SALTRO significantly higher than Jockey in 9 of 24 trials

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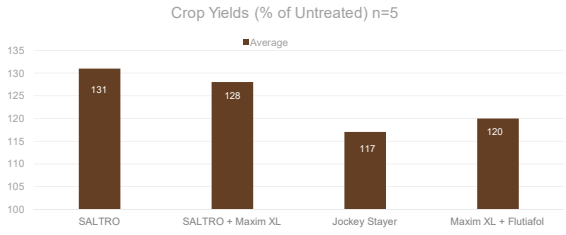
Maximising yield potential

NOTE: One trial removed to minimize distortion
SALTRO 3250% of untreated
Jockey Stayer 2250% of untreated



Trials conducted in WA, SA, and VIC 2018 by independent research organisations and Syngenta Field Biologists. Jockey applied at full registered rate

- Results with SALTRO significantly higher than untreated in 3 of 6 trials
- Results with SALTRO significantly higher than Jockey in 2 of 6 trials
- Results with SALTRO significantly higher than Maxim XL/Flutiafol in 2 of 6 trials

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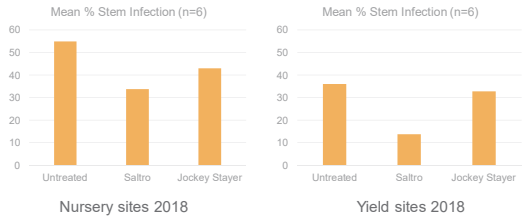
Stem infection – Nursery vs Yield sites



- Infection naturally higher in nursery trials but relative performance seen in all situations

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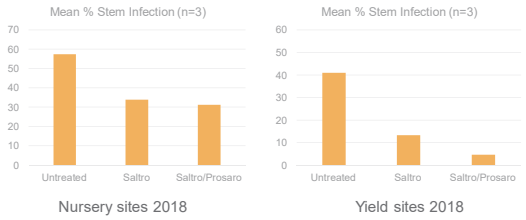
Foliar Application Benefits



- No significant benefit from Prosaro
- Significant benefit from Prosaro at one site

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SALTRO®– Guidelines for Resistance management

SALTRO belongs to SDHI group, known as complex II respiration inhibitors (FRAC Group 7)

SYNGENTA Proposed Guidelines (Basic)

1. **Where a seed applied SDHI fungicide such as SALTRO has been used, early post-emergent foliar applications must be from an alternate MOA group (e.g. DMI).**
2. **Integrated approach with industry Blackleg Management Guidelines**

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SALTRO plus MAXIM XL

"Seeing is believing"

SALTRO + MAXIM XL plant survival compared with the untreated control, assessed 6 - 8 weeks after planting. Trial was conducted at Lake Bolac, Victoria and conducted by Dr Steve Marcroft, 2016 – variety Archer CL in blackleg seedling nurseries

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