

Presentation Information

Spot East 2020 – Contact Herbicide Demonstration

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VCS (UK) Ltd and VCS Potatoes Ltd



POTATOES

Herbicides – SPot Farm 2016-2020

Demonstrations Spot East & North – Linuron/Diquat loss

VCS (UK) And VCS Potatoes - Demonstrations

2016-2020

- Activity of single a.i. residuals
- Combinations of residuals
- Varietal tolerance to metribuzin pre/post emergence
- Focus new a.i.'s
- Contact Herbicide - 2019/20



SPot
East
Elveden
2017



Contact Herbicide Demonstration 2020

Field Details -922A

- Loamy Sand/Sand
- Variety - Lanorma
- Planting date 10th April

No Weed Control Data



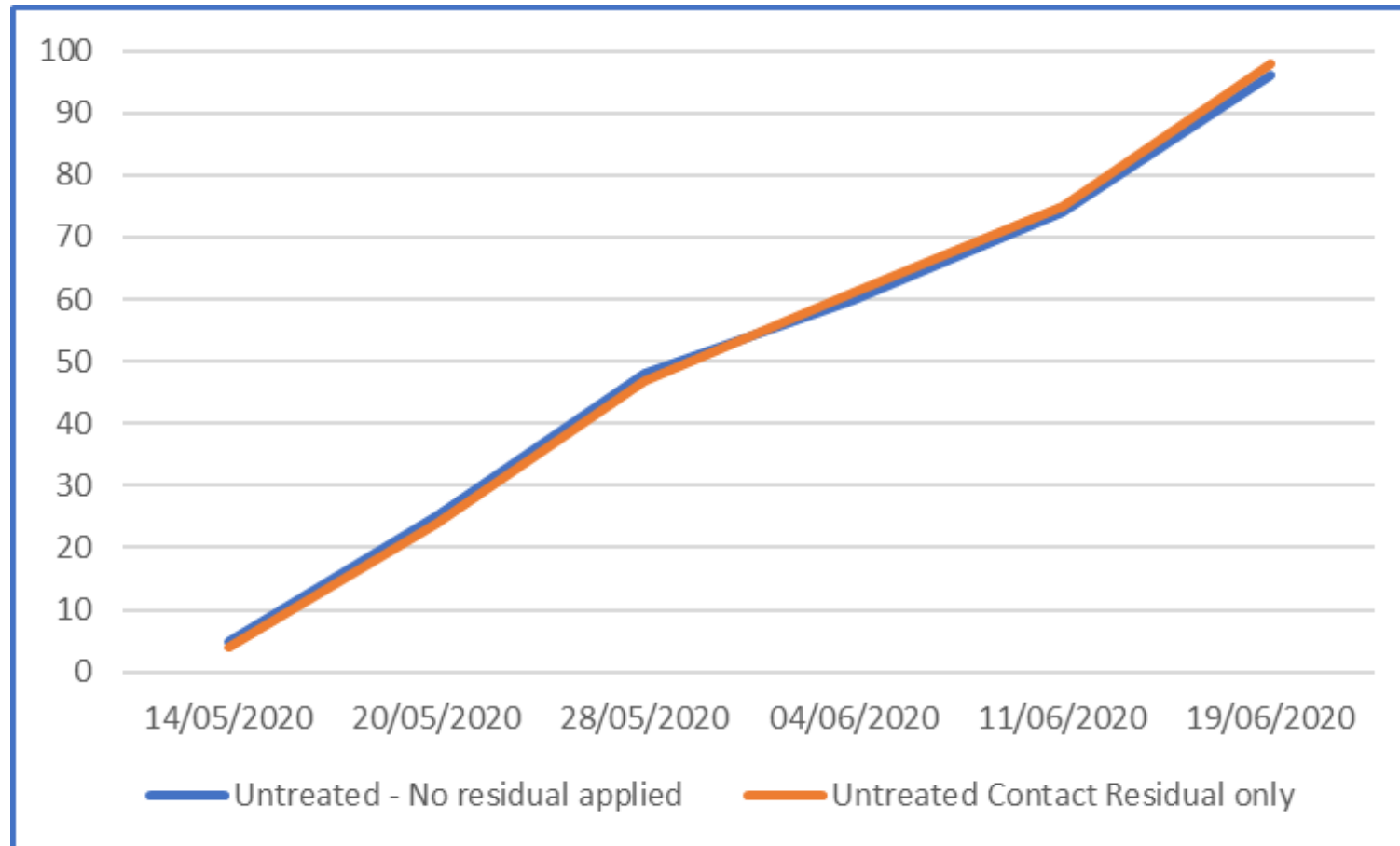
Contact Herbicide Demonstration 2020

Treatments (all plots Residual Emerger 1.75l/ha +Shotput 250g/ha)

1. No applications
2. Residual pre-emergence 24th April
3. Kabuki 0.4/ha pre-emergence 24th April
4. Shark 0.333l/ha pre-emergence 24th April
5. Kabuki 0.4l/ha 10% emergence 6th May
6. Shark 0.333l/ha 10% emergence 6th May
7. Kabuki 0.4 l/ha 80% emergence 11th May
8. Shark 0.333l/ha 80% emergence 11th May

Contact Herbicide Demonstration 2020

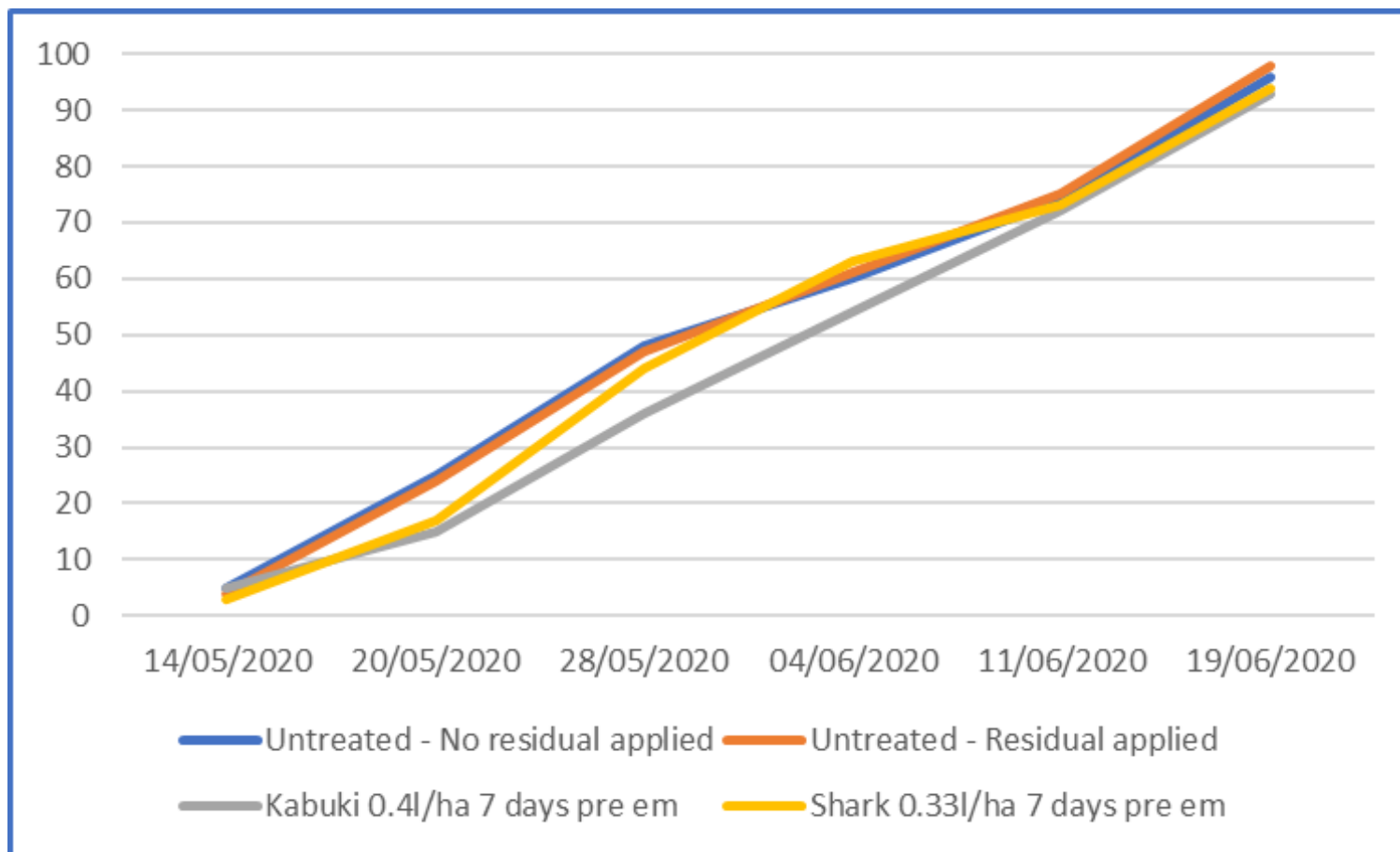
Observations – Ground cover



Untreated and residual only no differences

Contact Herbicide Demonstration 2020

Observations-Ground Cover

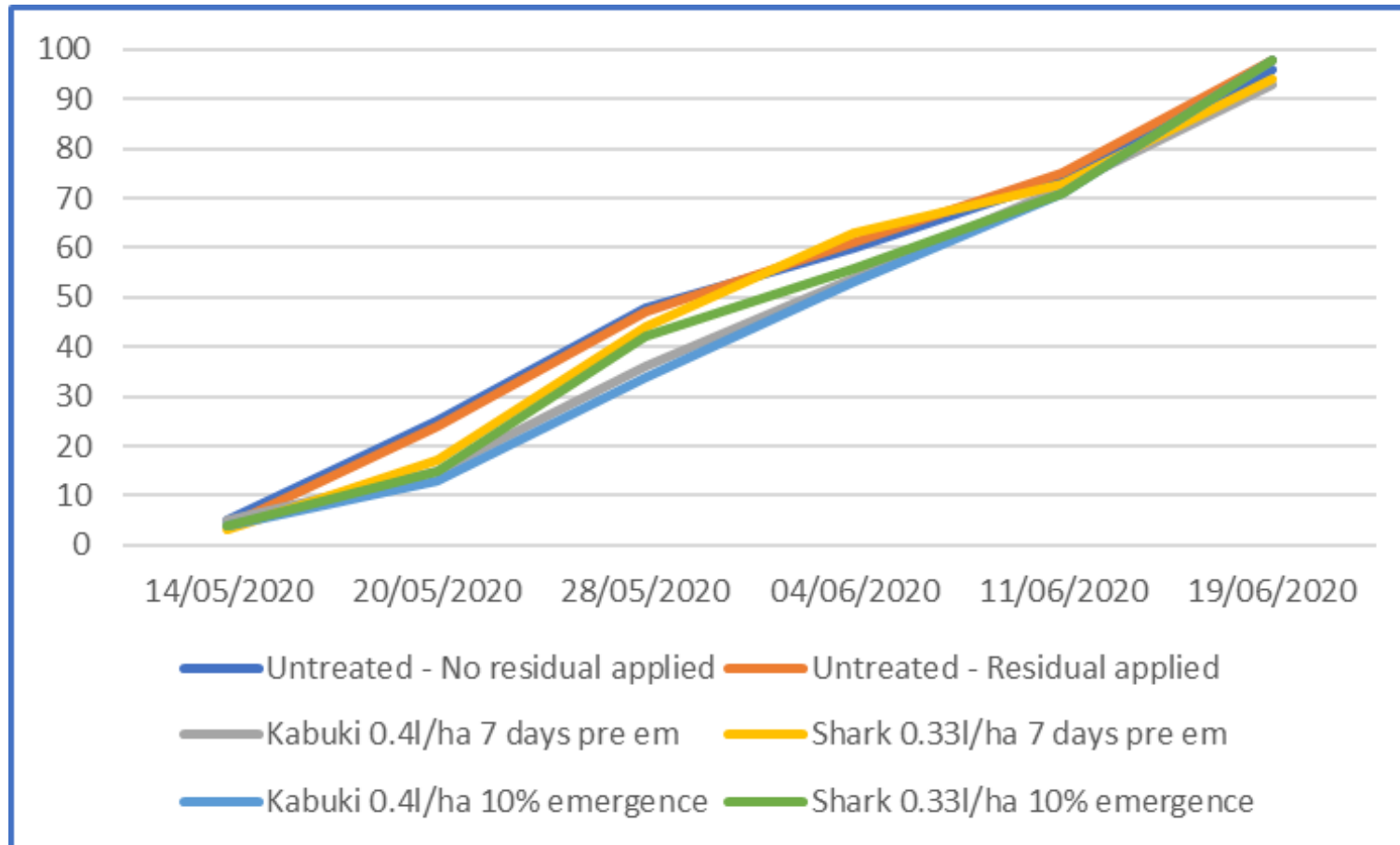


Pre emergence
treatment no
major differences

Application 24th
April

Contact Herbicide Demonstration 2020

Observations- Ground Cover

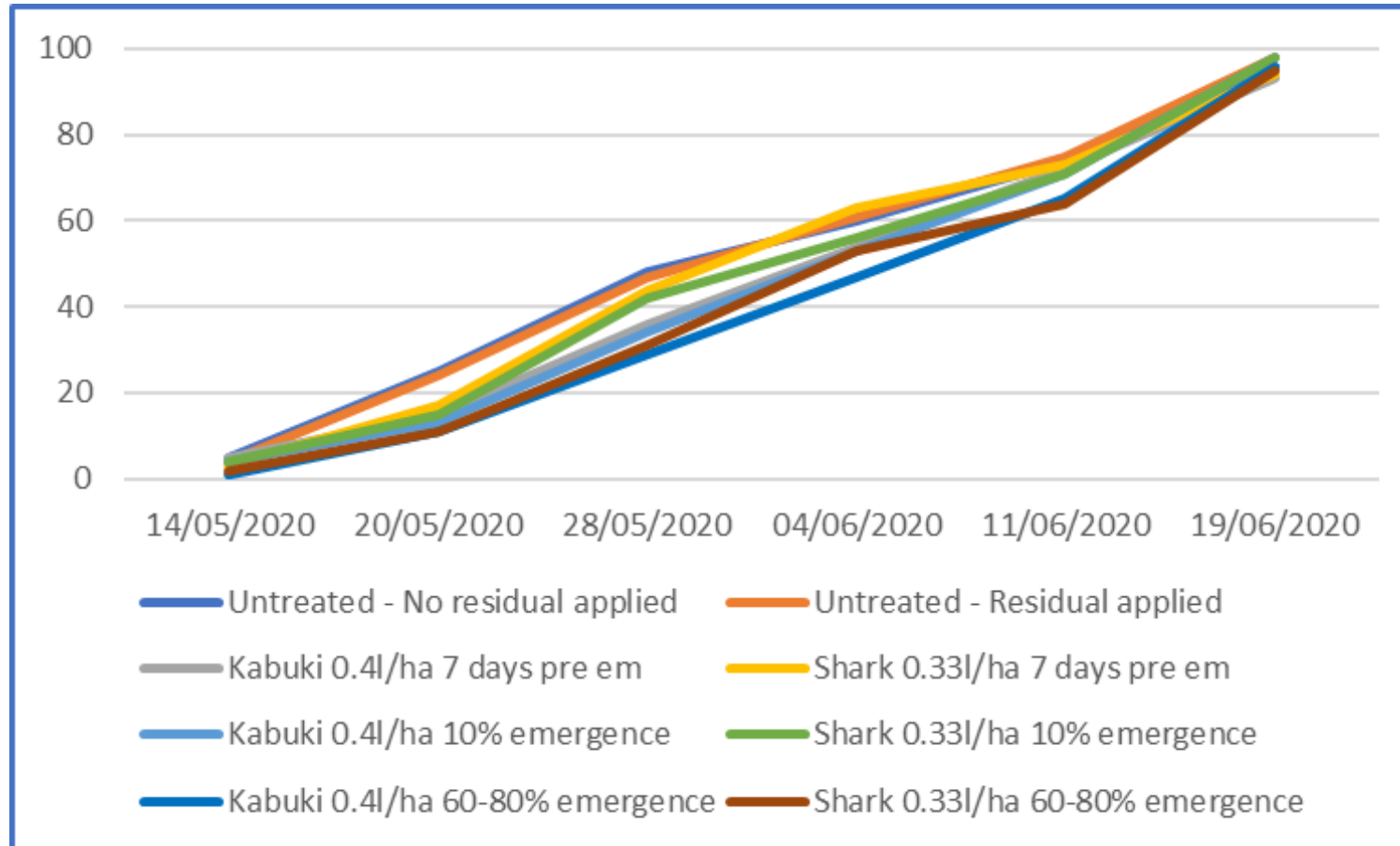


10% emergence
treatment limited
differences

Application 6th May

Contact Herbicide Demonstration 2020

Observations – Ground cover

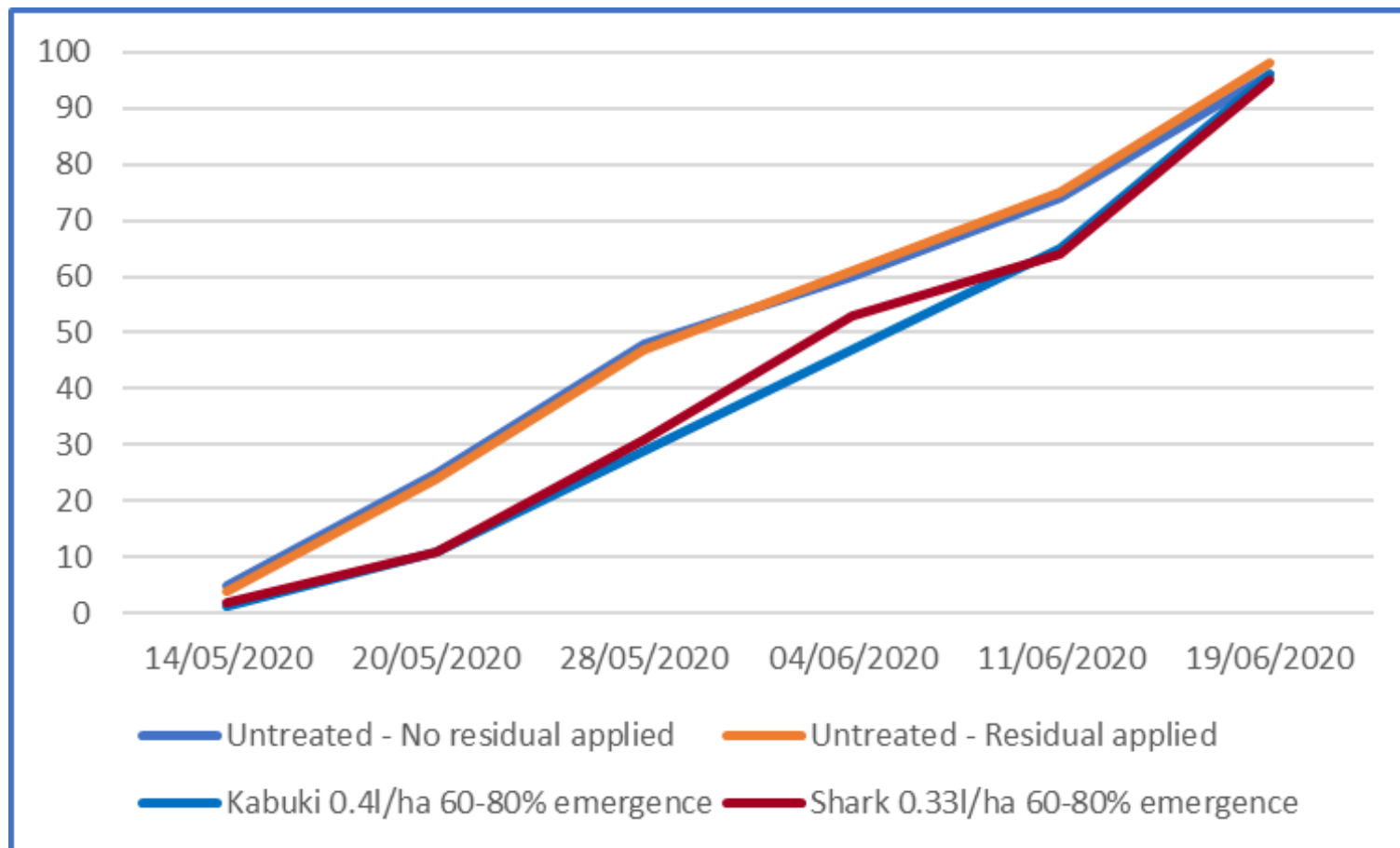


60-80%
emergence
application
reduced ground
cover for 25 days

Application 11th
May

Contact Herbicide Demonstration 2020

Observations – Ground cover



60-80%
emergence
application
reduced ground
cover for 25 days

Application 11th
May

Contact Herbicide Demonstration

2020

Observations 14th May



No Residual or Contact appl.



Shark 60-80 % Emergence



Kabuki 60-80% Emergence

Contact Herbicide Demonstration 2020

Observations

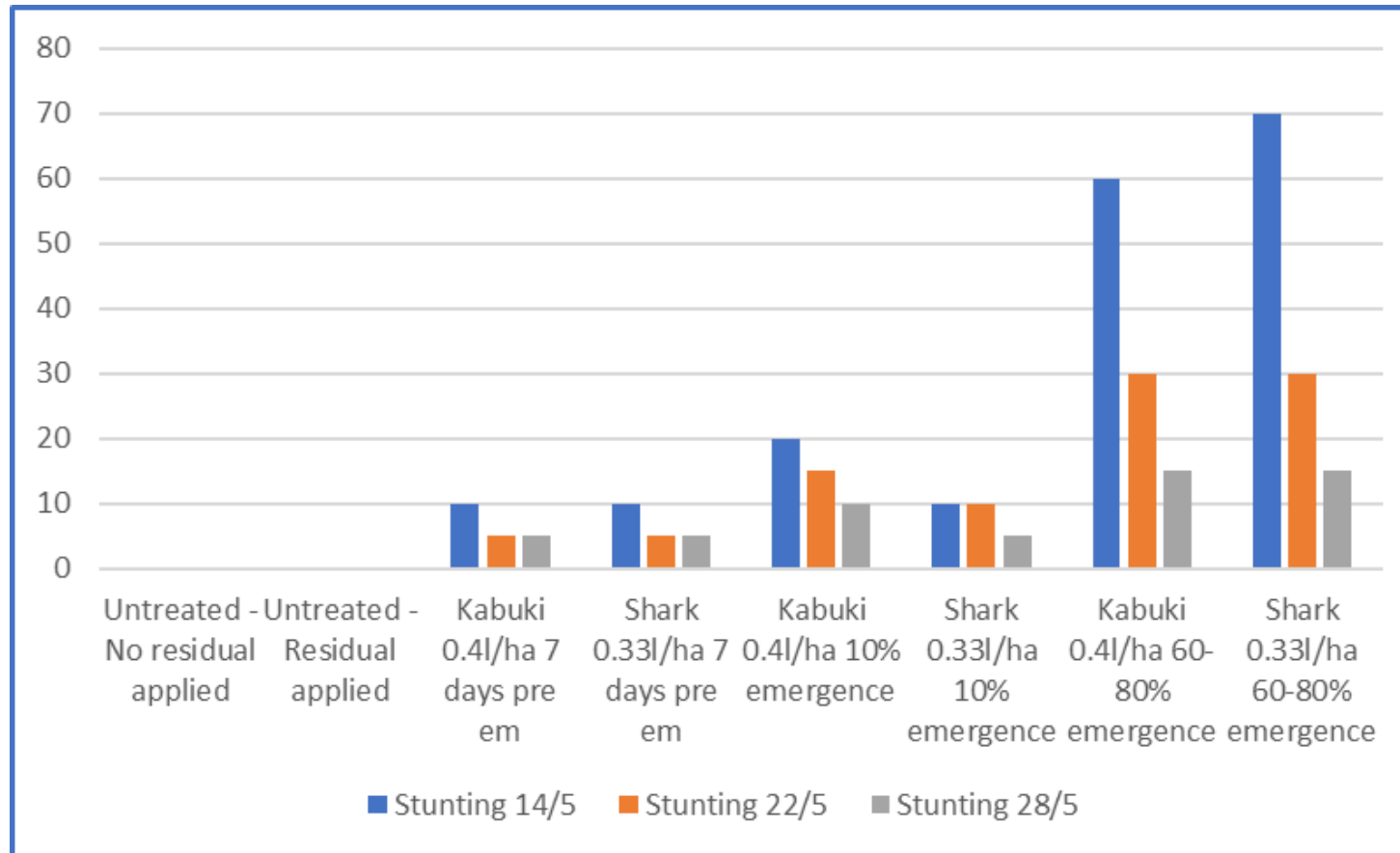


Limited differences
as approaching full
canopy

Contact Herbicide Demonstration

2020

Observations – Stunting (reduction in crop height)



- Minor effect except late application
- Ideal growing conditions post application

Contact Herbicide Demonstration

2020

Observations



Direct PPO scorch



Leaf curling early post emergence(soil cracking) – varietal?



Herbicides – Spot Farm 2016 2020

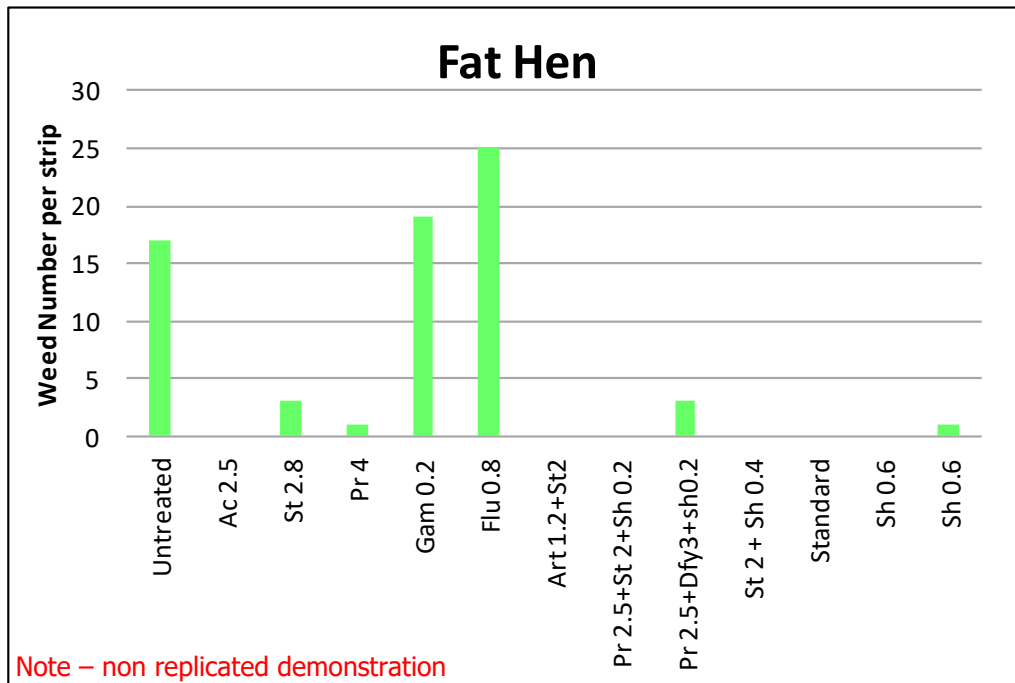
Conclusions – Contact pre-emergence Herbicides (2019-2020)

Trade Name/Active	Strengths	Weakness
Gozai <i>pyraflufen-ethyl</i>	BLW - long list	All grassweed spp. Fumitory > 2TL Knotgrass > 2TL
Shark <i>carfentrazone</i>	BLW - long list	All grassweed spp Chickweed Mayweed Groundsel > 2TL

- Options for diquat replacement exist - but costs have increased
- Knowledge of weed spectrum present will aid cost effective control
- Co application with residuals will improve control on some weed spp. – aclonifen, metribuzin
- Effect on early canopy expansion if applied at >10% emergence greater than diquat

Herbicides – Spot Farm 2016 2020

Fat Hen – Observations and weed counts 2017 (East)



- Good activity *aclonifen*, *metribuzin* – **Emerger**, **Shotput**
- Moderate activity *pendimethalin*, & *metobromuron*

Stomp Aqua & Praxim

- Poor activity *clomazone* & *flufenacet* – **Gamit 36Cs**


Note – weed counts full strip

Herbicides – Spot Farm 2016

2020

Conclusions – Residual Herbicides

Trade Name/Active	Strengths	Weakness
Emerger <i>Aclonifen</i>	Fat Hen Vol OSR Charlock Blackgrass Runch Knotgrass S.Nettle Mayweed	Fumitory Fool's Parsley Annual Mercury Ivy leaved Speedwell Black nightshade Groundsel
Praxim <i>Metobromuron</i>	Fat hen Orache S.nettle Wild Oats Charlock/Runch AMG Mayweed B.Bindweed	Cleavers Amarathus Common speedwell field Pansy

- Options for Linuron replacement exist (particularly relevant for lighter soils) but costs have increased
- Knowledge of weed spectrum present will aid cost effective control – target actives to expected weed spectrum
- *Metribuzin* is the most cost effective *a.i.* for many weeds, include in most applications - **but be careful of soil types and variety susceptibility**
- 3 Residual A.I. components provide a broader range of control of weed spp.
- **Emerger** *aclonifen* – Useful Partner product No phytotoxicity observed when applied pre emergence of the crop. 
- **Praxim** *metobromuron* - Useful partner product. No phytotoxicity observed when applied pre emergence of the crop.

Herbicides – Spot Farm 2016- 2020

Post Emergence Herbicide 2018

Basagran 1.1kg/ha

Tolerant to Very Low Sensitivity Label ' <i>Ok to treat</i> '	Moderate Sensitivity - Label ' <i>Bordeline</i> '	High Sensivity - Label ' <i>Do not treat</i> '
M.peer M.piper Gwenne* Angelique* Bambino* Gemson* Iodea* Brooke* Royal* Lanorma* Nectar* Laura* Mozart*	Estima Innovator* Melody* Rooster* Forza* Challenger* Soraya* Sensation* Red Fantasy* VR808* Performer* Georgina* Panther* Sunita* Tarus*	Markies* R.Burbank Shepody Leontine* Jelly* Sagitta* Alcander* Triple 7*

2018 Demonstration Results

– **Caution Not**
Recommendation, individual
field factors need to be
taken into account!

* Label recommendation on limited 2 year trial data

* Limited Spot farm trials 2018

Label “should not be applied in hot, sunny conditions when temperatures are at or above 21 Deg C particularly in the midday period. Foliage more sensitive to scorch in these conditions for 3 days following cool, cloudy weather” Apply before crop exceeds 15cm



Herbicides – Spot Farm 2016-^{AHDB} 2020

Post Emergence Herbicide 2018

Metribuzin post emergence

Tolerant	Low Sensitivity	Moderate Sensitivity	High Sensitivity
V.Sovereign* Brooke* Marfona Saxon Challenger* Markies	Royal Daisy* Lanorma* R.Burbank Jelly Angelique Soraya Bambino Gemson* Rooster Panther*	M.piper Leontine Eurostar Melody Nectar Performer Gwenne Shepody Georgina* Iodea Sensation* Alcander* Mozart*	Forza Innovator M.Peer VR808 Sunita* Laura* Triple 7* Sagitta*

2018 Demonstration Results

- Caution Not Recommendation, individual field factors need to be taken into account!
- Always follow product label

BASF Residual Herbicide Trial 2020

- BAS656 – pre-emergence active with root and shoot uptake to be used as a partner product – tank mix option
- Residual herbicide trial assessing a new active BAS656 in combination with approved actives
- Assessments with four varieties with know range of sensitivities to metribuzin – Marfona(tolerant), M.Peer, M.piper and VR808 (sensitive)



BASF Residual Herbicide Trial 2020

- BAS656 - Good activity on limited weed species present – s.nettle, groundsel, mayweed



BAS656 - M.peer

BASF Residual Herbicide Trial 2020

- Limited observations of phytotoxicity BAS656 on any varieties within the trial

BAS656 applied pre-emergence

Marfona



BASF Residual Herbicide Trial 2020

- Limited observations of phytotoxicity new A.I. on any varieties within the trial

BAS656 applied pre-emergence

Maris Peer



BASF Residual Herbicide Trial 2020

- Limited observations of phytotoxicity new A.I. on any varieties within the trial

BAS656 applied pre-emergence

Maris Piper



BASF Residual Herbicide Trial 2020

- Limited observations of phytotoxicity new A.I. on any varieties within the trial

BAS656 applied pre-emergence

VR808



BASF Residual Herbicide Trial 2020

- Phytotoxicity observed when metribuzin was applied in combinations on sensitive varieties – VR808 (also noted on std metribuzin combinations)



BAS656



BAS656 + Aclonifen



BAS656 + Metribuzin



Metobromuron + metribuzin

Potato Herbicides - Conclusion

- Compared to other Vegetable crops - wide range of *a.i.*'s for pre-emergence residual control however
 - loamy/organic soils heavy reliance on metribuzin
 - Many residuals have limited range of activity
 - Limitations on sandy soil types some actives
- Limited post emergence herbicides for BLW – B.Bindweed on silt/organic soils with metribuzin sensitive varieties
- Post emergence resistant blackgrass control

VCS Potatoes Ltd and VCS (UK) Ltd would like to thank James Foskett Farms, Elveden Estates, RJ & JE Godfrey and AHDB potatoes for their assistance with these demonstrations