



Science For A Better Life

INFINITO[®]

protection against tuber blight
– modes of action

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introduction

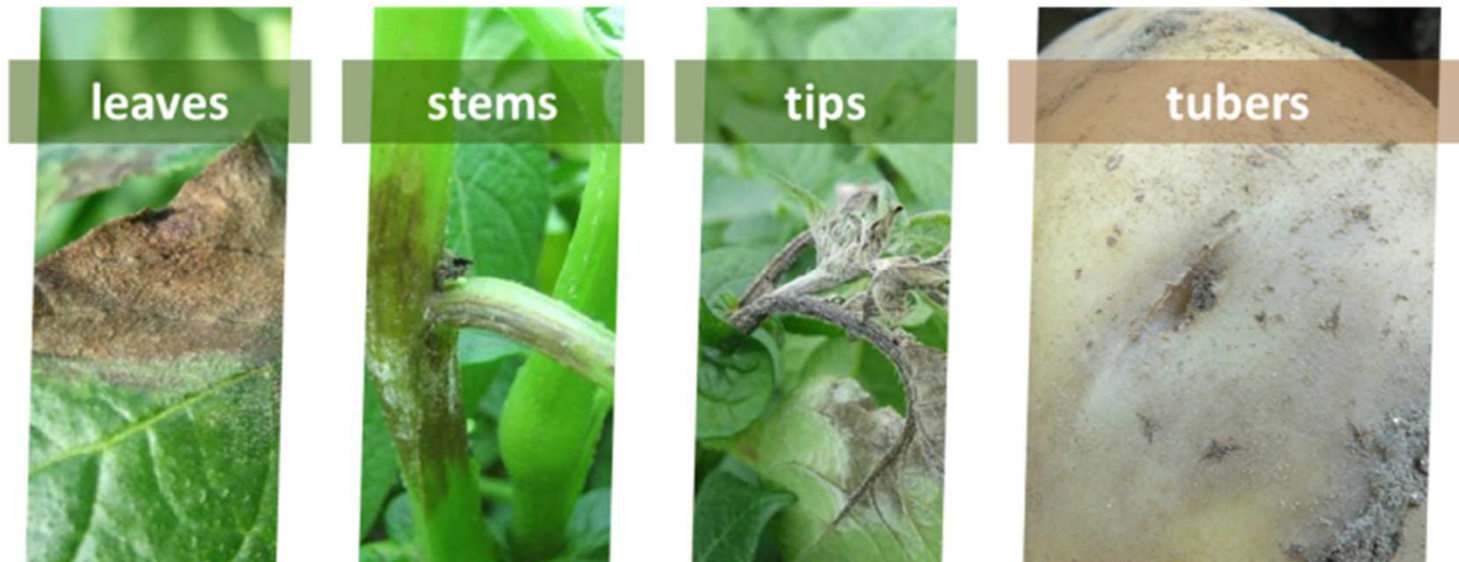
- Infinito presented at previous Workshops
 - translaminar activity
 - spore viability
 - sporicidal activity
- rated for leaf and tuber blight protection
- and established in the European market as a key product against late blight



Product (Dose rate [litre or kg/ha]) ¹	Effectiveness			
	Leaf blight ²	New growth	Stem blight	Tuber blight ⁷
propamocarb-HCl + fluopicolide (1.6)	3.8	●●	●●	3.9

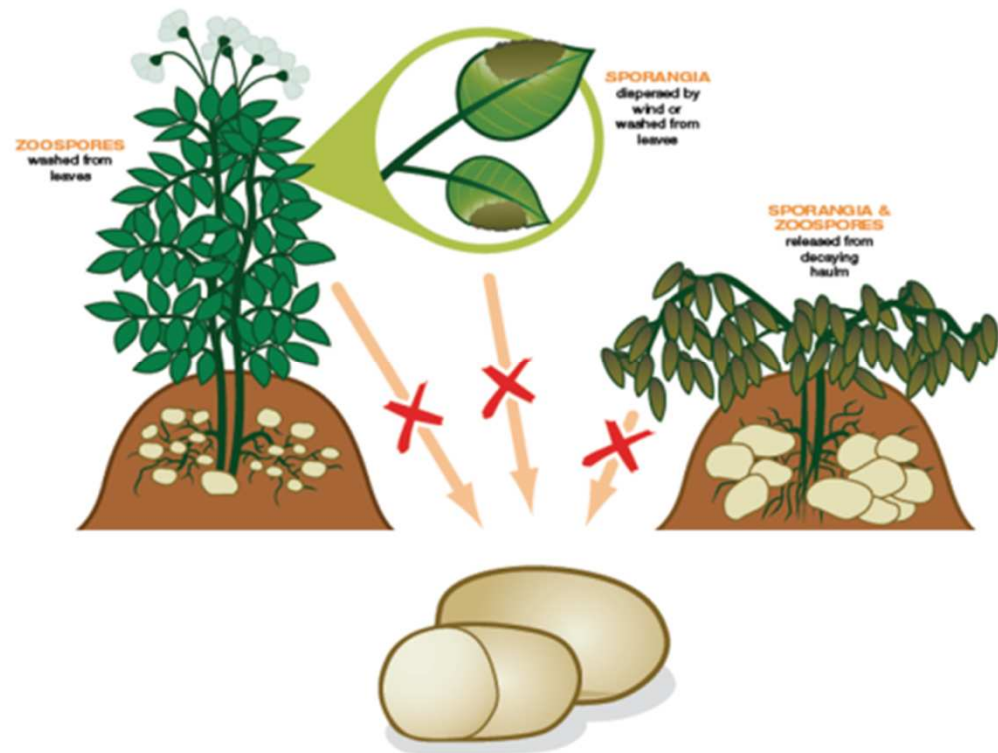
this summary

- expression of the multiple action of Infinito in field performance –
a product categorized as ‘translaminar+systemic’ providing tuber blight protection:
how does it work?



tuber protection

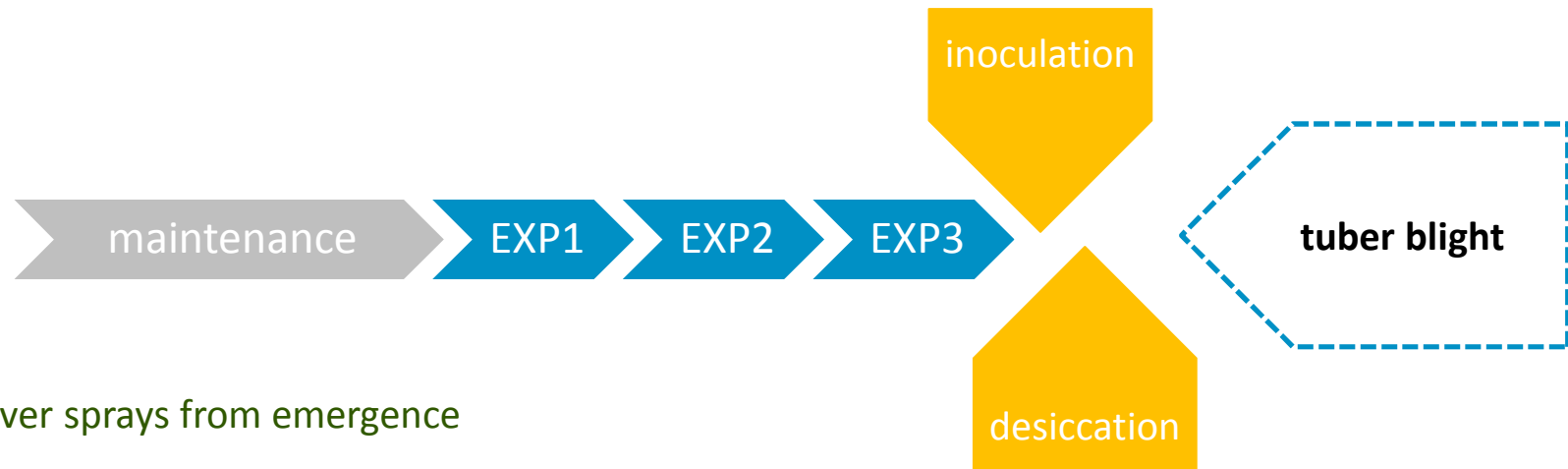
- spore inactivation
- sporulation reduction



spore inactivation



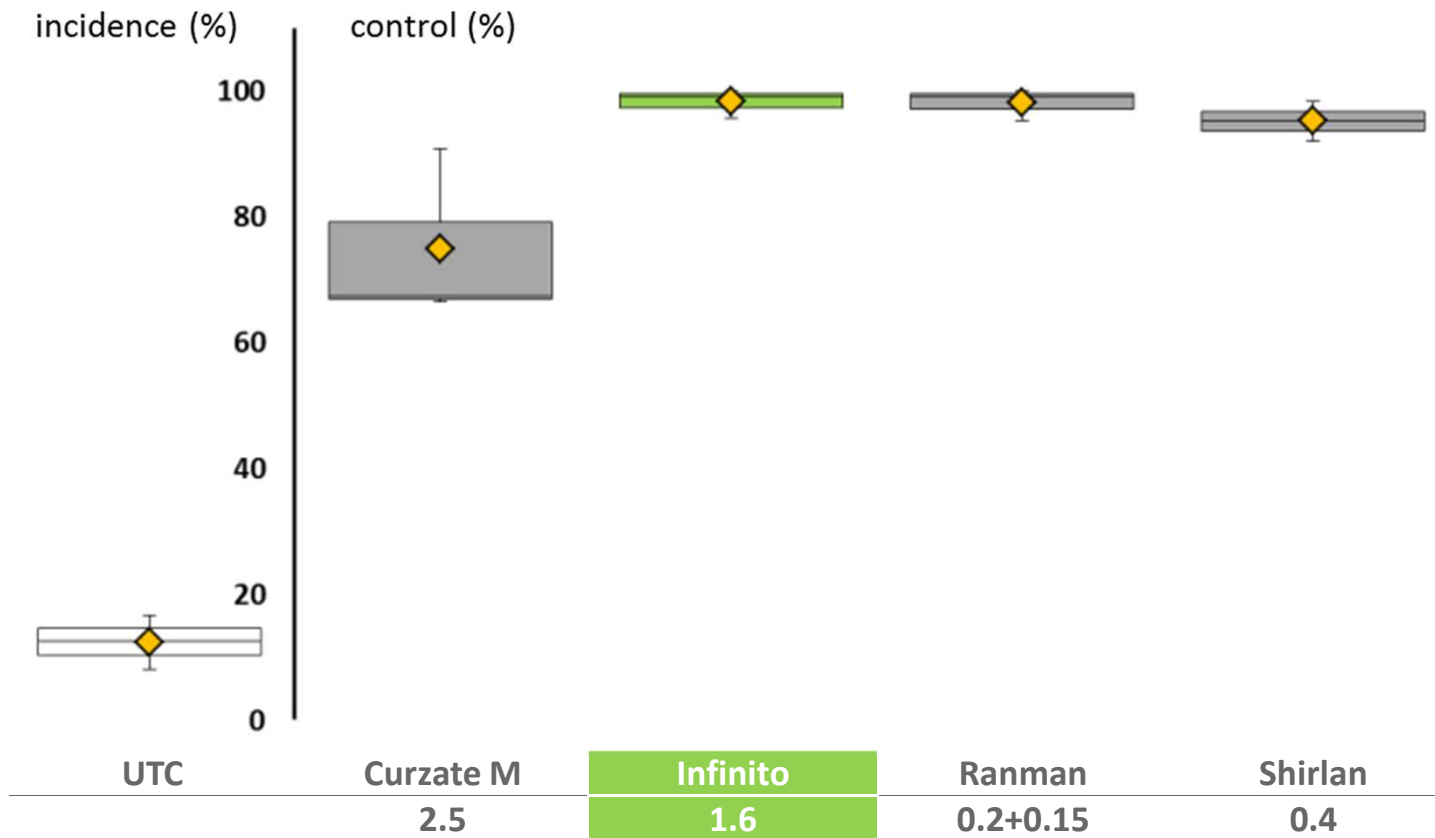
sporicide activity



- cover sprays from emergence
- 3 weekly experimental treatments from mid-late flowering
- no leaf blight epidemic in the canopy
- broadcast inoculation with spore overload 2 days after EXP3
- canopy desiccation 1 day later
- harvest approx 3 weeks after desiccation

HLB – The Netherlands 2005, Proeftuin Zwaagdijk – The Netherlands 2005, 2006
Field study on impact of spray deposits on tuber blight– comparison of products applied 3x at weekly intervals

sporicide activity and tuber blight control

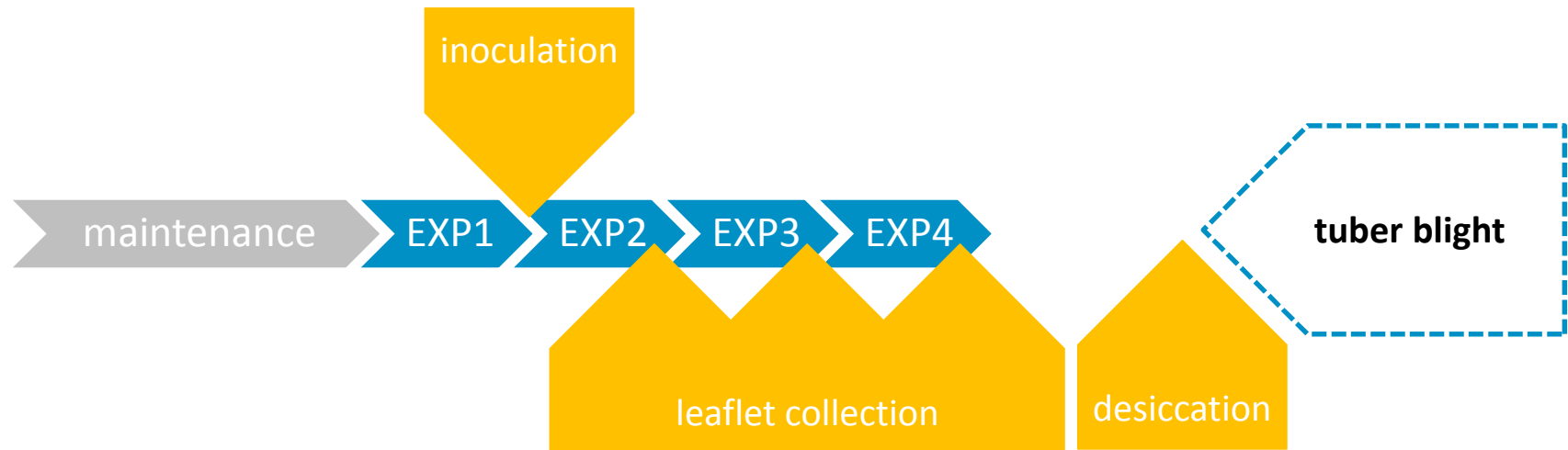


HLB – The Netherlands 2005, Proeftuin Zwaagdijk – The Netherlands 2005, 2006
Field study on sporicidal activity of spray deposits on tuber blight– comparison of products applied 3x at weekly intervals

spore production



Infinito and spore production

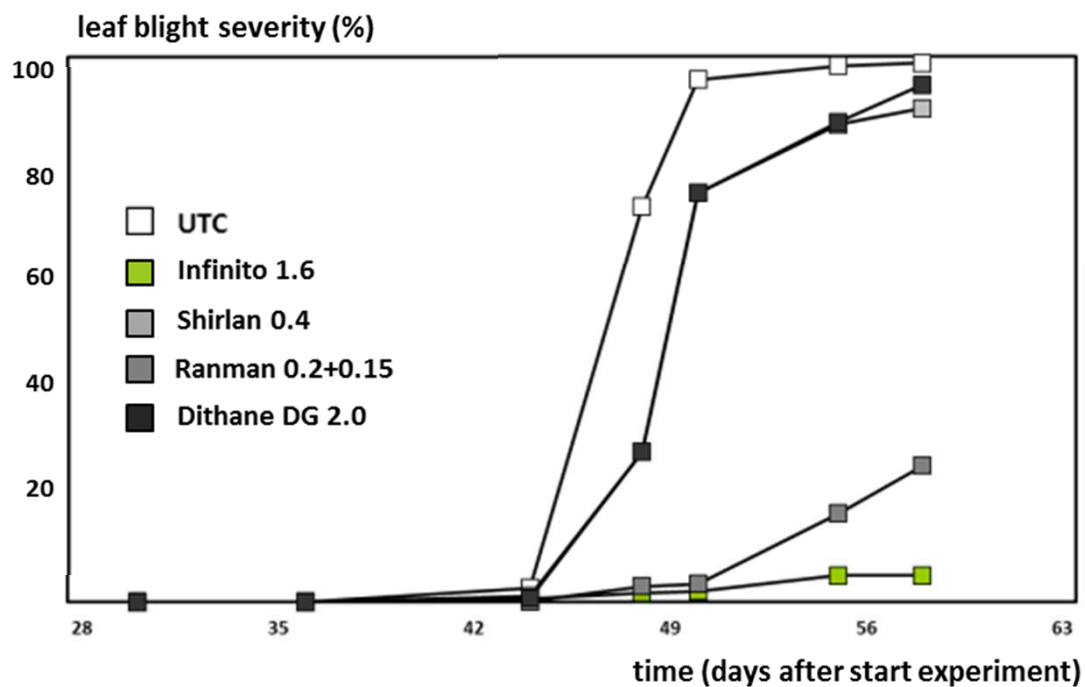


- 4 experimental treatments from late flowering
- broadcast inoculation between EXP1 and EXP2
- leaf blight epidemic in the canopy
- collection of leaflets with a single lesion 1-3 days after EXP2, 3 and 4
- harvest approx 2 weeks after desiccation

PPO – The Netherlands 2009

Field study on sporulation parameters – comparison of products applied 4x at weekly intervals

leaf blight epidemic and tuber blight



PPO – The Netherlands 2009

Field study on sporulation parameters – comparison of products applied 4x at weekly intervals

INFINITO



Bayer CropScience

sporulation reduction



contact fungicides



Infinito

lesion size reduction

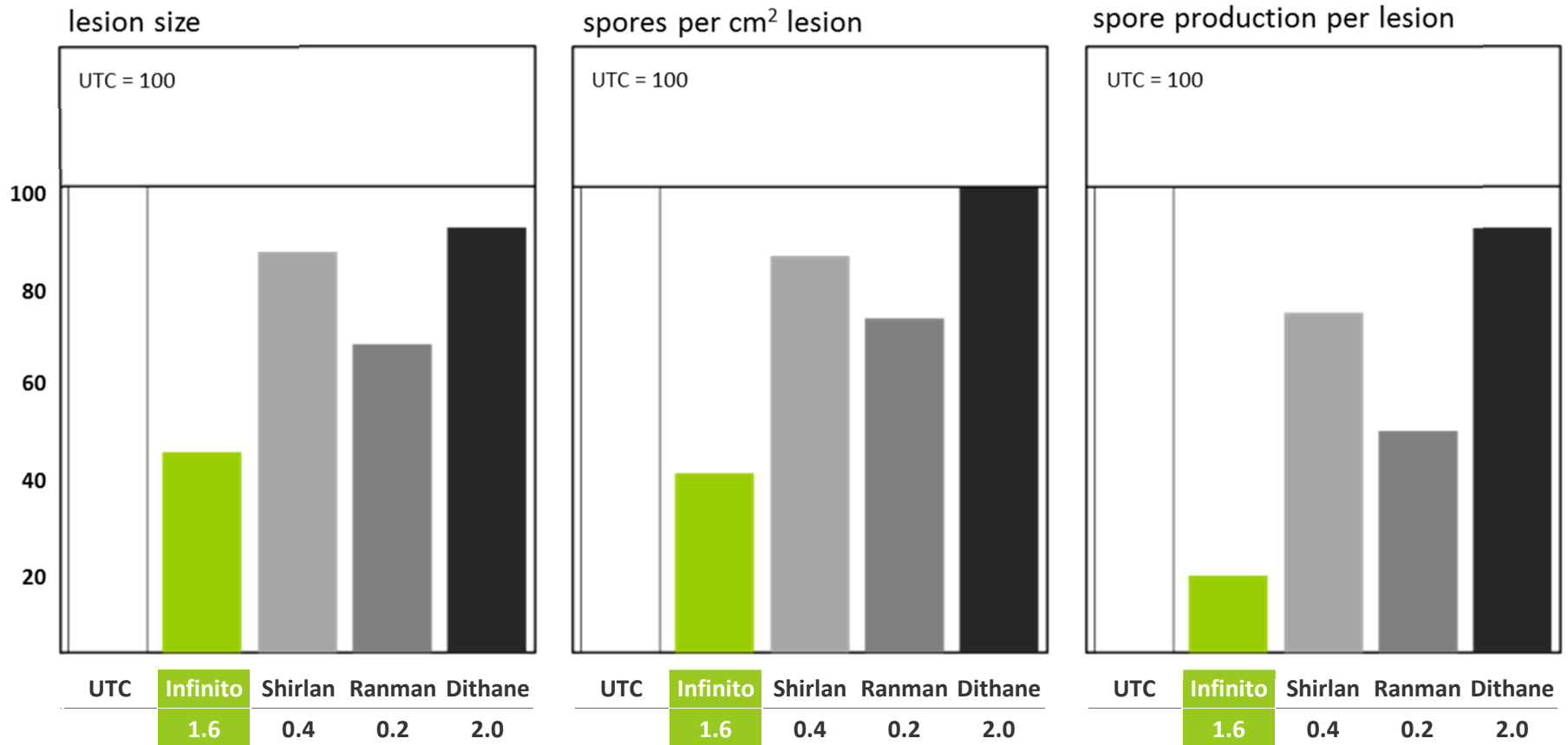


contact fungicides



Infinito

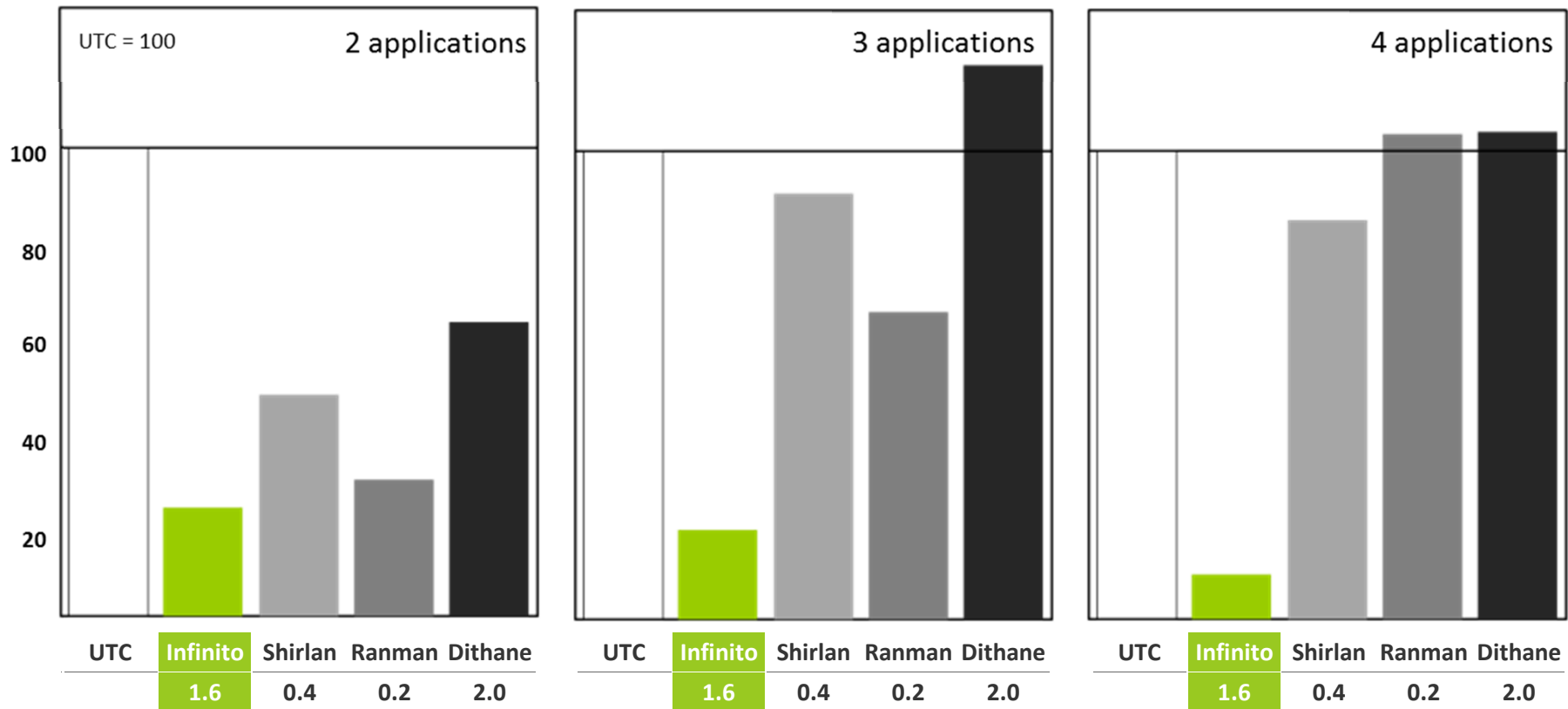
sporulation parameters (mean of 3 assays)



PPO – The Netherlands 2009
 Field study on sporulation parameters – comparison of products applied 4x at weekly intervals

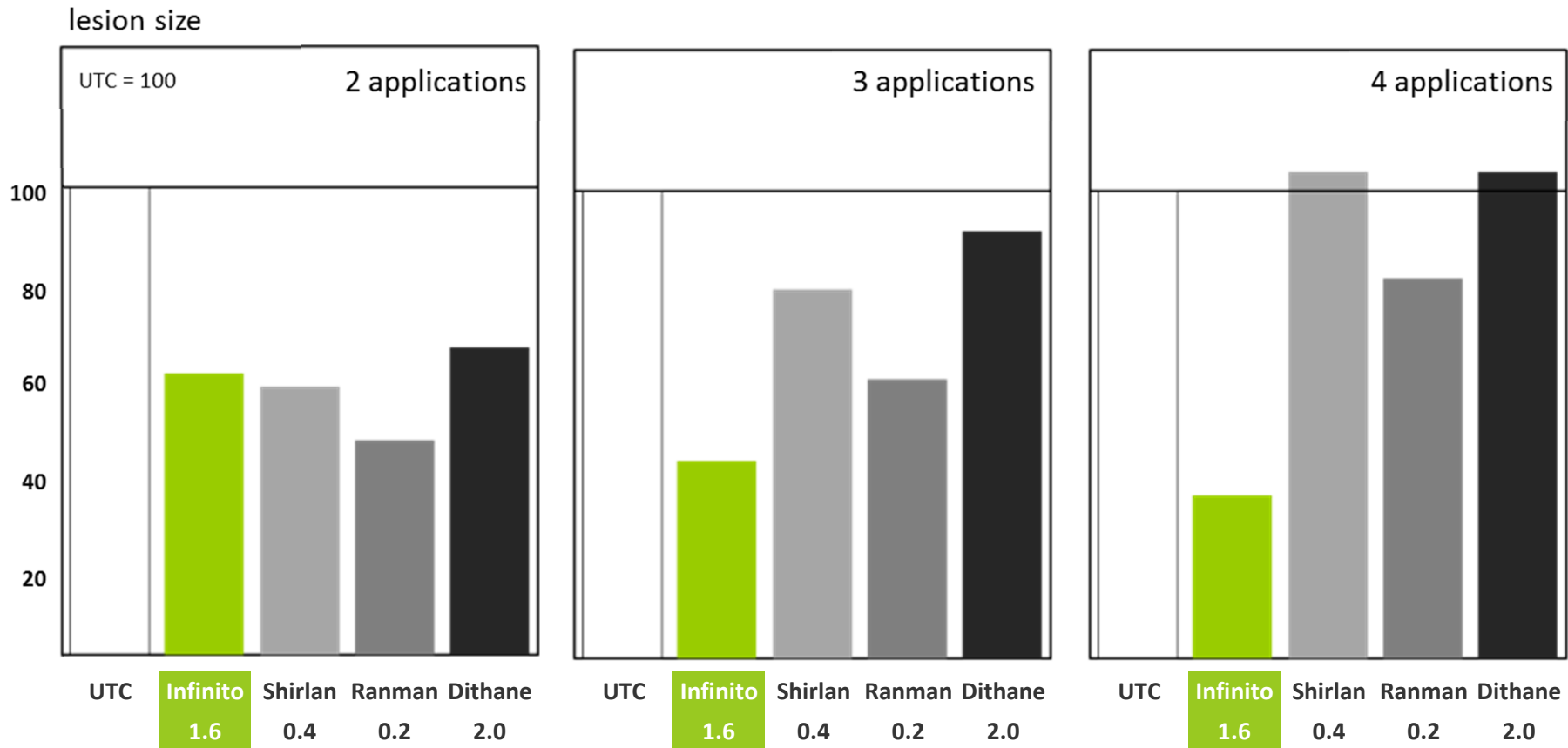
evolution in time

spore production per lesion



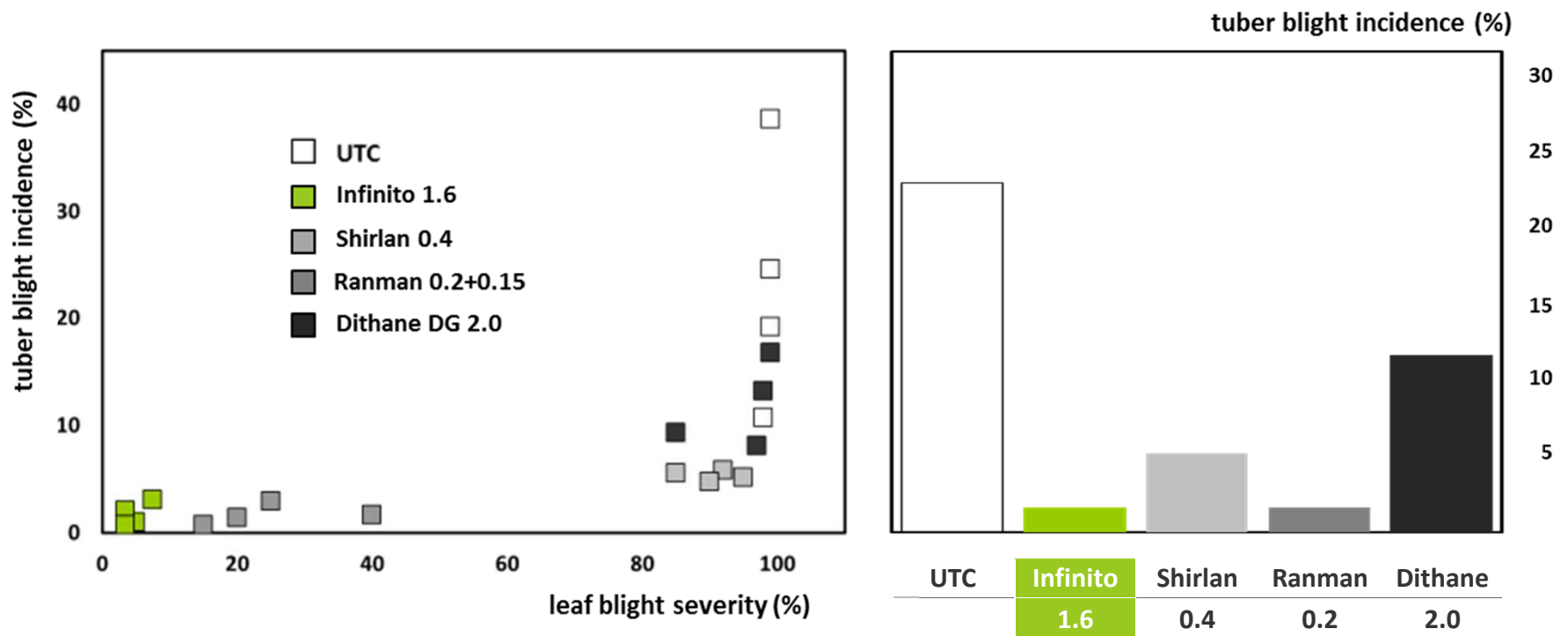
PPO – The Netherlands 2009
 Field study on sporulation parameters – comparison of products applied 4x at weekly intervals

evolution in time



PPO – The Netherlands 2009
 Field study on sporulation parameters – comparison of products applied 4x at weekly intervals

leaf and tuber blight

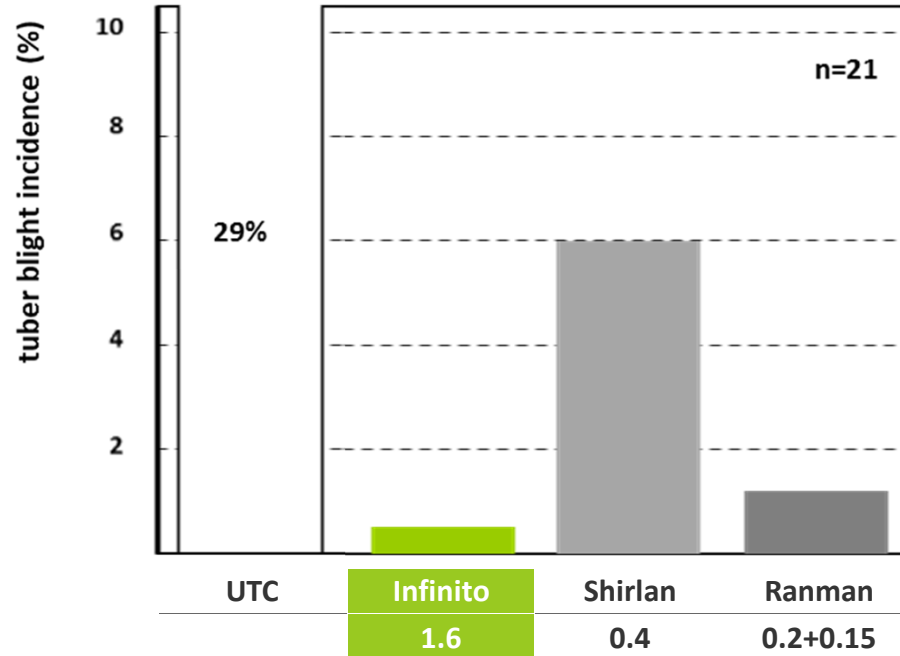


PPO – The Netherlands 2009
 Field study on sporulation parameters – comparison of products applied 4x at weekly intervals

tuber protection



tuber protection



BCS – The Netherlands 2006-2011
Product comparison in a program of sequential sprays at weekly intervals

conclusions

- Data presented in this summary confirm the existence of
 - direct sporicide activity of Infinito present at the canopy surface
 - anti-sporulant activity via **reduction of lesion growth** and **spore production**
- resulting in **solid protection against tuber blight**

..both in specific field trial set-ups and in BCS trials with spray sequences

acknowledgements

- HLB
- PPO-AGV
- PRI
- Proeftuin Zwaagdijk
- country team BCS The Netherlands

