

Gowan and future developments with Zoxamide in Potato

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Agenda

- **Gowan Company – some information**
- **Zoxamide mode of action (a reminder)**
- **Positioning of Zoxamide products for 2010 in PLB strategies**
- **Future new Zoxamide products for Potato**
- **Other areas of Zoxamide research in 2010 / 2011**

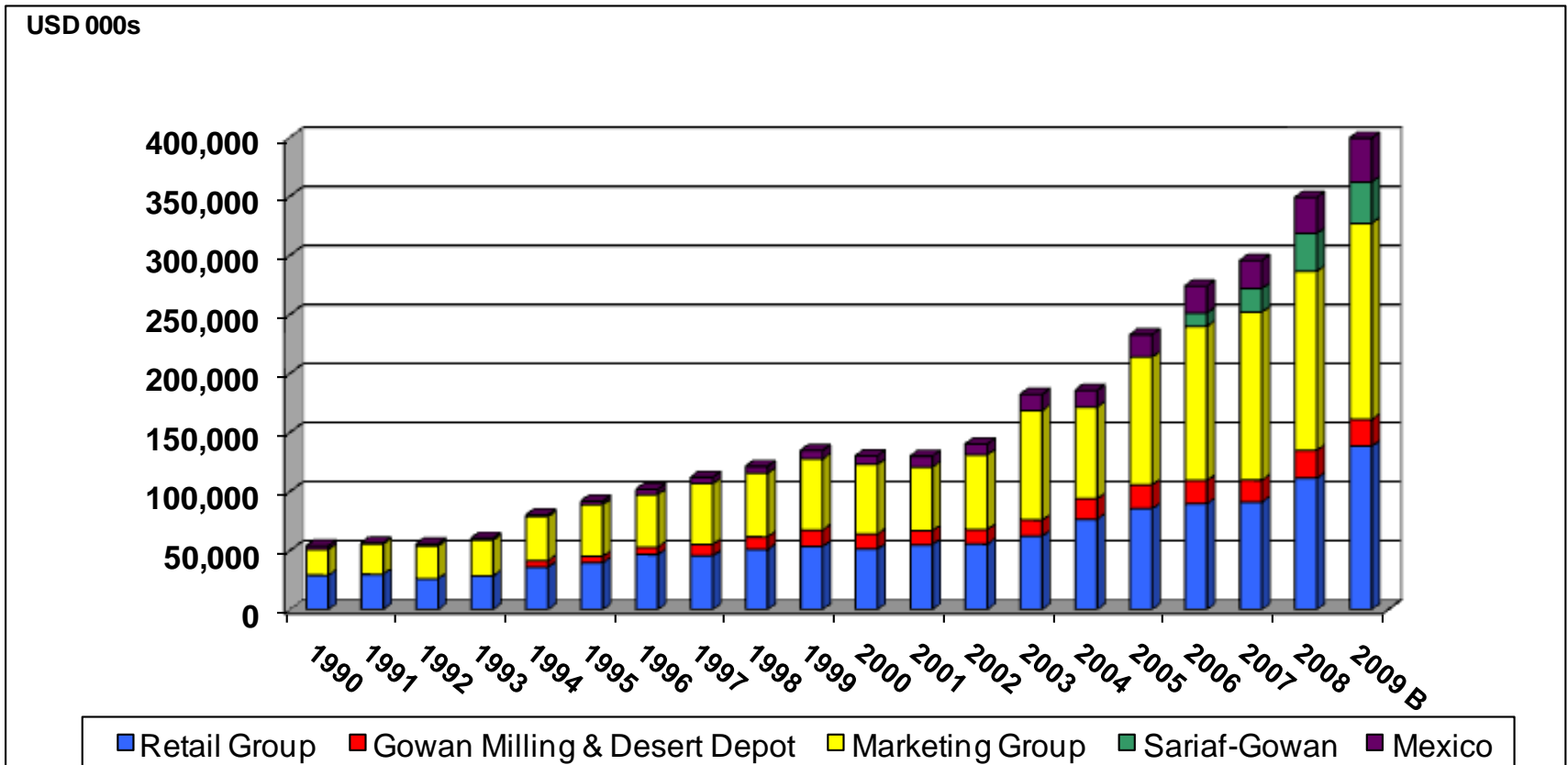


- **Gowan Company is a family owned US seeds, fertiliser and pesticide company, founded in 1963 in Yuma, Arizona**
- **Gowan acquire proprietary molecules and registrations (and support the products with their own dossiers)**
- **Gowan uses a strategy based on molecule acquisition combined with worldwide defence and re-development**
- **Gowan purchased the global rights and data for Zoxamide and all products containing Zoxamide (e.g. Electis / Aderio / Unikat Pro and Unikat) from Dow AgroSciences in Summer 2008.**

Gowan in the World



Gowan: Historical Sales



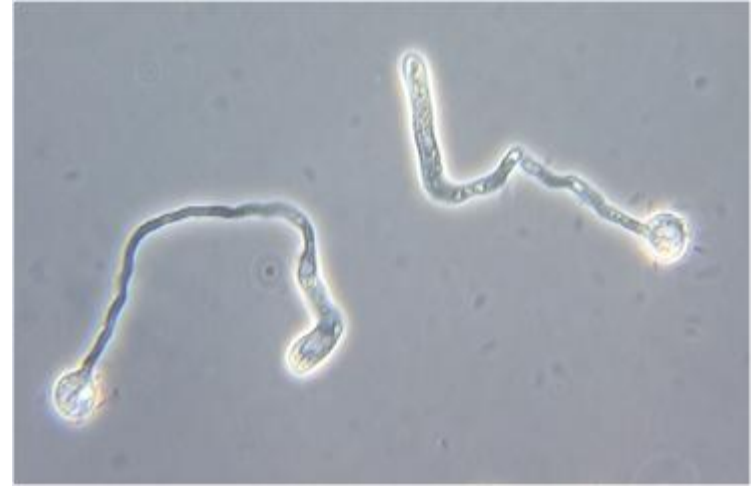
Zoxamide – mode of action (a reminder)

- Zoxamide acts within the nucleus to stop cell division by irreversibly binding to **beta**-tubulin
 - Zoxamide disrupts the formation of the microtubules and inhibits nuclear division
 - Zoxamide acts where mitosis occurs
- Zoxamide inhibits germ tube elongation and zoospore development within sporangia
- Zoxamide has no activity on fully developed zoospores

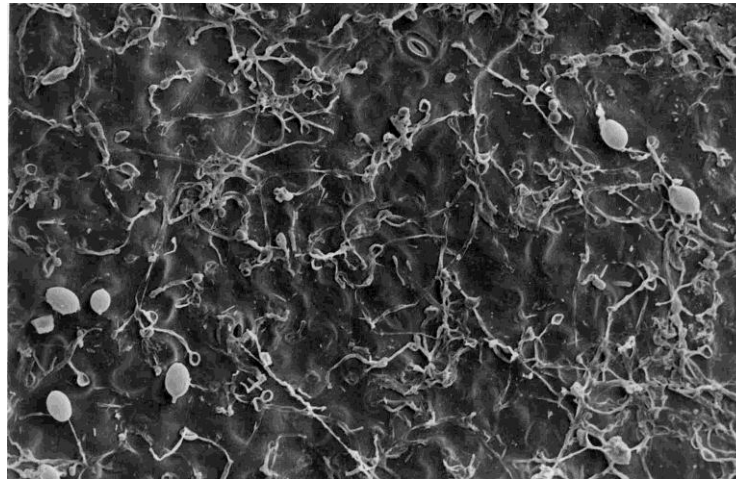
Zoxamide – mode of action



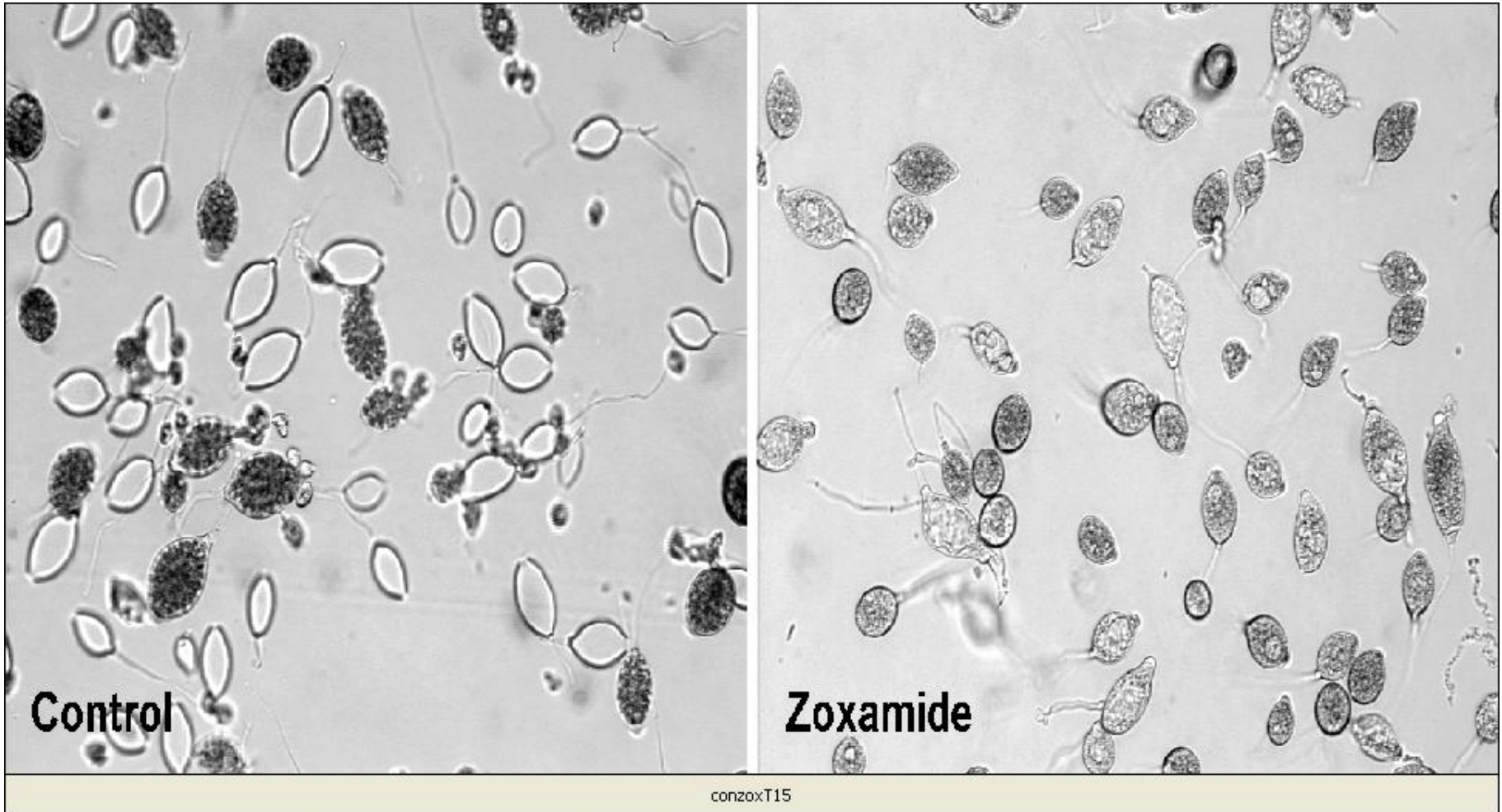
untreated



Zoxamide
treated



Zoxamide – mode of action



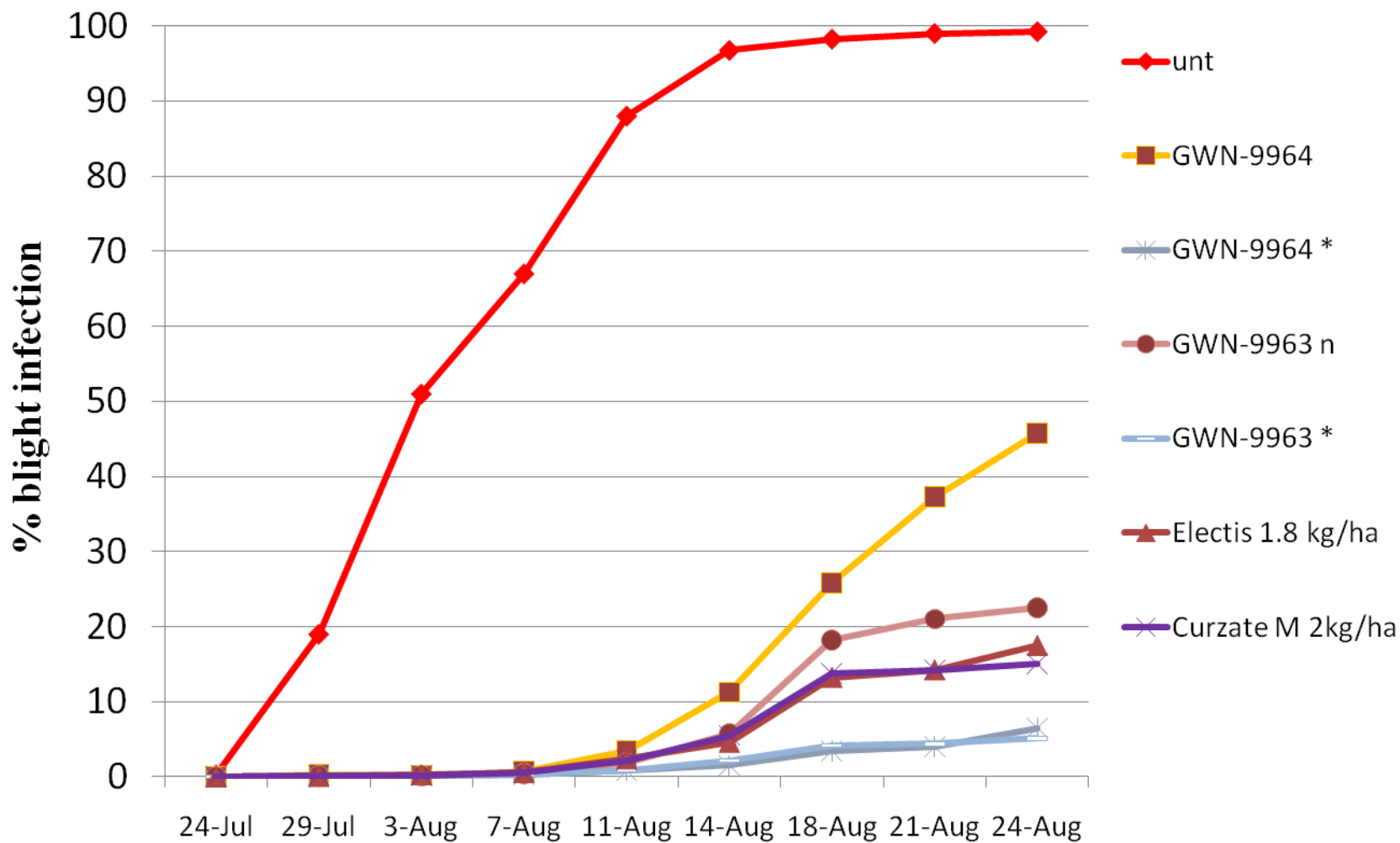
Zoxamide Developments in 2009 - 2011

- **Position Zoxamide (Electis/Aderio/Unikat Pro) towards the end of mid season sprays**
 - Zoxamide stops zoospore development in sporangia
 - Zoxamide has no activity on released zoospores
- **Alternaria – currently registered in France and Poland**
 - Plan to use historical Dow / Rohm & Haas data plus new trials in 2010 to add Alternaria registration to product labels in The Netherlands, Germany, UK plus Nordic/Baltic countries (where zonal registration will allow!)
- **Zoxamide – Pink Rot control in Potato at planting**
 - 2009 trial in The Netherlands showed very encouraging data and control of pink rot from a single application in furrow at planting
 - Repeat in 2010 and evaluate potential for registration trials in 2011

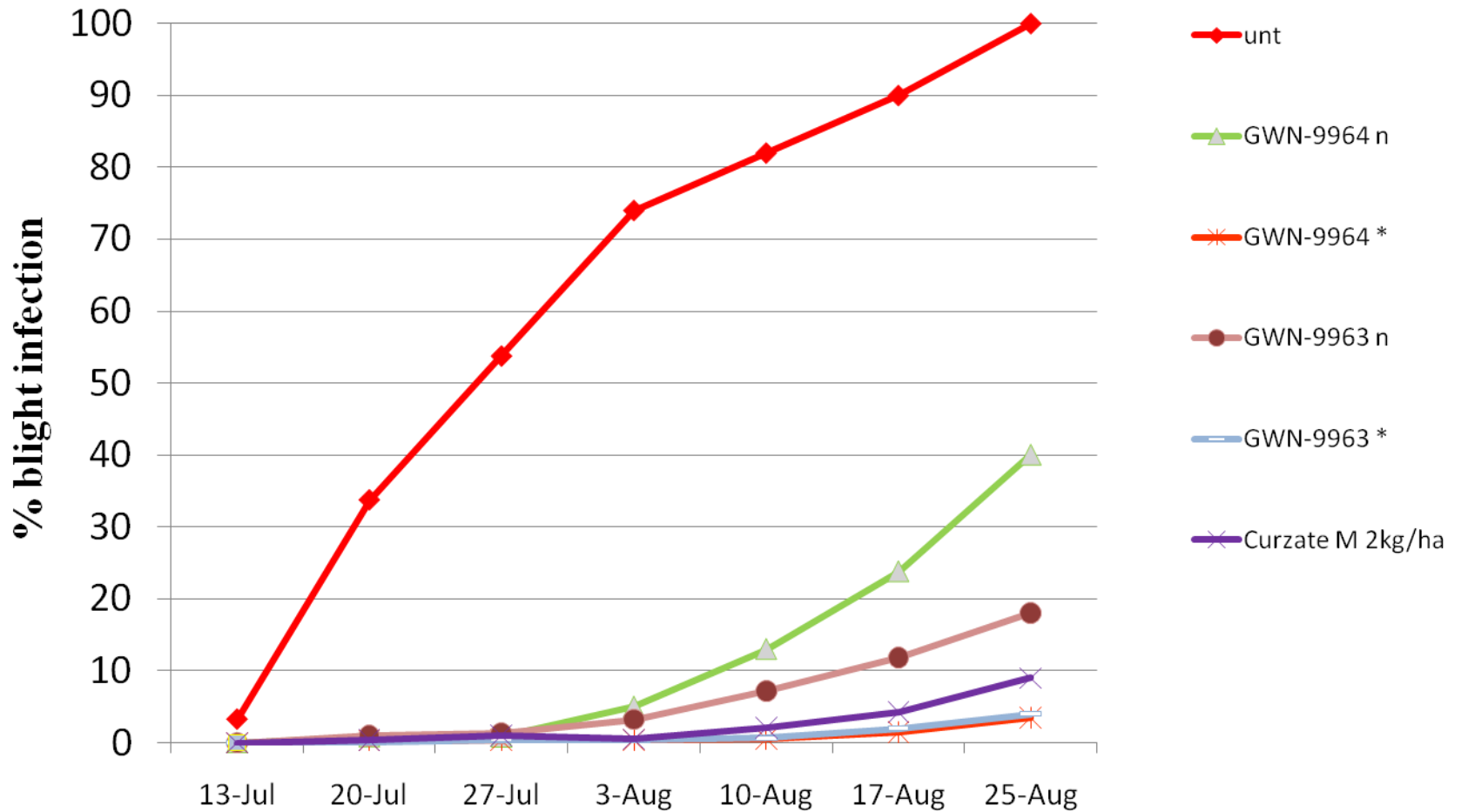
Zoxamide Developments in 2009 to 2011

- **Zoxamide development with two new potato blight products**
 - **GWN-9963**
 - **Non mancozeb product**
 - **Use rate likely to be 1 litre/ha**
 - **Protectant / translaminar product**
 - **Potentially on market in 2013**
 - **GWN-9964**
 - **Non mancozeb product**
 - **Potentially on market in 2012**
 - **Possibility it will be tank-mixed with protectant fungicide (e.g. mancozeb, fluazinam or cyazofamid etc.)**

UK 2009



NL 2009



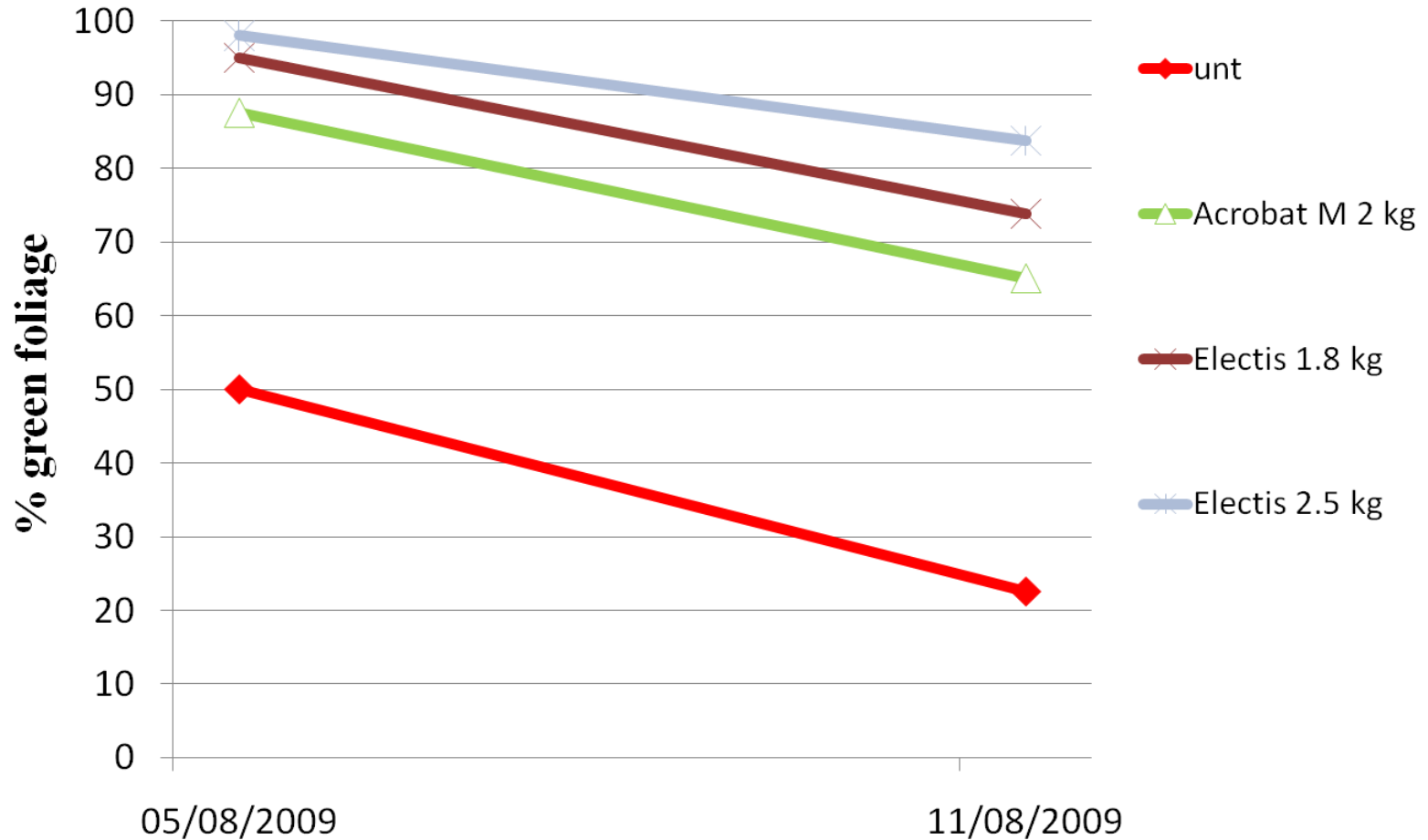
Zoxamide Developments

- Electis new registration in Onion
 - Trials in 2010 / 2011 to add registration in Onion for Downy Mildew / *Peronospera* disease control
- Electis – Tomato
 - To generate data in 2010 / 2011 to support registrations for early/late blight control in S EU zone countries where Electis is not currently registered in Tomato

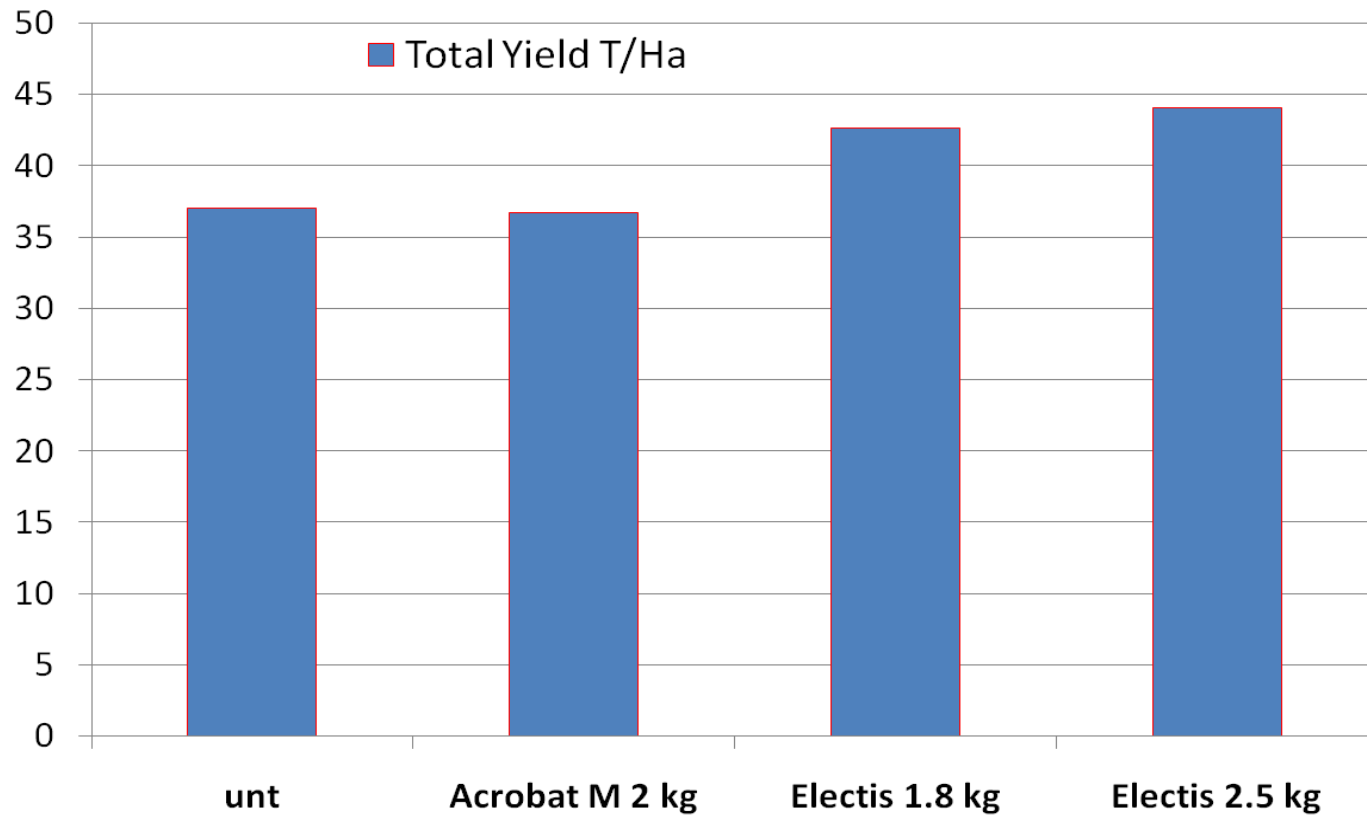
Downy Mildew – Onion, NL



Downy Mildew – Onion, NL



Downy Mildew – Onions, UK



Thank you for your attention

