

SPot West Results Day 2018

# Desiccation Demonstration – SPot North 2018

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# Desiccation 2018



# Desiccation 2018



## Desiccant update

- Active Ingredient *diquat* has been the primary desiccant product since the loss of Sulphuric Acid
- Key strength – rapid desiccation of older leaf material
- *Diquat* – decision re. future – end of sales 4<sup>th</sup> May 2019 end of use 4<sup>th</sup> February 2020!
- Harvest – (*glufosinate ammonium*), more recent label changes 'band spray' and final use January 2020.

## Remaining Desiccants 2020 onwards

Product	Active Ingredient	Max Rate	Maximum Total Dose	Harvest Interval	Cost - 1 app at max rate (£/ha)
Spotlight Plus	<i>carfentrazone-ethyl</i> 60.0 g/l	1.0 l/ha	1.6 l/ha	7	£40-45
Gozai*	<i>pyraflufen-ethyl</i> 26.5 g/l	0.8 l/ha	1.6 l/ha	14	£38-42

*\*Always include an adjuvant with Gozai to improve performance (e.g. Phase II or Toil)*





# Desiccation 2018

## SPot Farm North 2018

### Trial Timetable

T1 Desiccant Application	12 <sup>th</sup> September
T2 Desiccant Application	21 <sup>st</sup> September
Assessment Date	6/7 <sup>th</sup> October



Royal

Markies

Forza

# Desiccation 2018

## Trial Plan

Maris Peer
Laura
Lanorma
Maris Piper
Melody
Nectar
Jelly
Georgina
Mozart
Panther
Sunita
Estima
TE 02-0602 - Sensation
Challenger
Markies
Forza
Sagitta
Innovator
Performer
Royal
Russet Burbank
Brooke
Taurus
VR808
Alcander
Triple 7
<i>Unplanted</i>
<i>Unplanted</i>

Treatment application

# Desiccation 2018



## Treatment List

Trt. No.	Treatment 1 12 <sup>th</sup> September	Treatment 2 21 <sup>st</sup> September (T1 + 9 Days)	Cost £/ha
1	<b>No Treatment</b>	<b>No Treatment</b>	TBC
2	<b>Flail</b>	<b>Spotlight Plus</b> 1.0 l/ha	£38
3	<b>Flail</b>	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha	£42
4	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha	£76
5	<b>Spotlight Plus</b> 1.0 l/ha	<b>Spotlight Plus</b> 0.6 l/ha	£67
6	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha + <b>Ranman Top</b> 0.5 l/ha*	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha + <b>Ranman Top</b> 0.5 l/ha*	£112
7	<b>Spotlight Plus</b> 1.0 l/ha + <b>Ranman Top</b> 0.5 l/ha	<b>Spotlight Plus</b> 0.6 l/ha + <b>Ranman Top</b> 0.5 l/ha	£103
8	<b>diquat</b> 1.0 l/ha	<b>diquat</b> 3.0 l/ha	£28
9	<b>diquat</b> 4.0 l/ha	<b>No Treatment</b>	£28
10	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha + <b>VCS Coded 1718</b>	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha	TBC
11	<b>Spotlight Plus</b> 1.0 l/ha + <b>VCS Coded 1718</b>	<b>Spotlight Plus</b> 0.6 l/ha	TBC
12	<b>diquat</b> 1.0 l/ha	<b>Gozai</b> 0.8 l/ha + <b>Phase II</b> 2.0 l/ha	£45
13	<b>diquat</b> 1.0 l/ha	<b>Spotlight Plus</b> 1.0 l/ha	£49
14	<b>VCS Coded 1718</b>	<b>VCS Coded 1718</b>	TBC
15	<b>VCS Coded 1718</b>	<b>No Treatment</b>	TBC
16	<b>VCS Coded 1718</b>	<b>Spotlight Plus</b> 1.0 l/ha	TBC

Active Ingredients: **Gozai** (pyraflufen-ethyl 26.5 g/l), **Spotlight Plus** (carfentrazone-ethyl 60.0 g/l)

\*Gozai + Ranman Top + adjuvant not supported at present





# Desiccation 2018

T1 - 12<sup>th</sup> September – Flailed Treatments





# Desiccation 2018

T1 - 12<sup>th</sup> September - Crop Prior to Applications



Royal



Markies



Jelly



# Desiccation 2018

Comparison 6 days post T1



Untreated



Flail



*diquat 1.0 l/ha*



# Desiccation 2018

Comparison 6 days post T1



**Spotlight Plus 1.0 l/ha**



**Gozai 0.8 l/ha + Phase II 2.0 l/ha**



# Desiccation 2018

Comparison 6 days post T1



Spotlight Plus 1.0 l/ha



Gozai 0.8 l/ha +  
Phase II 2.0 l/ha



*diquat* 1.0 l/ha



# Desiccation 2018

Comparison 6 days post T1



Spotlight Plus 1.0 I/ha



Spotlight Plus 1.0 I/ha +  
Ranman Top 0.5 I/ha



# Desiccation 2018

Comparison 6 days post T1



Untreated



VCS Coded 1718



*diquat* 1.0 l/ha



# Desiccation 2018

Comparison at harvest 24 days post T1





# Desiccation 2018

Comparison at harvest 24 days post T1



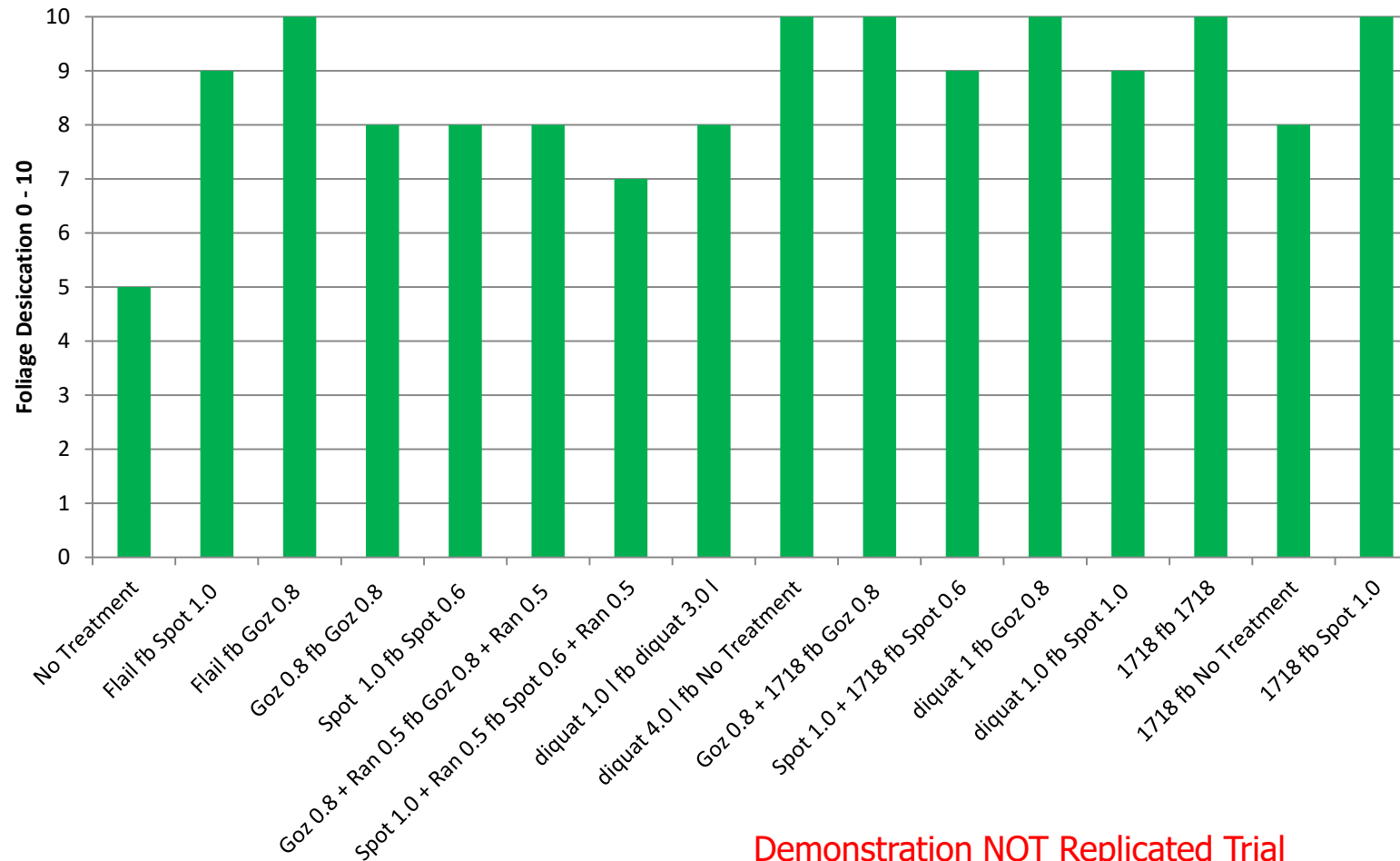
Untreated



Spotlight Plus 1.0 l/ha

# Desiccation 2018

Foliage & Stem Desiccation - 6<sup>th</sup> October (T1 + 24days)

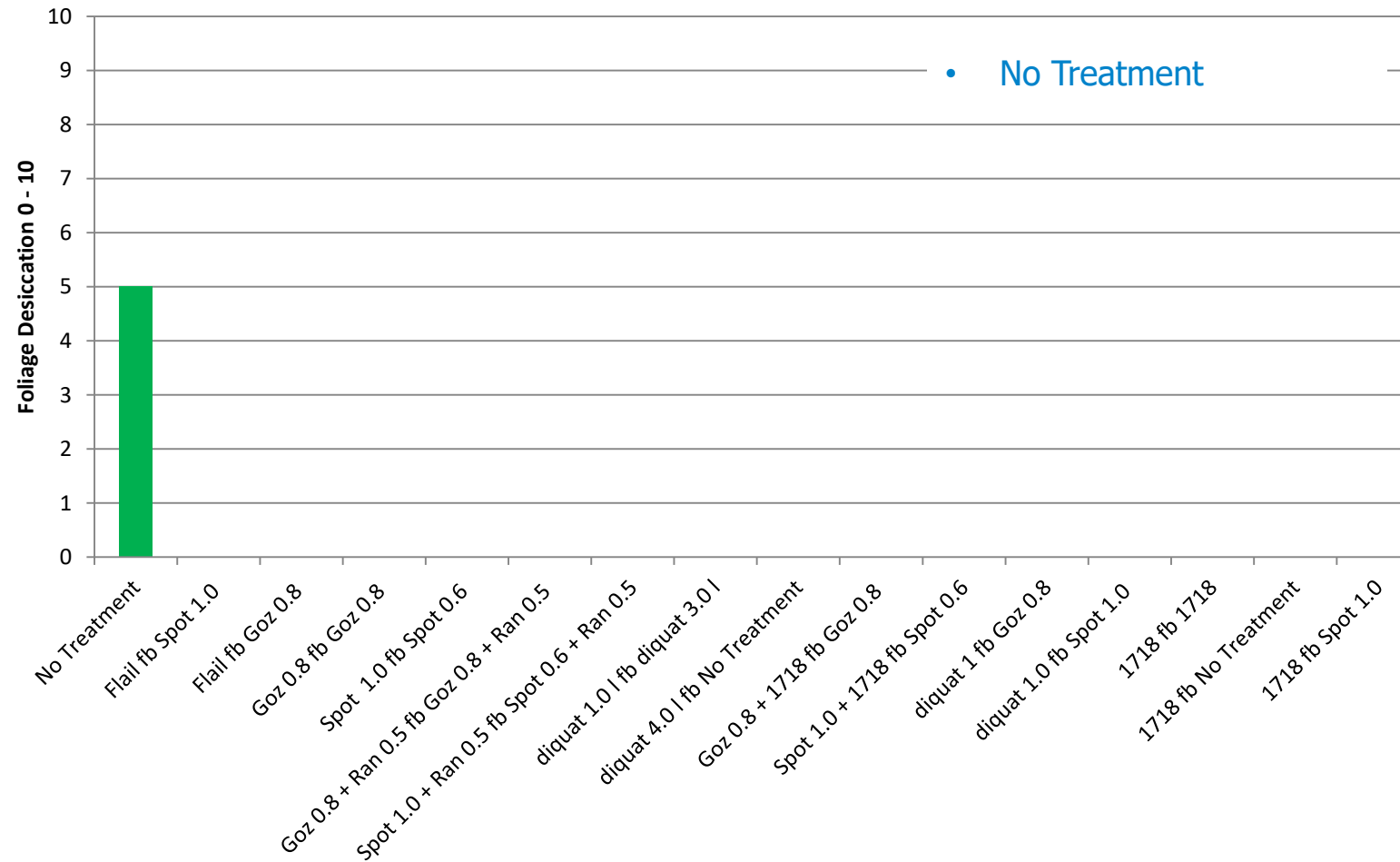


Demonstration NOT Replicated Trial



# Desiccation 2018

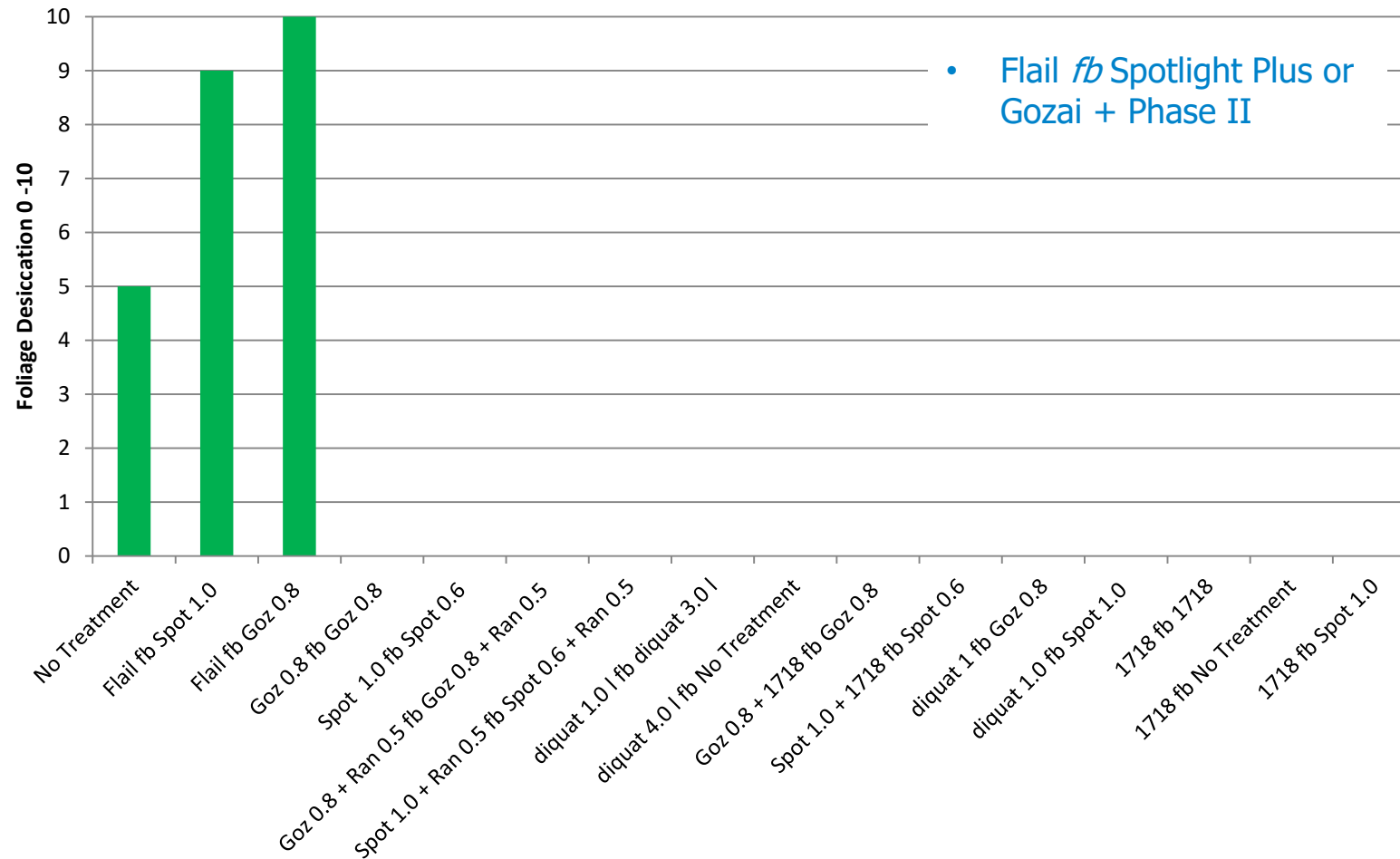
Foliage & Stem Desiccation - 6<sup>th</sup> October (T1 + 24days)



0 - Full canopy, 10 - Complete Foliage and Stem Desiccation – Variety Markies

# Desiccation 2018

Foliage & Stem Desiccation - 6<sup>th</sup> October (T1 + 24days)



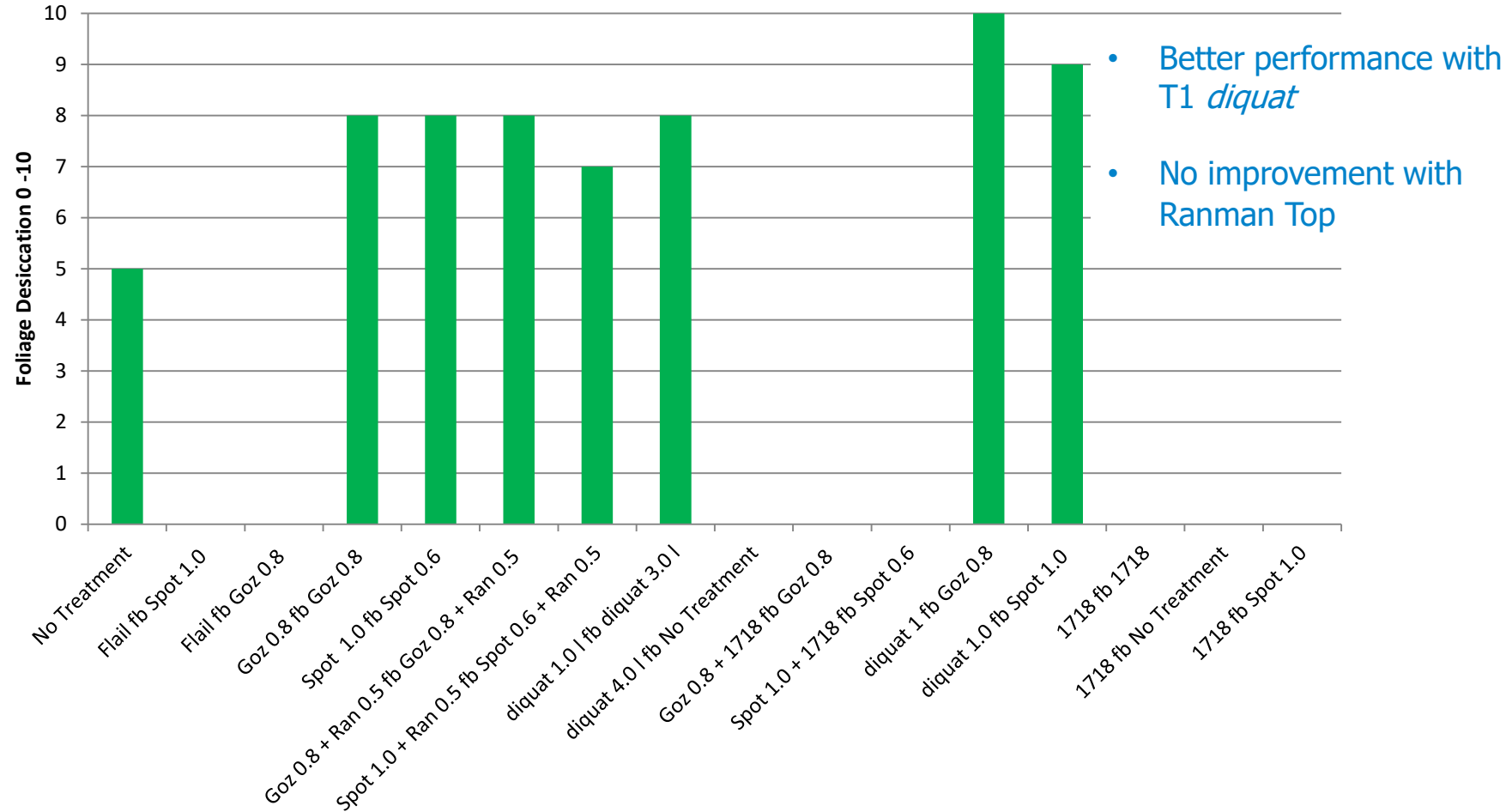
0 - Full canopy, 10 - Complete Foliage and Stem Desiccation – Variety Markies

Note: All Gozai applications include adjuvant



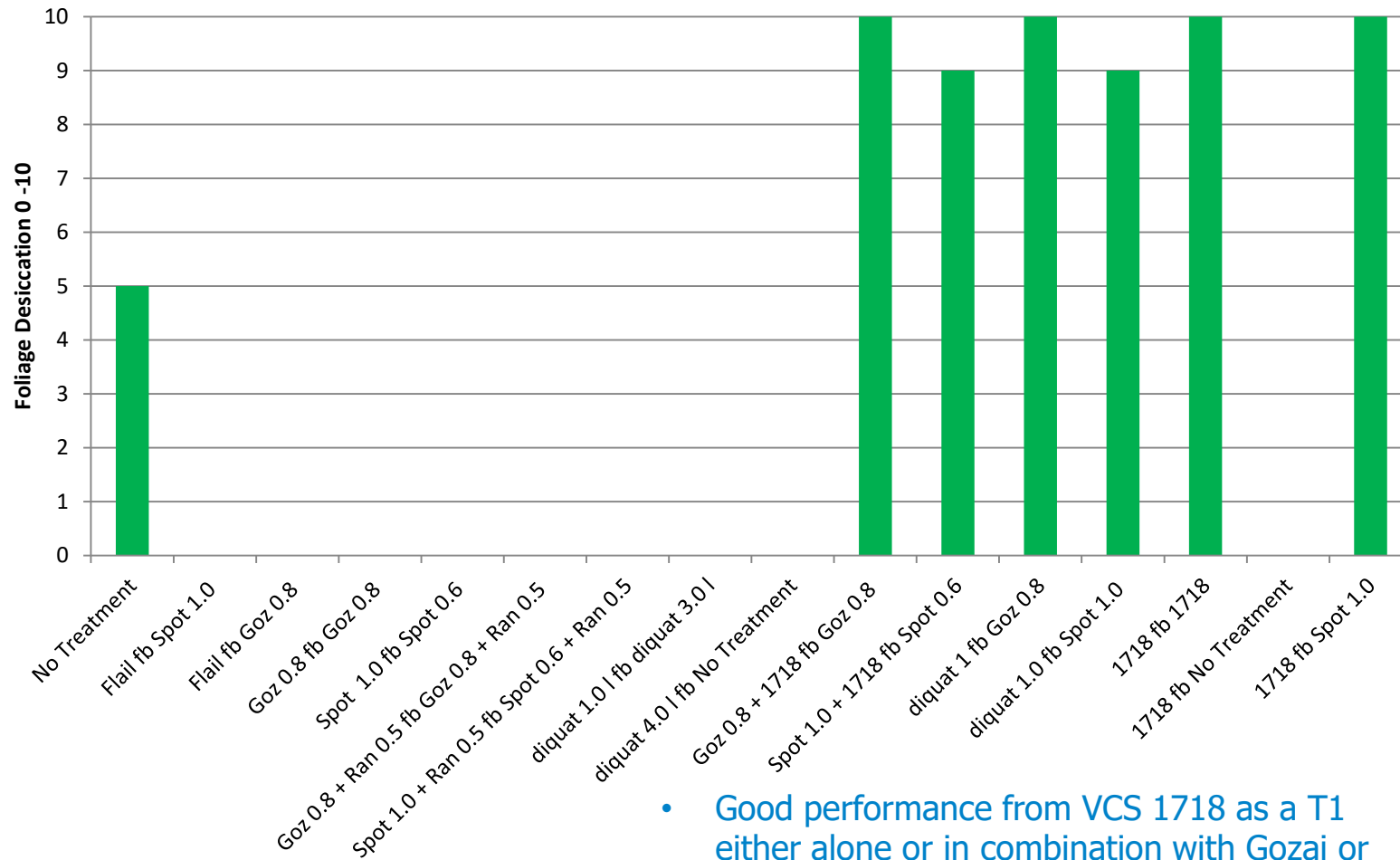
# Desiccation 2018

Foliage & Stem Desiccation - 6<sup>th</sup> October (T1 + 24days)



# Desiccation 2018

Foliage & Stem Desiccation - 6<sup>th</sup> October (T1 + 24days)

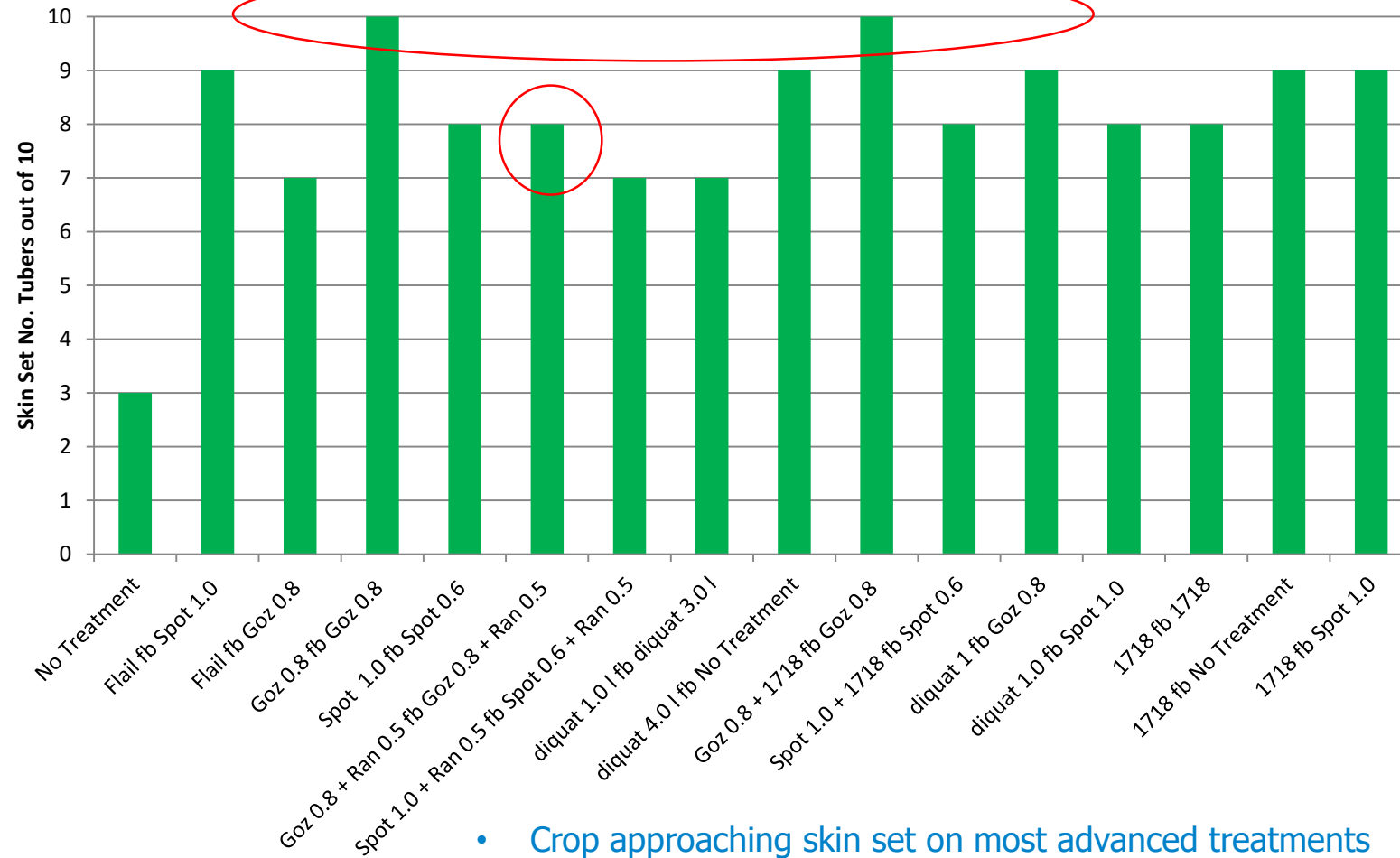


- Good performance from VCS 1718 as a T1 either alone or in combination with Gozai or Spotlight



# Desiccation 2018

Skin Set - 6<sup>th</sup> October (T1 + 24days)



- Crop approaching skin set on most advanced treatments
- Slower skin set where some stem remained

# Desiccation 2018

## Stolon Death/Strength Issues



- 'Plugging' of tuber when harvested
- Tuber damage – opening for bacterial disease infection



# Desiccation 2018

Stolon Death Assessments 6<sup>th</sup> October



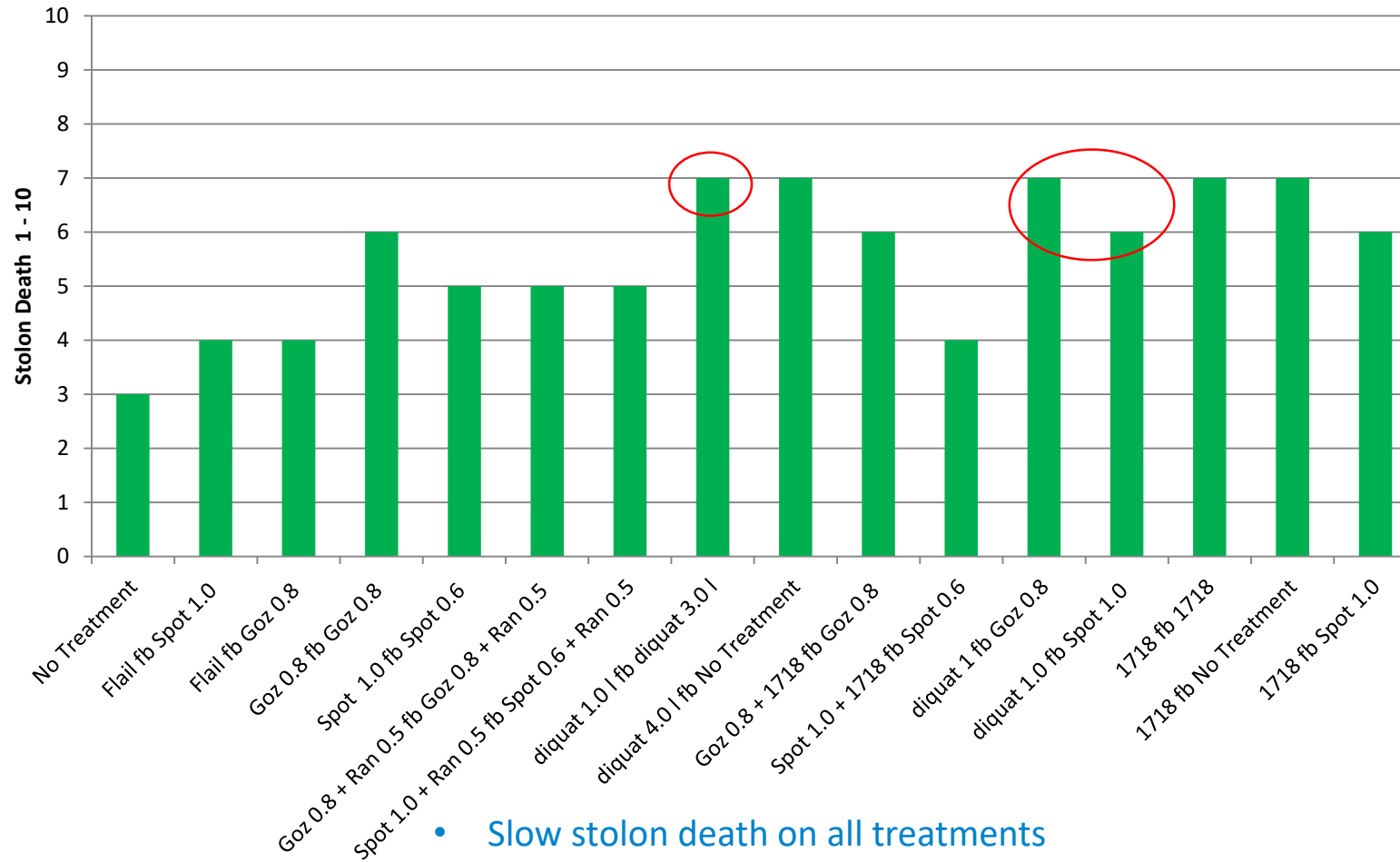
**Untreated**

**Flailed fb Spotlight Plus 1.0 l/ha**

- Slow stolon death in untreated & flailed treatments

# Desiccation 2018

## Stolon Death Assessments 6<sup>th</sup> October



- Slow stolon death on all treatments
- Small improvement in stolon death with T1 *diquat* 1.0 l/ha

0 – No Stolon Death, 10 Stolons Dead – Variety Markies Note: All Gozai applications include adjuvant



# Desiccation 2018

Vascular Browning - 6<sup>th</sup> October (T1 + 24days)



- Slight vascular browning observed on many treatments at very low levels

# Desiccation 2018

Alternative desiccation options post *diquat*

- Flail *fb* thermal 'greenburn'
- Flail *fb* haulm pulling
- Zasso 'Xpower' electro desiccation



**Rema Haulm Puller**



**Zasso 'Xpower'**



# Desiccation 2018



## Conclusions

- Where flail is an option adequate desiccation with available products should be achieved – issues seed crops (bacterial disease spread/re-growth of indeterminate varieties)
- Where determinate varieties are grown, non flail options exist, however a delay in skin set may occur – potential black dot issues
- Indeterminate varieties, particularly on fertile/high nitrogen sites, late planted will present particular issues
- Inevitable increase in costs for growers post 2019
- Inevitable increase in time from start of desiccation until skin set/harvest
- Improved 'On-Farm' applications in difficult situations – water volume/forward speed/conditions



# Desiccation 2018



## Future Research

- AHDB funded SPot Farm focused replicated trial/demonstrations in 2019
- New actives with approval unlikely in the near future - ensure adequate research to bring forward actives – investigate all alternatives
- Assessments of improved application – water volume/adjuvants/nozzle choice/weather at application

VCS (UK) Ltd & VCS Potatoes Ltd would like to thank RJ & JE Godfrey and AHDB Potatoes for their assistance and support with this demonstration





A wide-angle photograph of a lush green field, possibly a wheat or barley field, with a narrow path leading from the foreground towards the horizon. The sun is low on the horizon, creating a warm, golden glow and long shadows. The sky is filled with scattered clouds, some of which are illuminated by the setting sun. In the distance, there are rolling hills and a few small buildings. The overall mood is peaceful and inspiring.

**‘Inspiring our farmers, growers  
and industry to succeed in a  
rapidly changing world’**