



Recommendations and field performance of INITIUM[®] based products against *Phytophthora infestans* in potatoes

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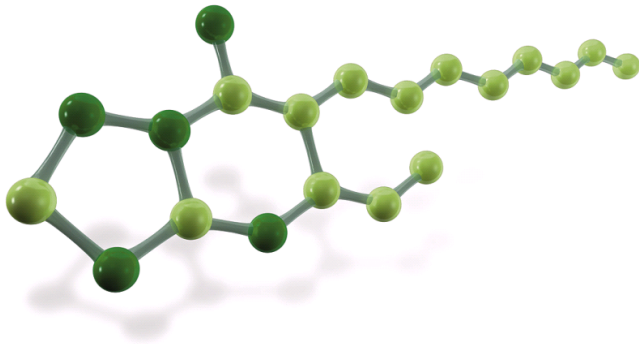
 **BASF**
The Chemical Company

13th EuroBlight Workshop, St. Petersburg, Russia,
October 11th, 2011

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Initium[®]

– key benefits of the new active ingredient



- new active ingredient
- high intrinsic efficacy against different infectious stages of peronosporomycetes
- strong adsorption to the wax layer (due to molecule structure, low water solubility high log P_{ow})
- very good rainfastness
- redistribution on the leaf under the influence of moisture
- excellent crop selectivity
- very favourable regulatory profile

Orvego Duo[®] and Orvego[®]



- Initium products for the potato segment -

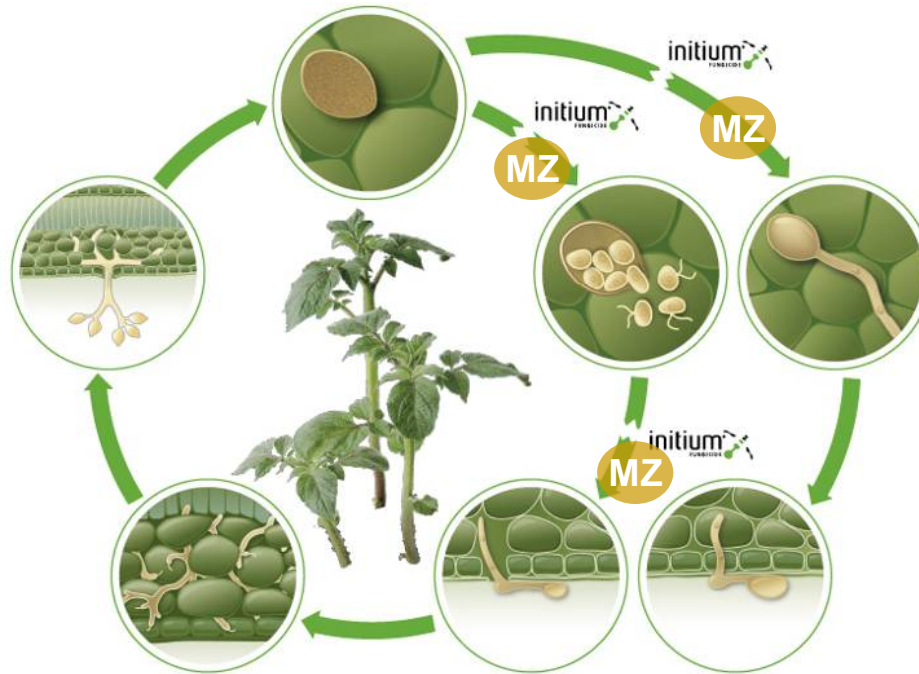
Tradenames	Orvego Duo [®] (Decabane [®] (UK))	Orvego [®] (Resplend [®] (UK))
Active ingredients	Initium [®] + mancozeb	Initium [®] + dimethomorph
Mode of action	Complex III inhibitor + Multi-site	Complex III inhibitor + Inhibition of phospholipid biosynthesis and interference with cell wall
Formulation	80 + 480 g/kg WG	300 + 225 g/l SC
Target dose rate (potato)*	2.5 kg/ha (= 200 + 1200 gai/ha)	0.8 l/ha (= 240 + 180 gai/ha)
Target disease (potato)*	<i>Phytophthora infestans</i> & side effect: <i>Alternaria</i> spp.	<i>Phytophthora infestans</i>
Launched (in EU)	DE, UK	NL, UK

* General information; the country-specific labels must be considered

Orvego Duo®

- Mode of action and key benefits -

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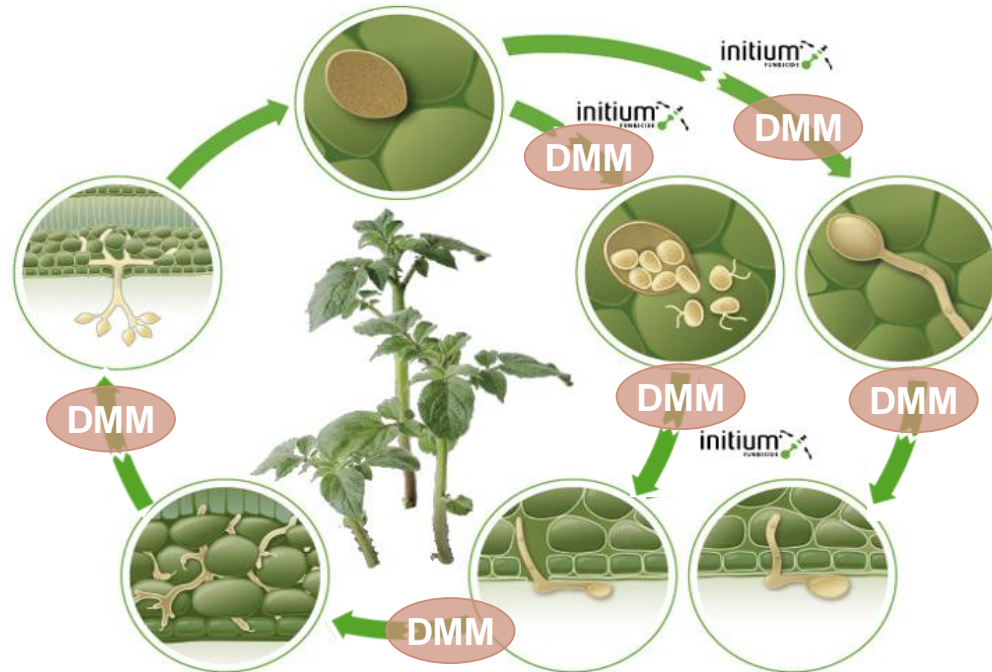


- excellent preventive efficacy against *Phytophthora infestans*
- side effects against *Alternaria* spp.
- excellent rainfastness
- built-in anti-resistance management with mancozeb as a multi-site a.i.
- flexible use possibilities in sprayprogrammes

Orvego®

- Mode of action and key benefits -

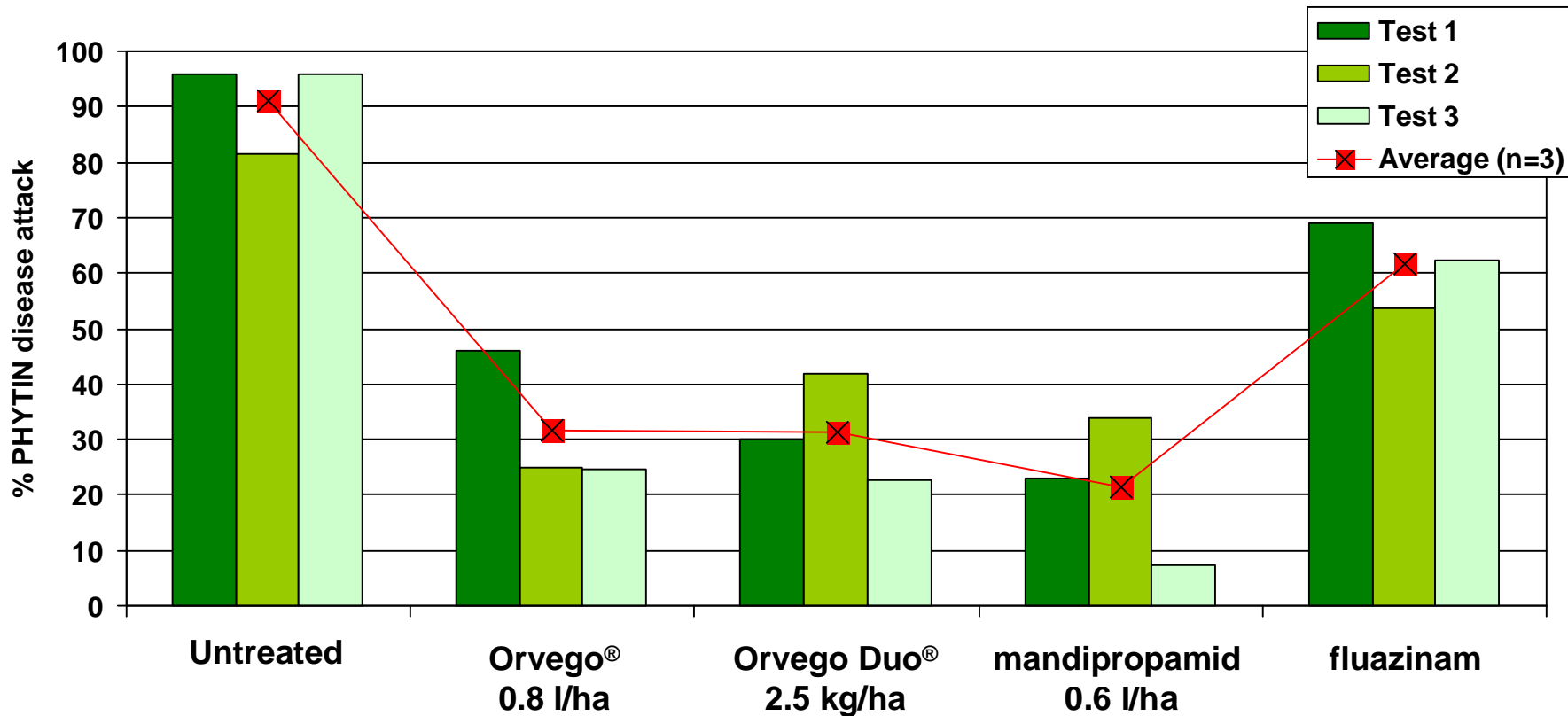
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- very good control of several stages in the life cycle of *Phytophthora infestans*
- combination product for preventive, curative and antisporent efficacy
- user-friendly liquid formulation with low active ingredient input per hectare
- EBDC-free product with a very favourable regulatory profile

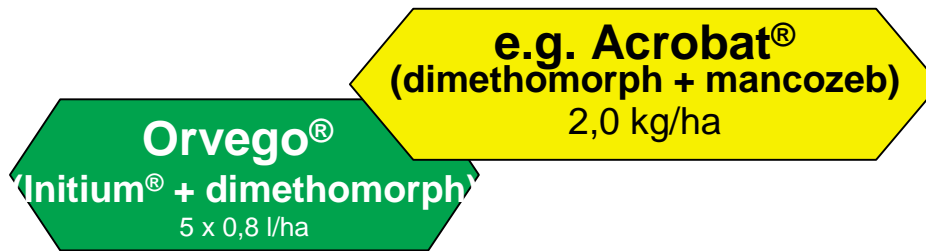
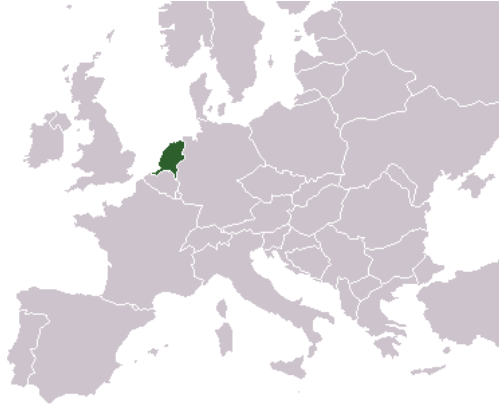
Protection of new growth with Orvego[®] and Orvego Duo[®]

Combined field/lab study conducted by PPO Lelystad, 2010

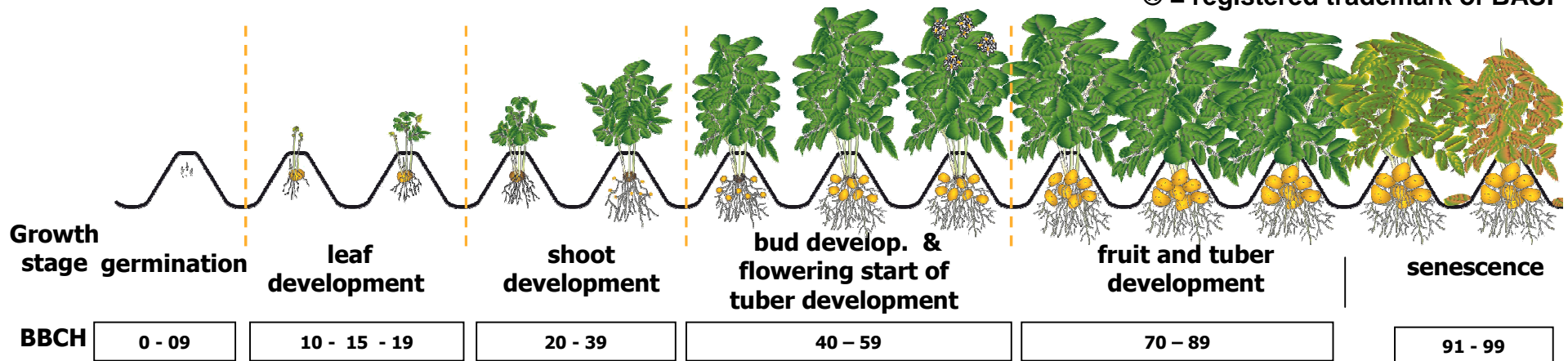


Additional internal and external results confirm very good protection of new growing plant material

Positioning of Orvego[®] in the Netherlands (target disease: *Phytophthora infestans*)

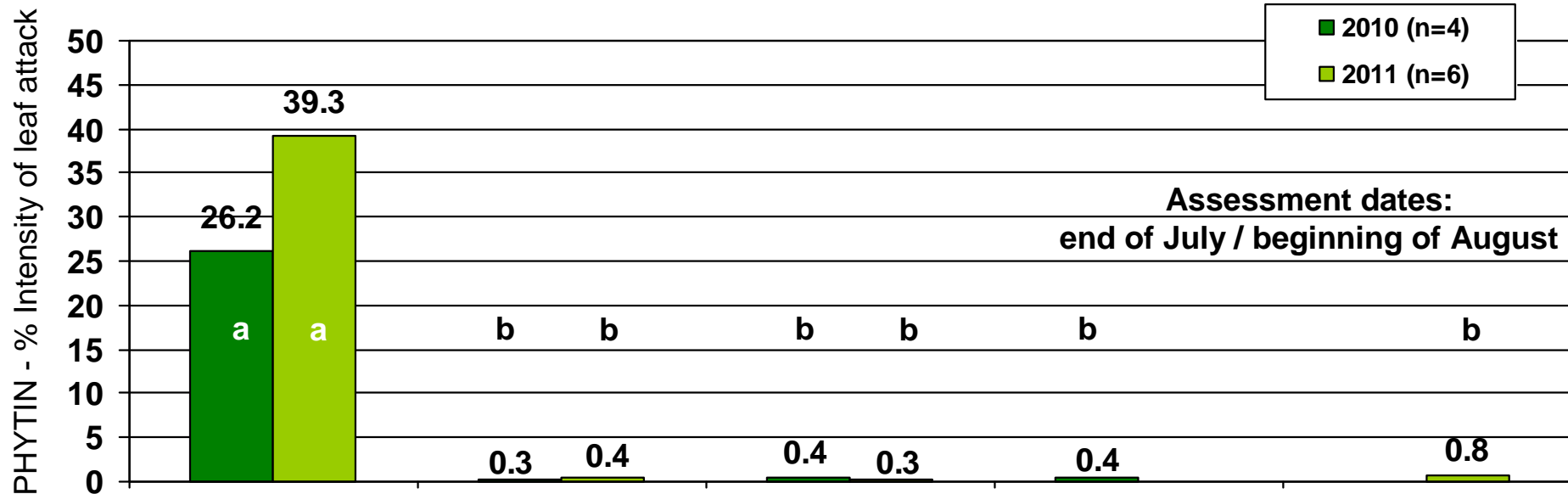


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Positioning of Orvego® in the Netherlands

Statistical analysis: SNK test, $\alpha=0.05$,.



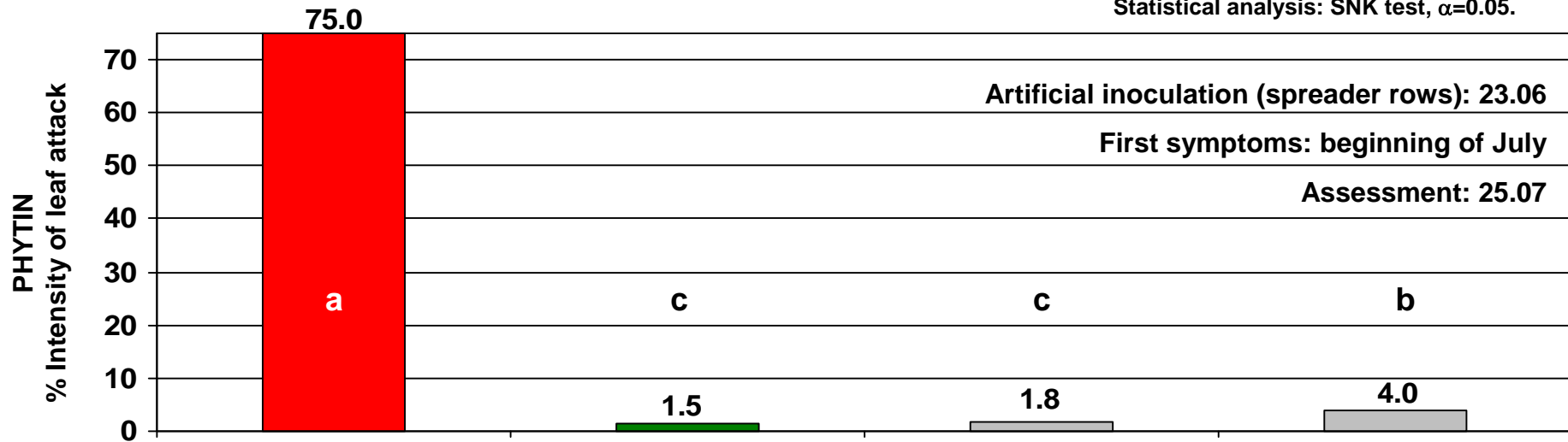
Assessment dates:
end of July / beginning of August

Trt. #	1	2	3	4 (2010)	4 (2011)
Early block	UTC	Orvego®	mandipropamid	fluazinam (only 2010)	cymoxanil + mancozeb (only 2011)
Second block	UTC	Acrobat®	Acrobat®	Acrobat®	Acrobat®
Third block	UTC	cyazofamid	cyazofamid	cyazofamid	cyazofamid

Conclusion: The summary over the two seasons shows that Orvego® provides similar levels of excellent control as mandipropamid when it is positioned in the early block

Positioning of Orvego® in the Netherlands

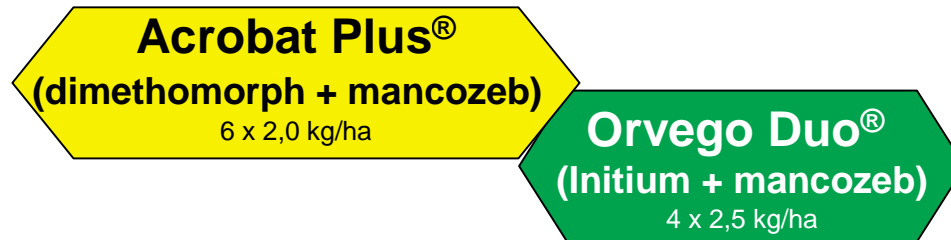
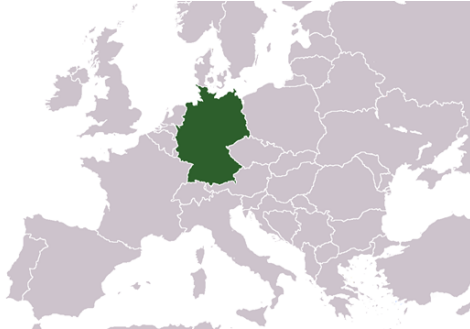
Statistical analysis: SNK test, $\alpha=0.05$.



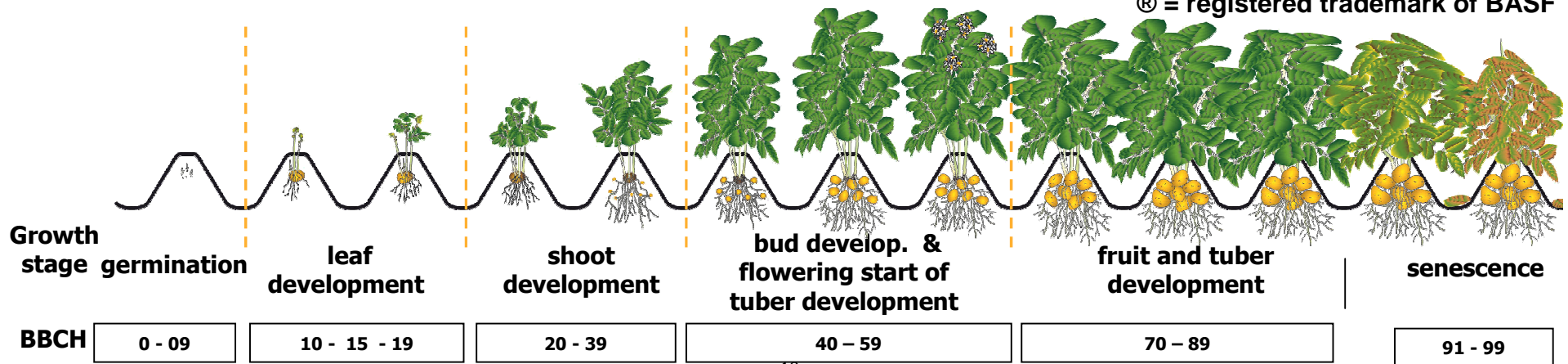
Trt. #	1	2	3	4
<u>Early block</u> 15.06, 23.06, 01.07, 08.07, 15.07	UTC	Orvego®	mandipropamid	cymoxanil + mancozeb
<u>Second block</u> 22.07, 27.07 03.08, 11.08	UTC	Acrobat®	Acrobat®	Acrobat®
<u>Third block</u>	UTC	cyazofamid	cyazofamid	cyazofamid

Conclusion: Under conditions with early high disease attack, Orvego® shows very good efficacy comparable to mandipropamid and significantly better than cymoxanil and mancozeb.

Positioning of Orvego Duo® in Germany (target disease: *Phytophthora infestans*)



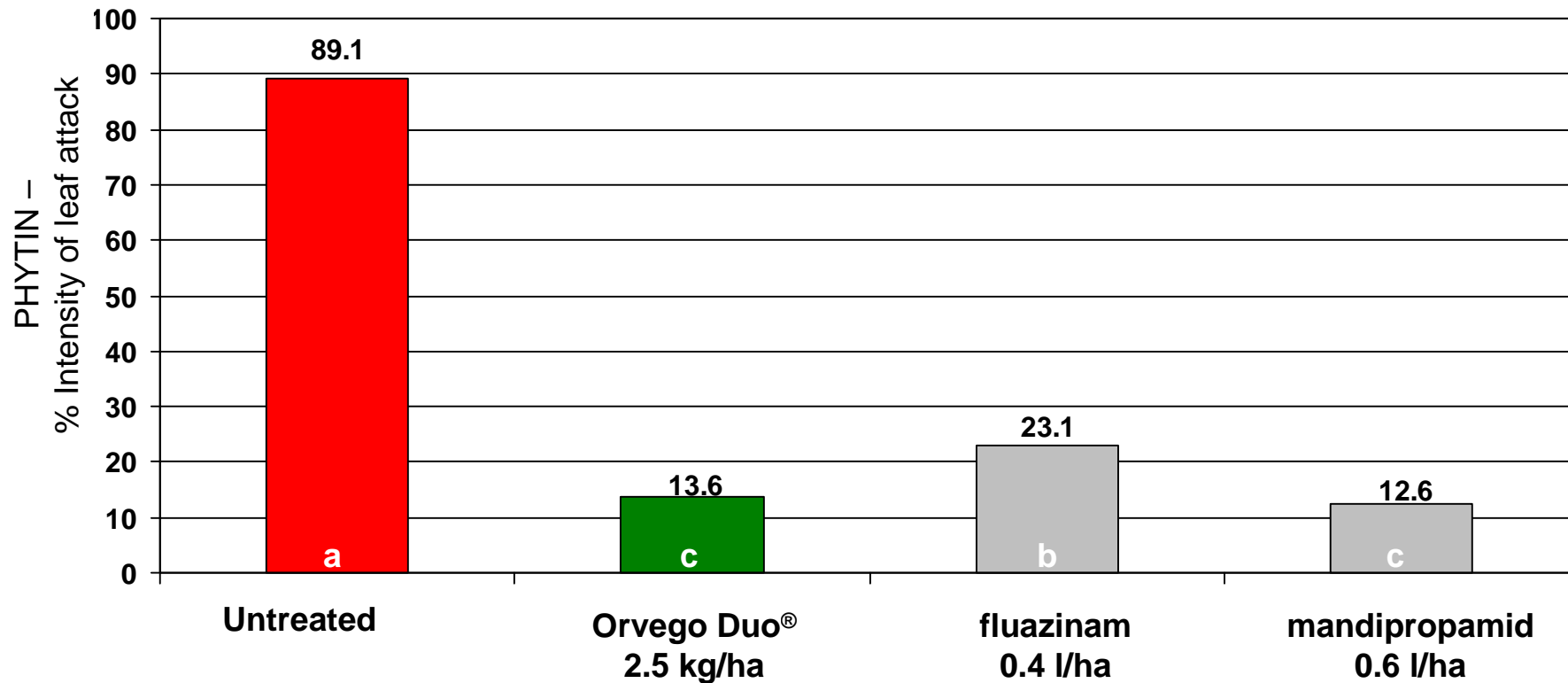
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Season-long sprayed trials from Germany

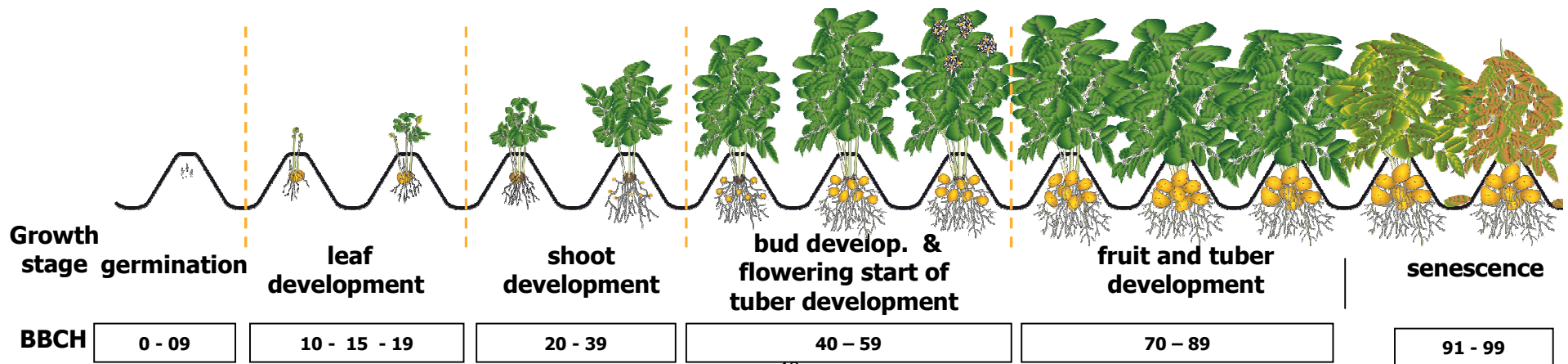
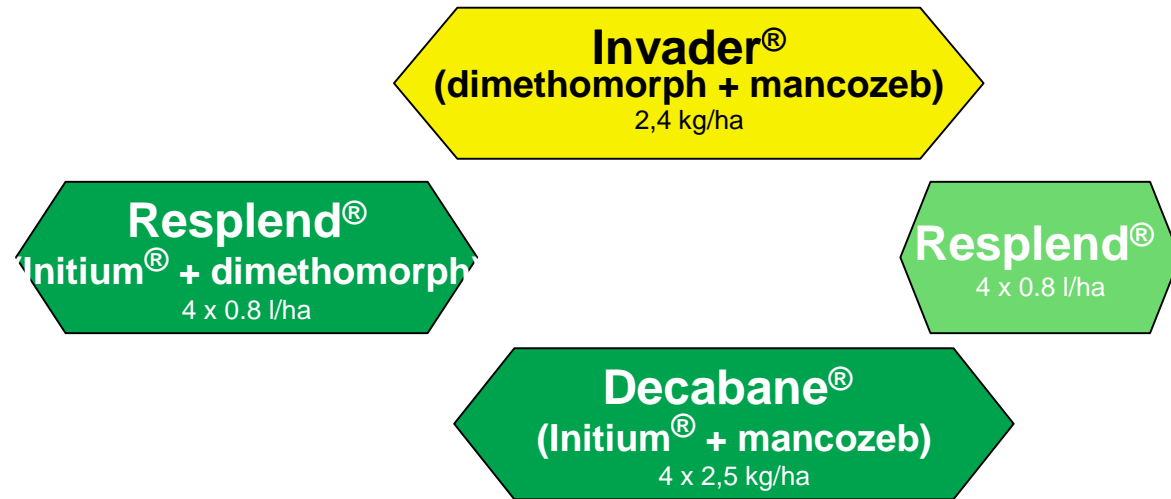
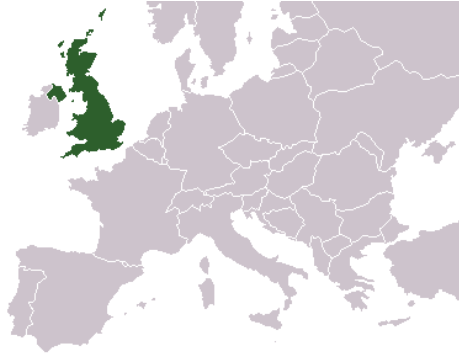
Summary of 14 trials from 2009-2011

Statistical analysis: SNK test, $\alpha=0.05$.

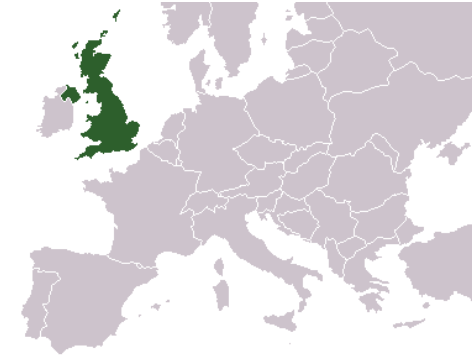
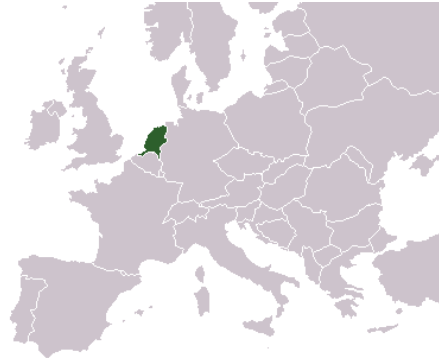


Conclusion: Orvego Duo® provides excellent efficacy levels.

Positioning of Resplend[®] and Decabane[®] in the United Kingdom



Summary of Experiences 2010/2011 with Orvego and Orvego Duo



- Orvego and Orvego Duo provide very good efficacy in *Phytophthora infestans* spray programmes.
- Orvego and Orvego Duo can be used without problems in mixtures with other plant protection products, mineral oils and fertilizers.
- Orvego can be positioned flexibly in the spray program: In the period of active plant growth as well as in the period of stable canopy very good disease control is ensured. Furthermore dimethomorph ensures beside preventive efficacy also curative and antisporent efficacy. Farmers using Orvego appreciate the easy-to-use liquid formulation.
- Orvego Duo controls *Phytophthora infestans* before the infection can establish. Due to its excellent rainfastness the product ensures long-lasting protection of the crop. Farmers using Orvego Duo appreciate the side effect against *Alternaria* spp.



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