



LEADING IN CROP INNOVATION

Bruce Napier



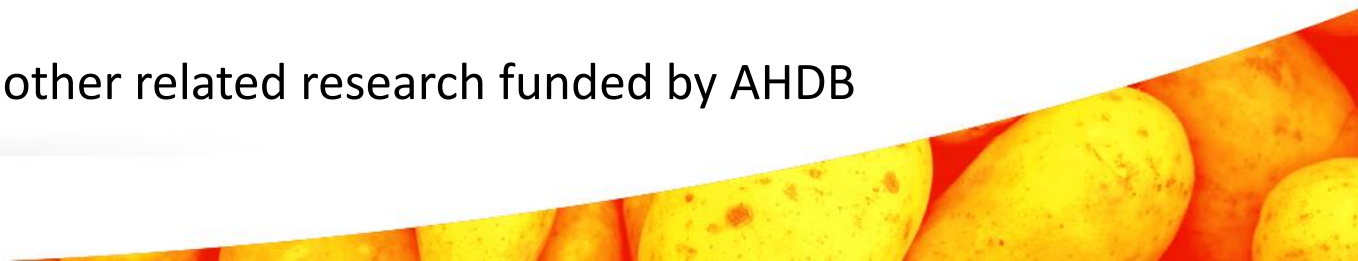
AHDB Horticulture Strategic Centres for Field Vegetables

Carrot trials and breakage data



Horticulture Strategic Centres for Field Vegetables

- FV462 project brings together AHDB funded core variety work on onions, carrots, brassicas and vining peas
- NIAB led consortium with ADAS, PGRO and Duchy College
- Additional funding from AHDB has been released to allow crop associations and growers to propose new areas of research and knowledge transfer without having to bid for a larger research grant
- Research partners outside the main consortium are involved as dictated by the work packages
- KE events cover consortium and other related research funded by AHDB



Additional funding

- Direct and in kind funding supports the work of the strategic centres
- Thanks to the following:
 - **Seed Companies, Chemical manufactures/suppliers**
 - **Trial Host**
 - **BCGA**



Carrot Trials

- BCGA Committee
- AHDB Horticulture fund demo site and event
- Seed Companies pay to enter demo plots
- Host farm provide in kind support
 - Fresh Gro - Martin Brittain & Martin Evans
 - Farmer – Tim Hardstaff
- Seed rate trial (350,000-950,000/ac)
 - 7 rates x 3 reps
- Seed treatment comparison trial
 - (BMOX, Primed, Wakil) x 3 reps
- Variety v breakage assessments
 - Single sample per variety



Root breakage assessments

| | | 2019 | 2020 | mean |
|----------------|-----------------|------------|------------|------------|
| variety | company | % breakage | % breakage | % breakage |
| Caribou | Agility/Seminis | 0.0 | 0.0 | 0.0 |
| Nerac | Elsoms | 0.0 | 0.0 | 0.0 |
| CA 6572 F1 | Agri-seeds | 0.0 | 2.0 | 1.0 |
| Berdina | Agri-seeds | 0.0 | 2.2 | 1.1 |
| Octavo | Hazera | 1.0 | 2.0 | 1.5 |
| Elegance | BASF | 4.0 | 0.0 | 2.0 |
| Nun 13095 | BASF | 4.0 | 0.0 | 2.0 |
| VAC111 | Hazera | 2.0 | 2.0 | 2.0 |
| Volcano | Hazera | 2.0 | 2.0 | 2.0 |
| Melodio | Hazera | 3.0 | 4.0 | 3.5 |
| Nairobi | Elsoms | 4.0 | 4.0 | 4.0 |
| Stromboli | Clause | 0.0 | n/a | |
| SVDN7396 | Agility/Seminis | n/a | 2.0 | |

- Approx 50 varieties tested in both 2019 and 2020
- **Good selection of varieties with better than or equal strength to Nairobi**



Seed rate trials

7 rates:

350,000/ac

450,000/ac

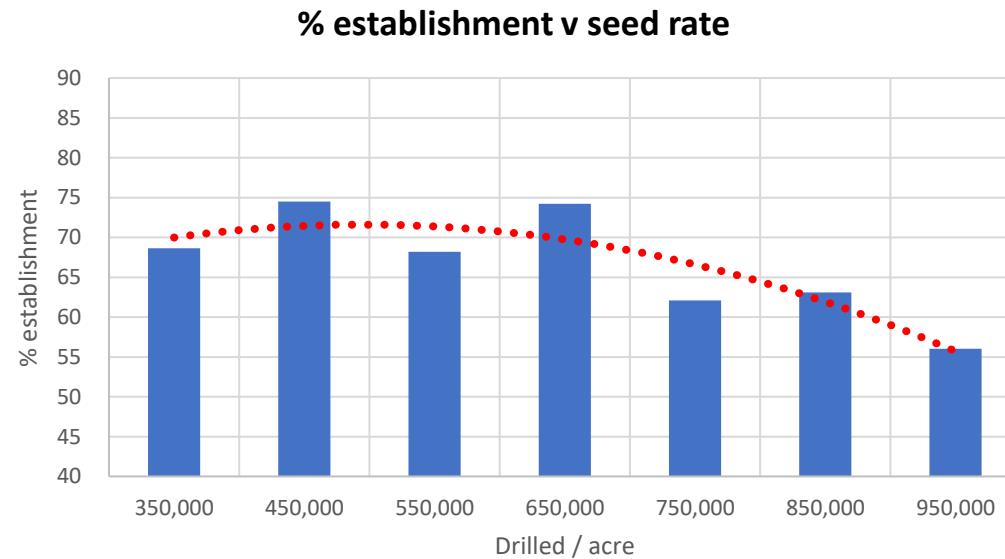
550,000/ac

650,000/ac

750,000/ac

850,000/ac

950,000/ac#



In new money:

870,000/ha

1,175,000/ha

1,495,000/ha

1,635,000/ha

1,920,000/ha

2,160,000/ha

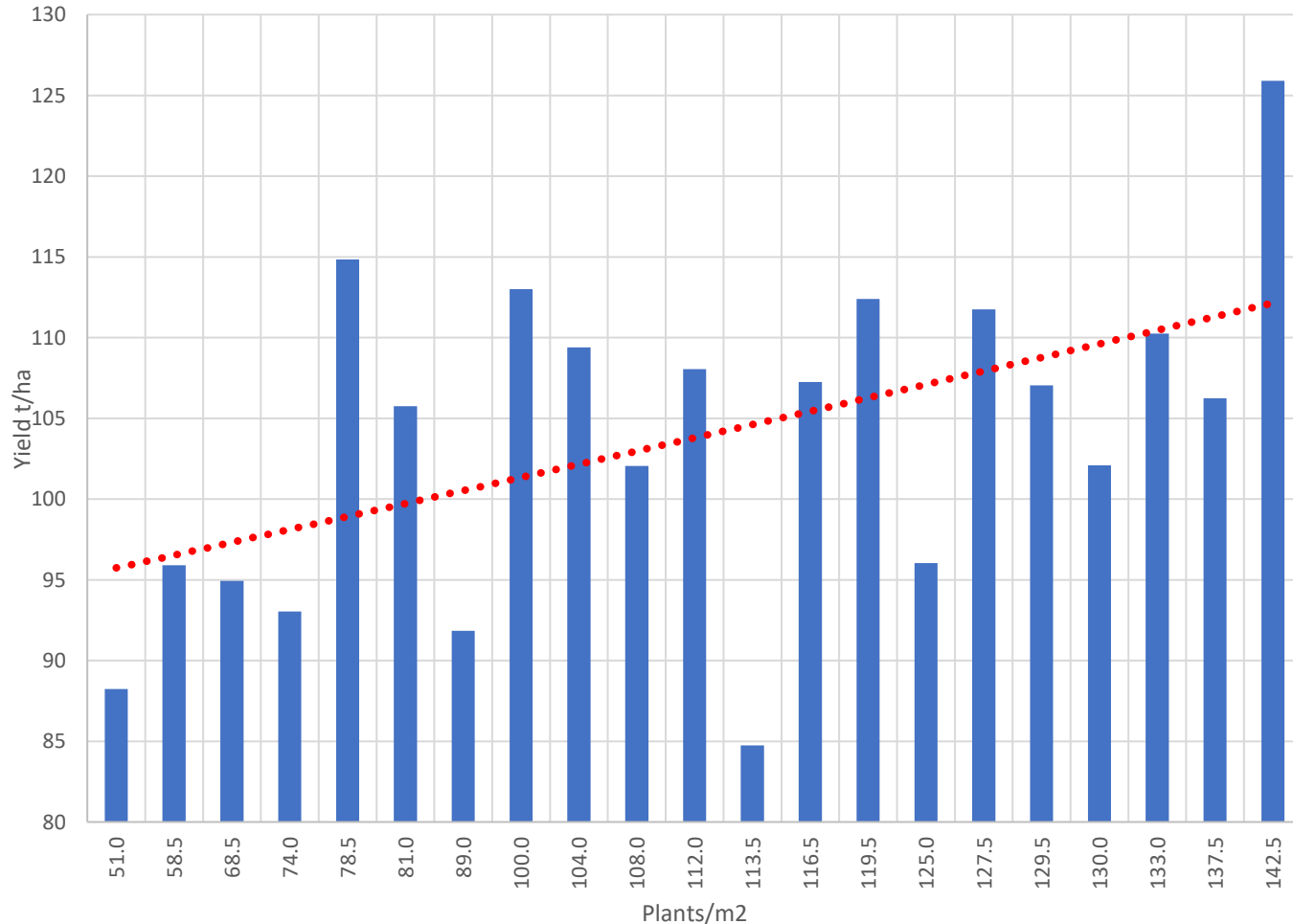
2,385,000/ha

- Trial site drilled over 2 dates due to rain stopping play
- Seed rate trial at second drill timing
- Site suffered from blow
- Later drillings may have been affected by herbicides...

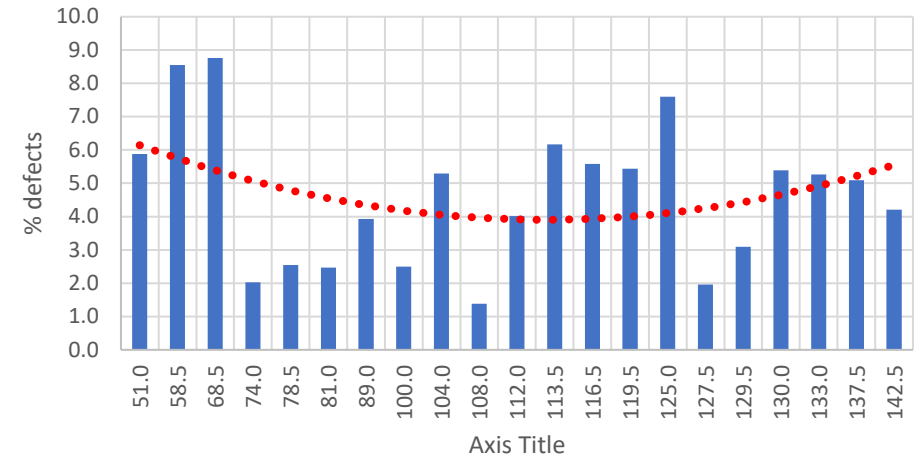


Seed rate trials

harvested plant count v marketable yield



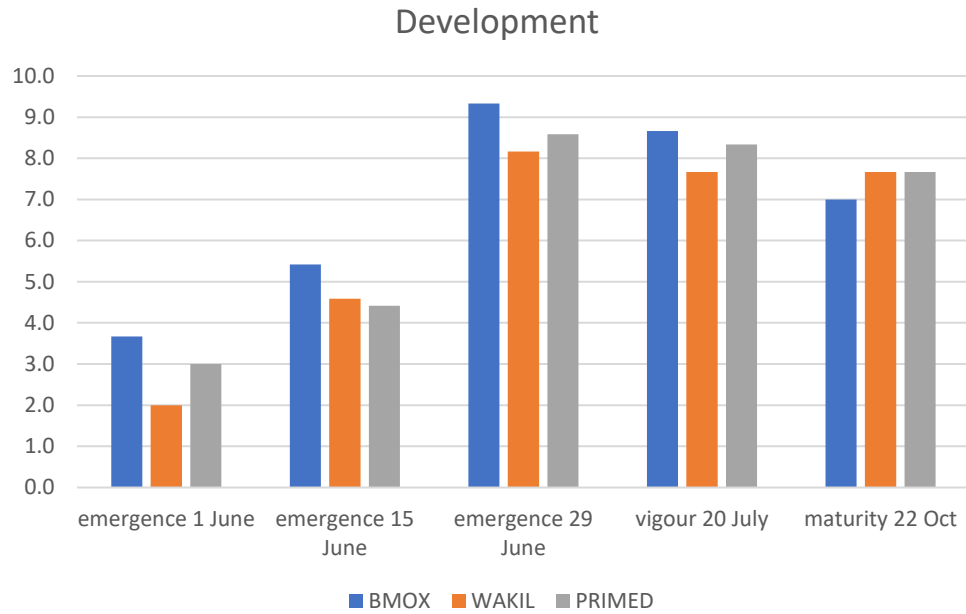
%defects



- Individual plot data due to uneven establishment
- General trend on higher yields from higher rates
- Didn't achieve higher rates so no plateau seen
- Data not split by grading fractions
- More defects at lowest drill rates

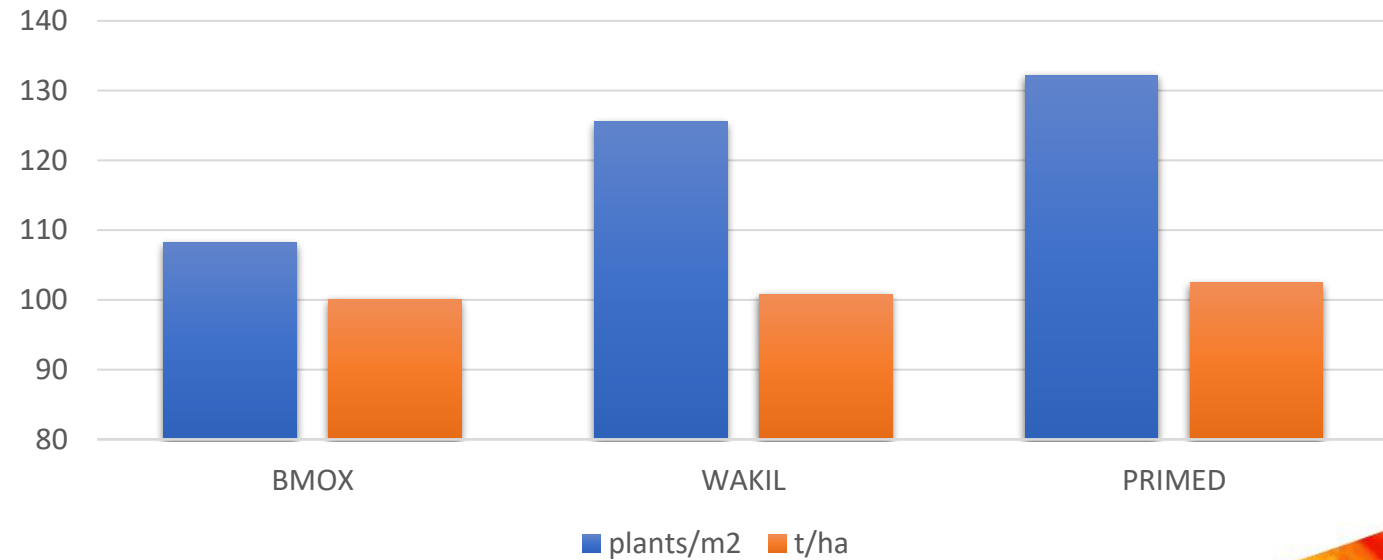


Seed treatment trials



- Too few reps to draw firm conclusions
- BMOX material got away fastest
- Primed material second fastest and highest marketable roots

Effect of seed treatment on final establishment and yield



Horticulture Strategic Centres for Field Vegetables

- **Ideas for 2021 and 2022...?**
- Contact your grower association R&D group to share your ideas/priorities
- Repeat and build on the work on seed rate/treatment/root breakage
- Aphids and virus – support other AHDB projects e.g. additional plots/samples
- Crown Rot – with the removal of approval for fenpropimorph (e.g. Corbel); treatments for crown rot prior to straw laying are now into the unknown. There could be potential to look at a trial for fungicide treatments to best protect crops being stored under straw...
- Biostimulants – there are a range of biostimulants being promoted for use in various crops including carrots and parsnips. Independent assessment of the effects of these on crop growth, root yield and quality is another potential area of work which we have not yet really investigated.
- Other ideas?



- Thank you

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