



VELUM[®]
PRIME



Carrots





New nematicide:

VELUM[®]
PRIME



*A novel nematicide with a new approach to reducing the impact of **FLN** and **PCN***

What is it?

A liquid formulation of **fluopyram** (SDHI)

What does it do?

Active against **cyst**, **free-living** and **root-knot** & contribution to **Sclerotinia** control

How does it work?

Inhibits ATP production leading to paralysis then death of juveniles. Different from other nematicides

Dose

(250 g ai/ha) **Spray** on soil and **incorporate** / potato in furrow

Crops

Potatoes and **carrots**

Toxicity and Ecotox

Favourable: **huge interest** from food chain

Not yet authorised ... but expecting still in time for 2020 use



Highly effective!



250 g/ha of fluopyram

Velum applied at 0.625 L/ha



Note: Velum Prime is not yet authorised on carrots



Soil mobility - modelling of fluopyram Vs oxamyl

Molecular properties can be very different

Fluopyram degrades 19x
slower than oxamyl...

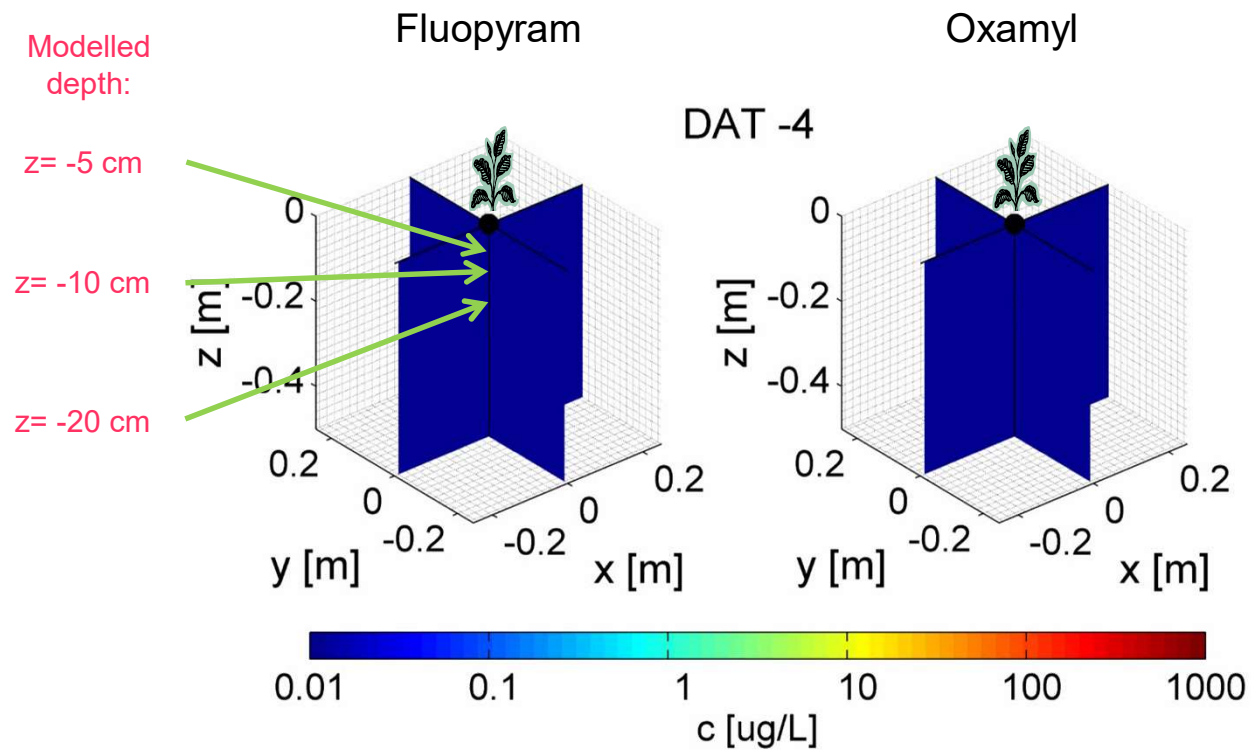
	Fluopyram	Oxamyl
soil DT50 [days] guideline study	123.05 (geomean)	6.6 (arithmetic mean)
Kfoc [L/kg] guideline study	278.9 (geomean)	16.0 (arithmetic mean)

... and is
less mobile



3D comparison 1000 g/ha

Soil pore water concentrations (= “liquid” concentrations)

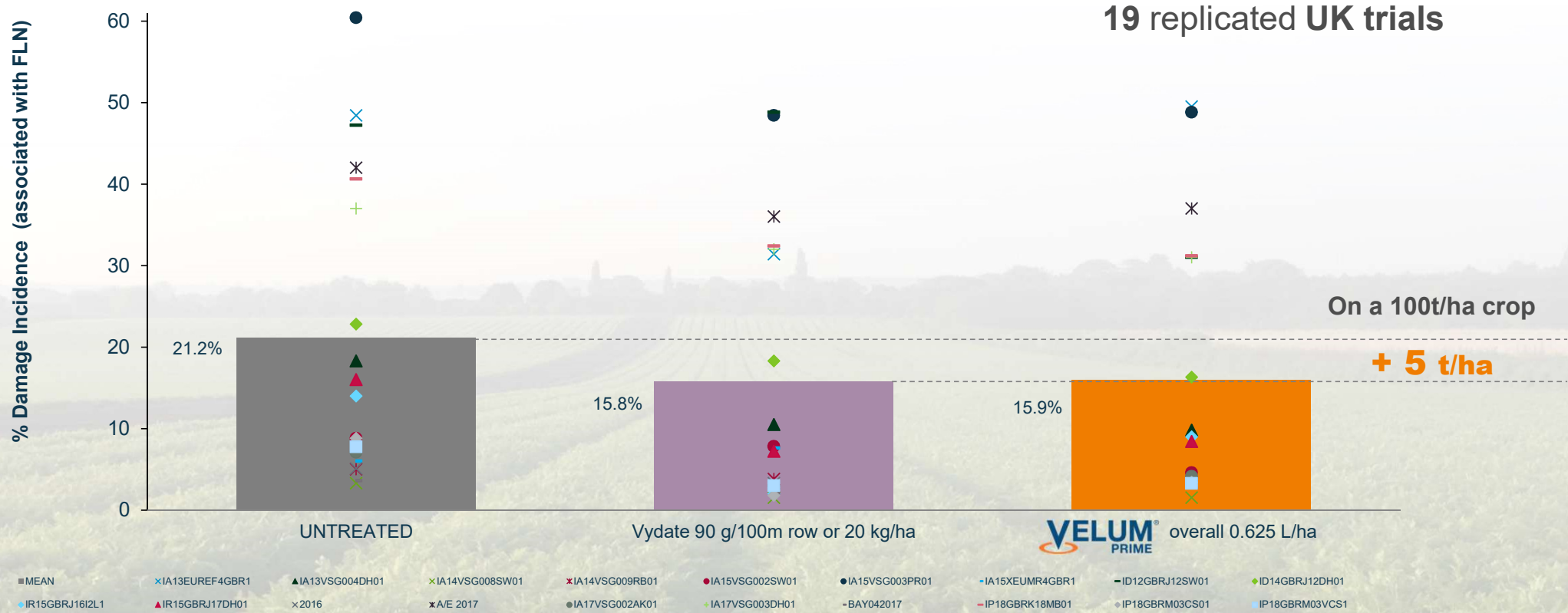




On carrots: FLN damage

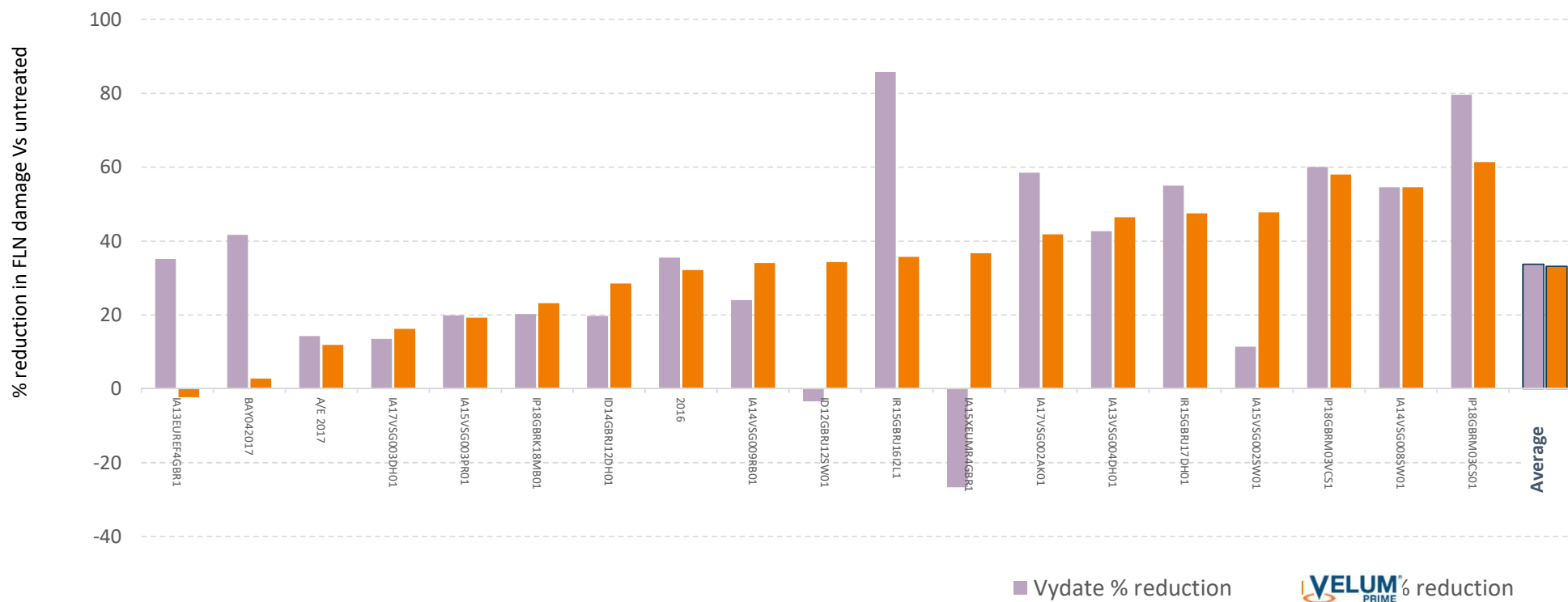


Reduced damage in the presence of FLN





% Reduction in damage Vs Untreated in the presence of FLN. 19 UK Trials

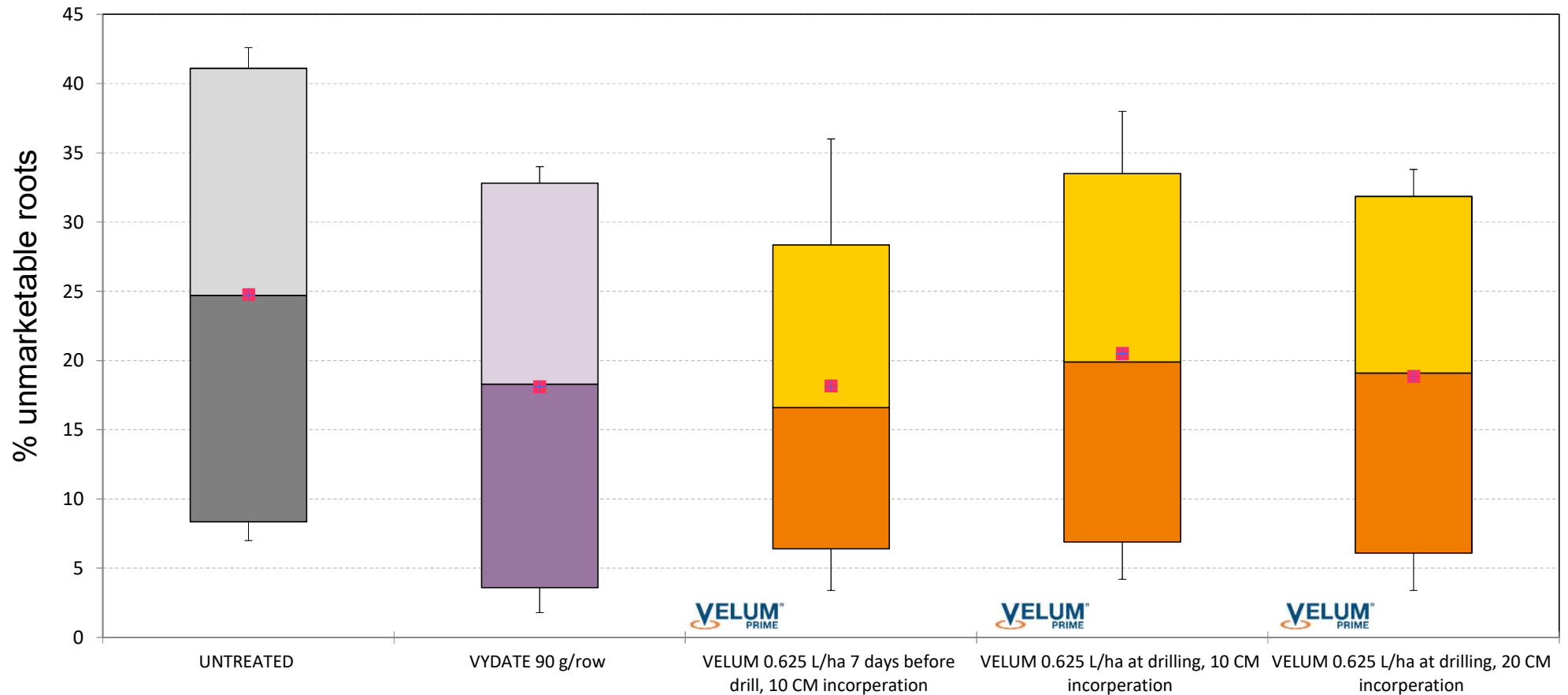


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Incorporation trials - % unmarketable roots

4 trials, 3 external. Yorkshire and Suffolk area's in 2017 and 2018

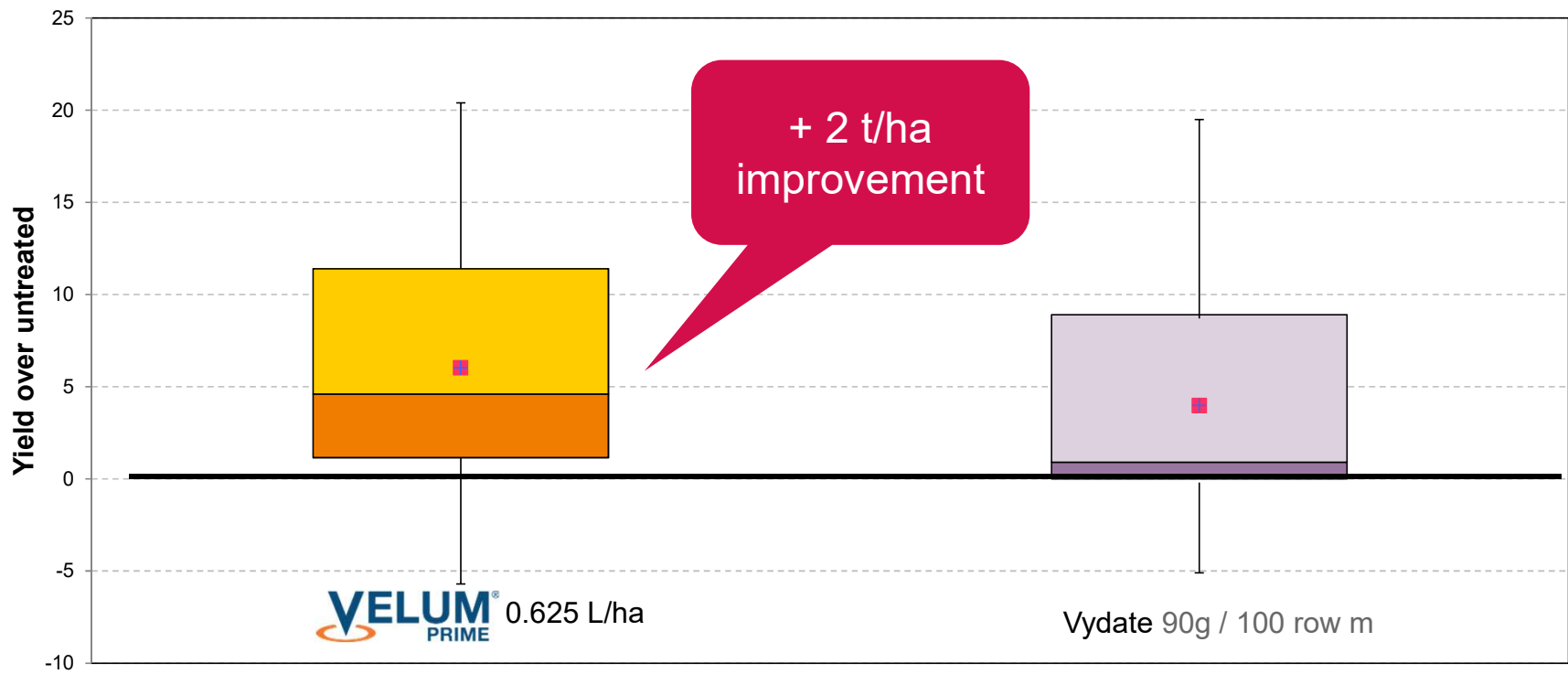




Yield over untreated



15 trials, 2013-18. Untreated yield = 89 t/ha





In practice!

On carrots: FLN damage



Non-replicated dig, but...

Untreated



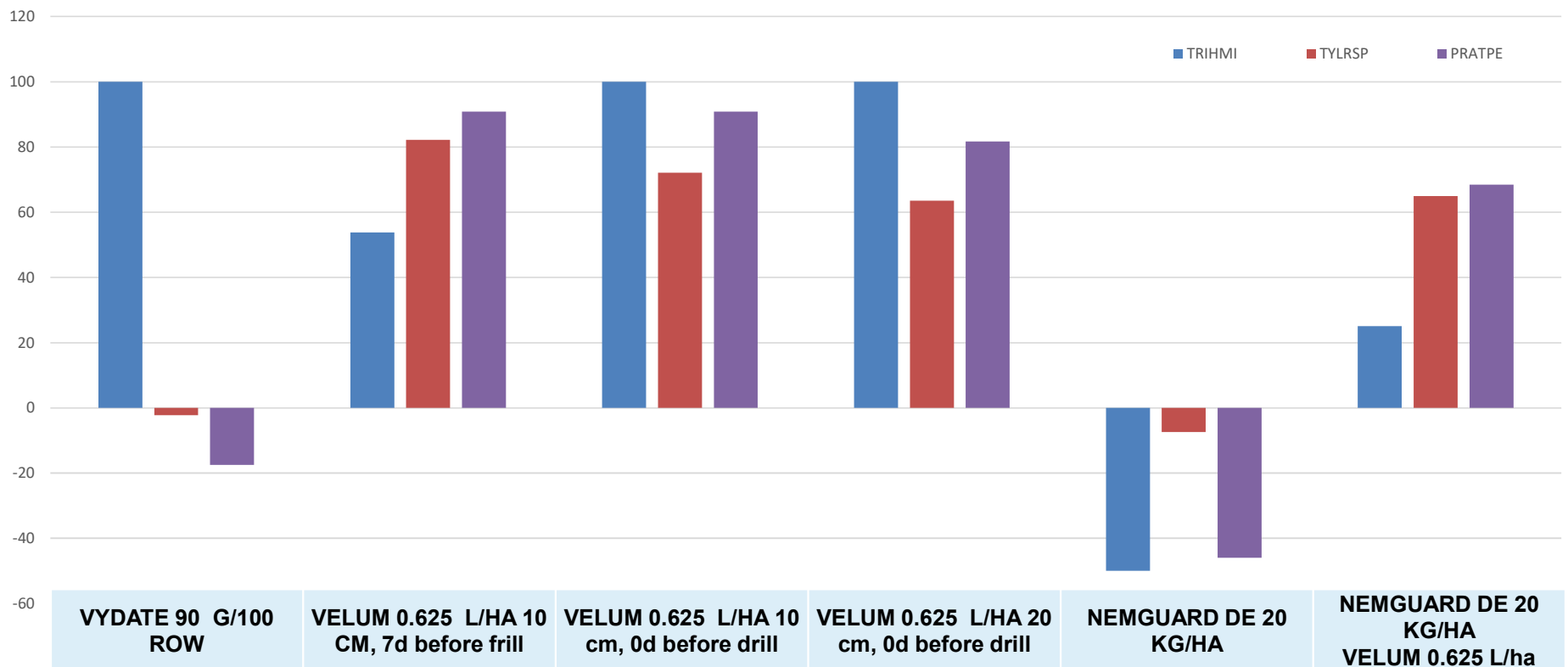
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Broad Spectrum Nematicide

Trichodorus mean count 06-06 = 38
Tylenchorhynchus mean count 06-06 = 165
Pratylenchus mean count 06-06 = 1734

VCS 2017 trial IR17GBRC03VCS1



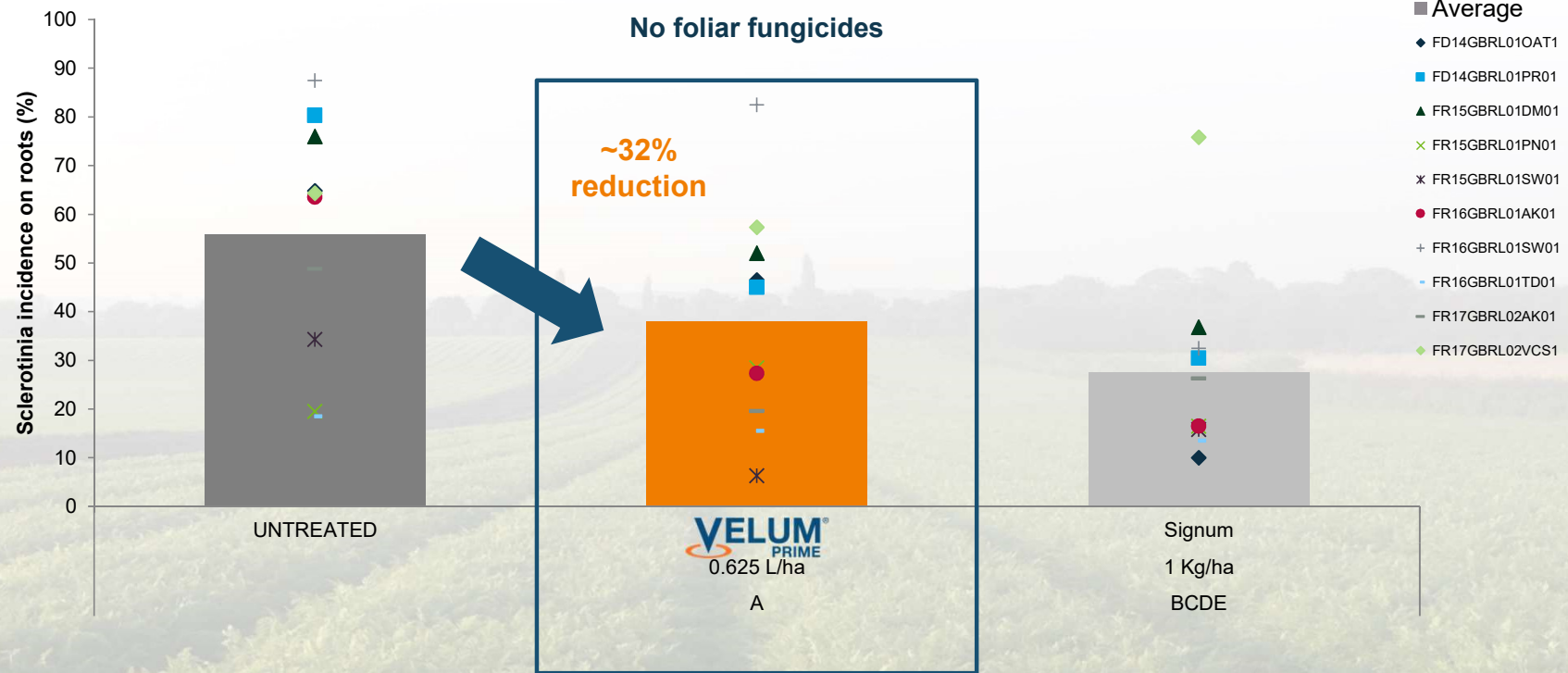
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On carrots: *Sclerotinia* side-effect



Contribution to *Sclerotinia* control – mean of 10 UK trials 2014-2017



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Co-application with



BCGA Demo strips 27th June 2018



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Carrot: Serenade colonisation

Nottingham University MSC research 2017/18 – temperature effects on colonisation



Cool

15°C / 10°C 12 hr photoperiod



Application



Velum Prime Application in UK Practices - Carrots



Deep Ridging



Bed Forming/Tilling



Drilling



VELUM
PRIME



Vydate[®] 10G

NEMATOCIDE



CARROTS AND PARSNIPS

VYDATE 10G can be used for the suppression of plant parasitic nematodes and for the reduction of fangling caused by nematodes.

Apply the granules at 0.09 kg/100m row at drilling using a conventional granule applicator to a minimum depth of 2.5cm. Do not apply later than 12 weeks before harvest.

- Incorporation to **10-20cm**
- Follows **statutory label** requirement
- Efficacy **supported**





Velum Prime Application in UK Practices - Carrots



Deep Ridging



De-stoning



Bed Forming/Tilling



Drilling



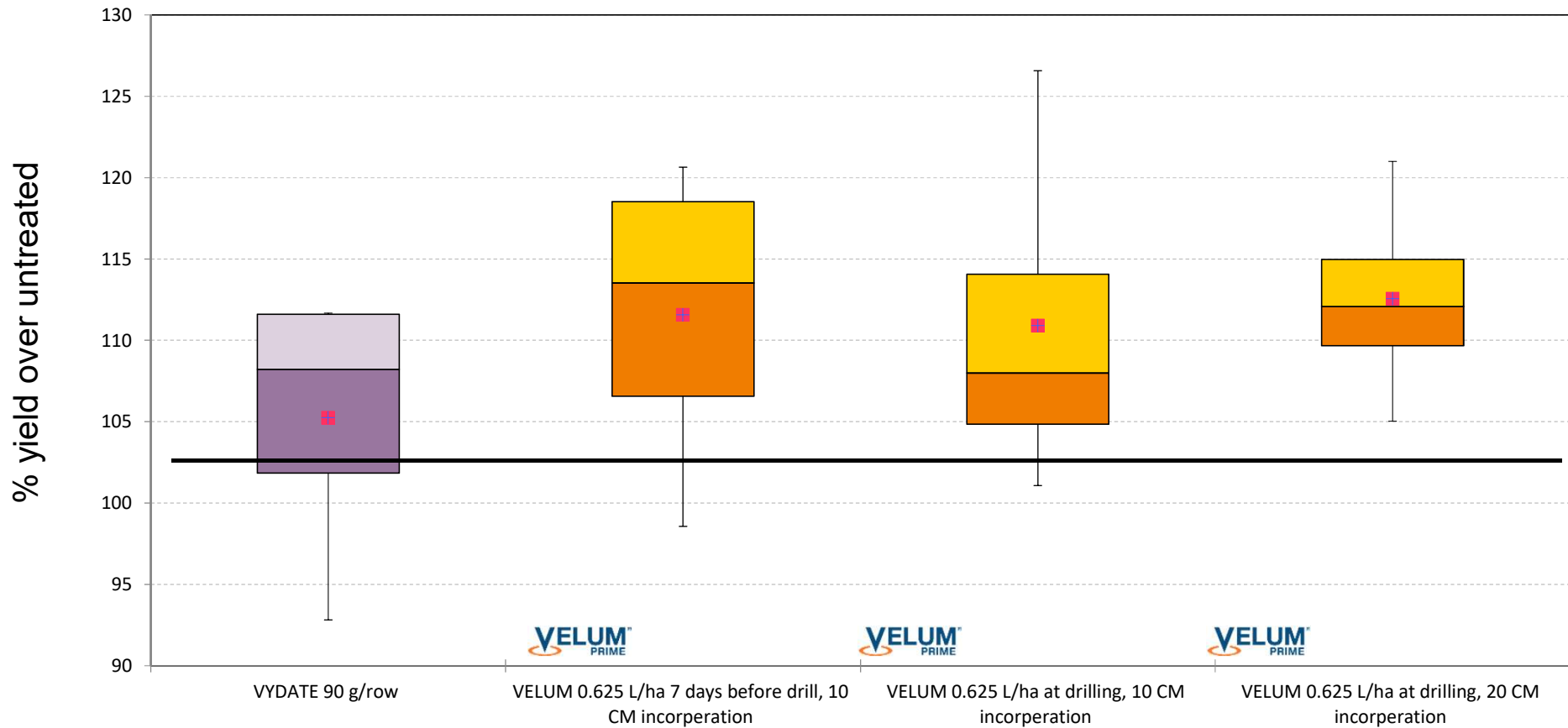
VELUM[®]
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Incorporation trials - % yield over untreated

4 trials, 3 external. Yorkshire and Suffolk area's in 2017 and 2018





Why use it?



Sustainable !

Some uncertainty about efficacy from broadcast onto destoned ridges

Reduced foliar SDHIs

Use will count as 1x SDHI for foliar applications, and 1st spray can't be SDHI (typically Signum used first)

New application approach (inertia)

Potentially difficult to fit application with current practices

Simple spray using existing kit

No bulky returnable containers

Low dose

Great start to *Sclerotinia* control

No additional kit on drill
=
reduced costs
(maintenance, servicing, training)

No refilling while drilling
=
quicker + better focus

Combine with

for cavity spot

Food chain
love it

It works
(Cost = Vydate)





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