

# STRATEGIC POTATO FARMS



## Strategic Farm North

Results Day || 23.1.19



SPot North Results 2018

# Desiccation Demonstrations 2018

Graham Tomalin VCS



# Desiccation 2018



# Desiccation

## Desiccant update

Active Ingredient *Diquat* has been the primary desiccant product since the loss of Sulphuric acid and more recent label changes 'band spray' and withdrawal January 2020 Harvest – Glufosinate ammonium

- *Diquat* – Decision re future – end of sales 4<sup>th</sup> May 2019 end of use 4<sup>th</sup> February 2020!

Key strength – rapid desiccation of older leaf material

### Remaining Desiccants 2020 onwards

| Product        | Active                    | Max Rate<br>l/ha | Maximum total<br>dose l/ha | Harvest<br>Interval | Cost £/ha<br>1 app at<br>max rate |
|----------------|---------------------------|------------------|----------------------------|---------------------|-----------------------------------|
| Spotlight Plus | carfentrazone-ethyl 60g/l | 1 l/ha           | 1.6 l/ha                   | 7 days              | £40-45                            |
| Gozai*         | Pyraflufen-ethyl 26.5 g/l | 0.8 l/ha         | 1.6 l/ha                   | 14 days             | £38-42                            |

*\*Always include adjuvant with Gozai to improve performance (e.g. Toil @ 1.5 l/ha)*

# Desiccation 2018



↑  
Markies

↑  
Forza

## Trial Timetable

| Demonstration timings    | Date                       |
|--------------------------|----------------------------|
| 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

# 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<br>12 <sup>th</sup> September               | Treatment 2<br>21 <sup>st</sup> September               | Cost<br>£/ha |
|---------|---|---|--------------|
| 1       | No Treatment  | No Treatment  | TBC          |
| 2       | Flail   | Gozai 0.8 l/ha + Phase II 2 l/ha                        | £38          |
| 3       | Flail   | Spotlight Plus 1 l/ha                                   | £42          |
| 4       | Gozai 0.8 l/ha + Phase II 2 l/ha                        | Gozai 0.8 l/ha + Phase II 2 l/ha                        | £76          |
| 5       | Spotlight Plus 1 l/ha                                   | Spotlight Plus 0.6 l/ha                                 | £67          |
| 6       | Gozai 0.8 l/ha + Phase II 2 l/ha + Ranman Top 0.5 l/ha* | Gozai 0.8 l/ha + Phase II 2 l/ha + Ranman Top 0.5 l/ha* | £112         |
| 7       | Spotlight Plus 1 l/ha + Ranman Top 0.5 l/ha             | Spotlight Plus 1 l/ha + Ranman top 0.5 l/ha             | £103         |
| 8       | diquat 1l/ha  | diquat 3l/ha  | £28          |
| 9       | diquat 4l/ha  | No Treatment  | £28          |
| 10      | Gozai 0.8 l/ha + Phase II 2 l/ha + VCS Coded 1718       | Gozai 0.8 l/ha + Phase II 2 l/ha                        | TBC          |
| 11      | Spotlight Plus 1 l/ha + VCS Coded 1718                  | Spotlight Plus 1 l/ha                                   | TBC          |
| 12      | diquat 1l/ha  | Gozai 0.8 l/ha + Phase II 2 l/ha                        | £45          |
| 13      | diquat 1l/ha  | Spotlight Plus 1 l/ha                                   | £49          |
| 14      | VCS Coded 1718  | VCS Coded 1718  | TBC          |
| 15      | VCS Coded 1718  | No Treatment  | TBC          |
| 16      | VCS Coded 1718  | Spotlight Plus 1 l/ha                                   | TBC          |

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

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

# Desiccation 2018

Crop Prior to applications 12<sup>th</sup> September



**Royal**



**Markies**



**Jelly**



# Desiccation 2018

Comparison 6 days post TI



Untreated



Diquat 1l/ha



Flail



# Desiccation 2018

Comparison 6 days post TI



Spotlight Plus 1l/ha



Gozai 0.8 l/ha + Phase II 2l/ha



# Desiccation 2018

Comparison 6 days post TI



Spotlight Plus 1l/ha



Gozai 0.8 l/ha  
+ Phase II 2l/ha



diquat 1l/ha



# Desiccation 2018

Comparison 6 days post TI



Spotlight Plus 1l/ha



Spotlight Plus 1l/ha + Ranman Top  
0.5l/ha



# Desiccation 2018

Comparison 6 days post T1



Untreated



VCS Coded product



diquat 1l/ha



# Desiccation 2018

Comparison at Harvest 24 days post TI





# Desiccation 2018

Comparison at Harvest 24 days post T1



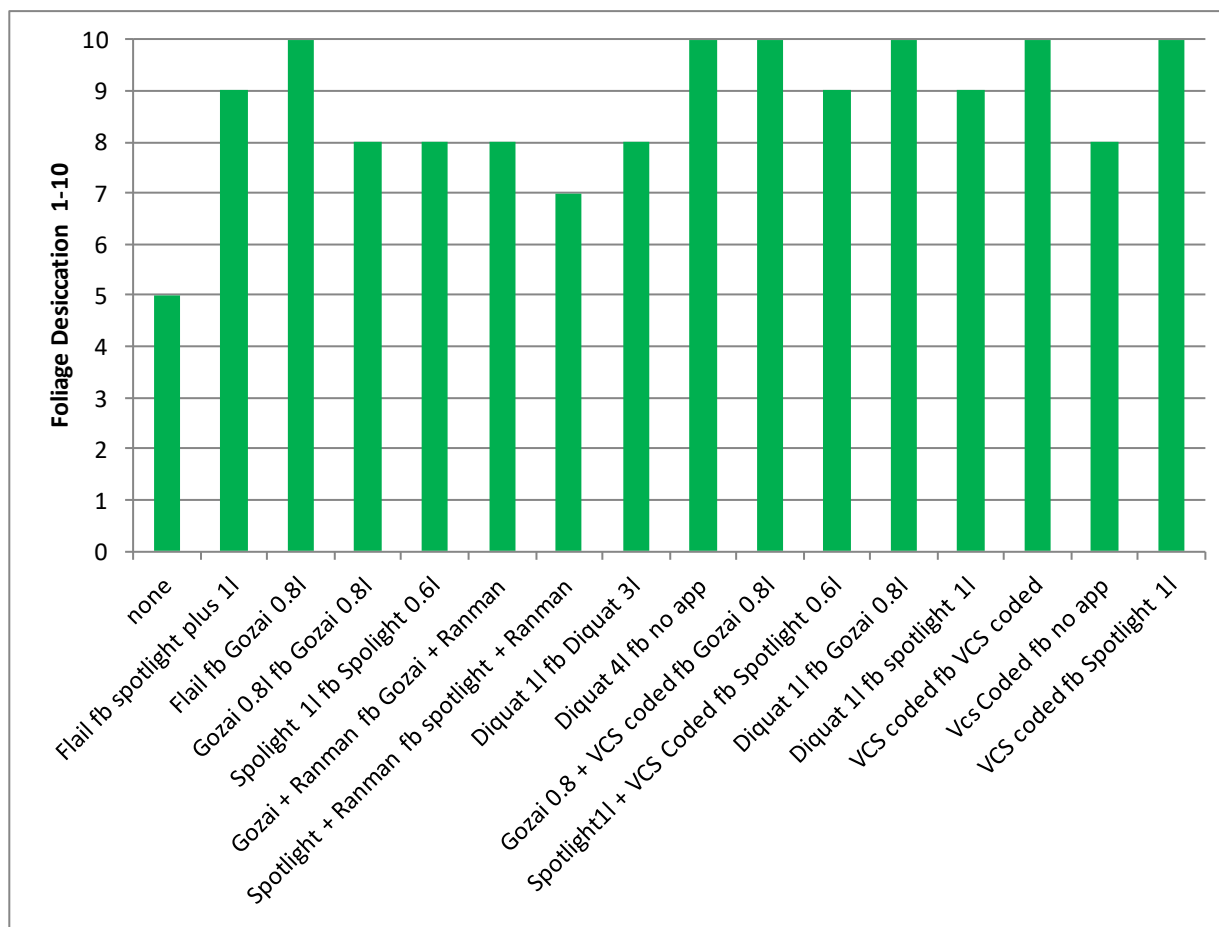
Untreated



Spotlight Plus 1l/ha

# Desiccation 2018

Foliage and Stem Desiccation assessments 6<sup>th</sup> October



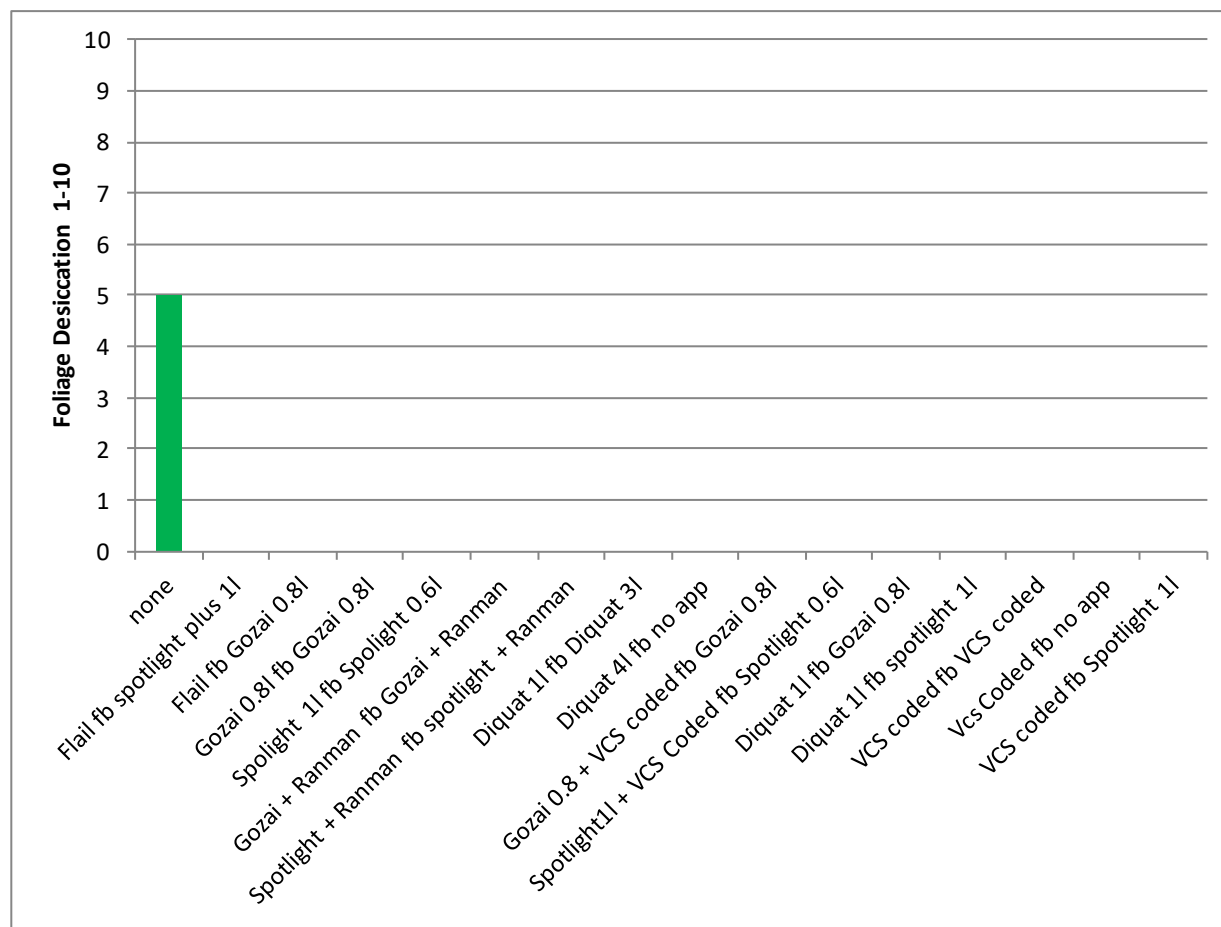
**Non Replicated  
Demonstration  
NOT Trial**

**Note:**  
\*All Gozai applications include adjuvant

0 Full canopy – 10 complete Foliage and Stem desiccation – Variety Markies

# Desiccation 2018

Foliage and Stem Desiccation assessments 6<sup>th</sup> October



Untreated

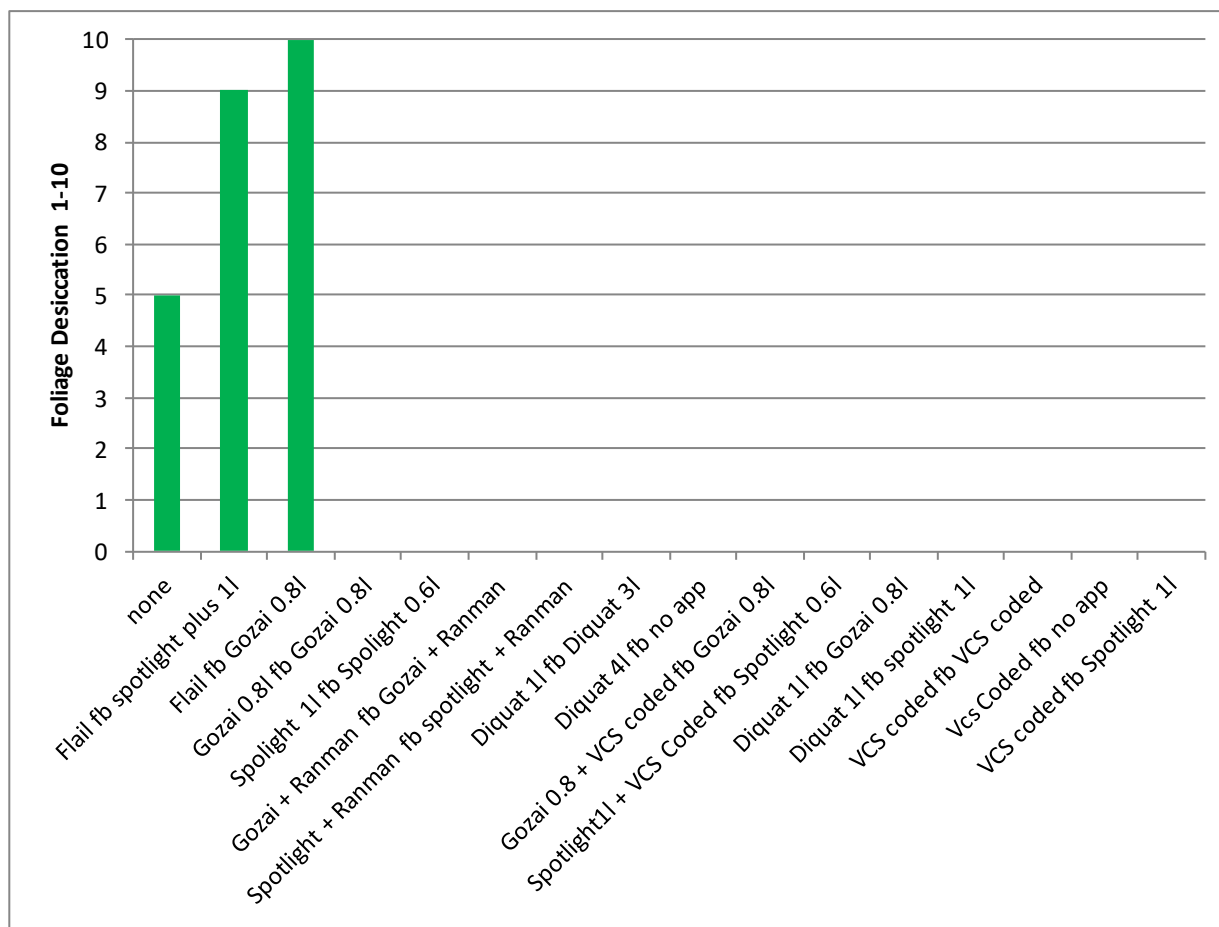
Note:  
\*All Gozai applications include adjuvant

0 Full canopy – 10 complete Foliage and Stem desiccation - Variety Markies



# Desiccation 2018

Foliage and Stem Desiccation assessments 6<sup>th</sup> October



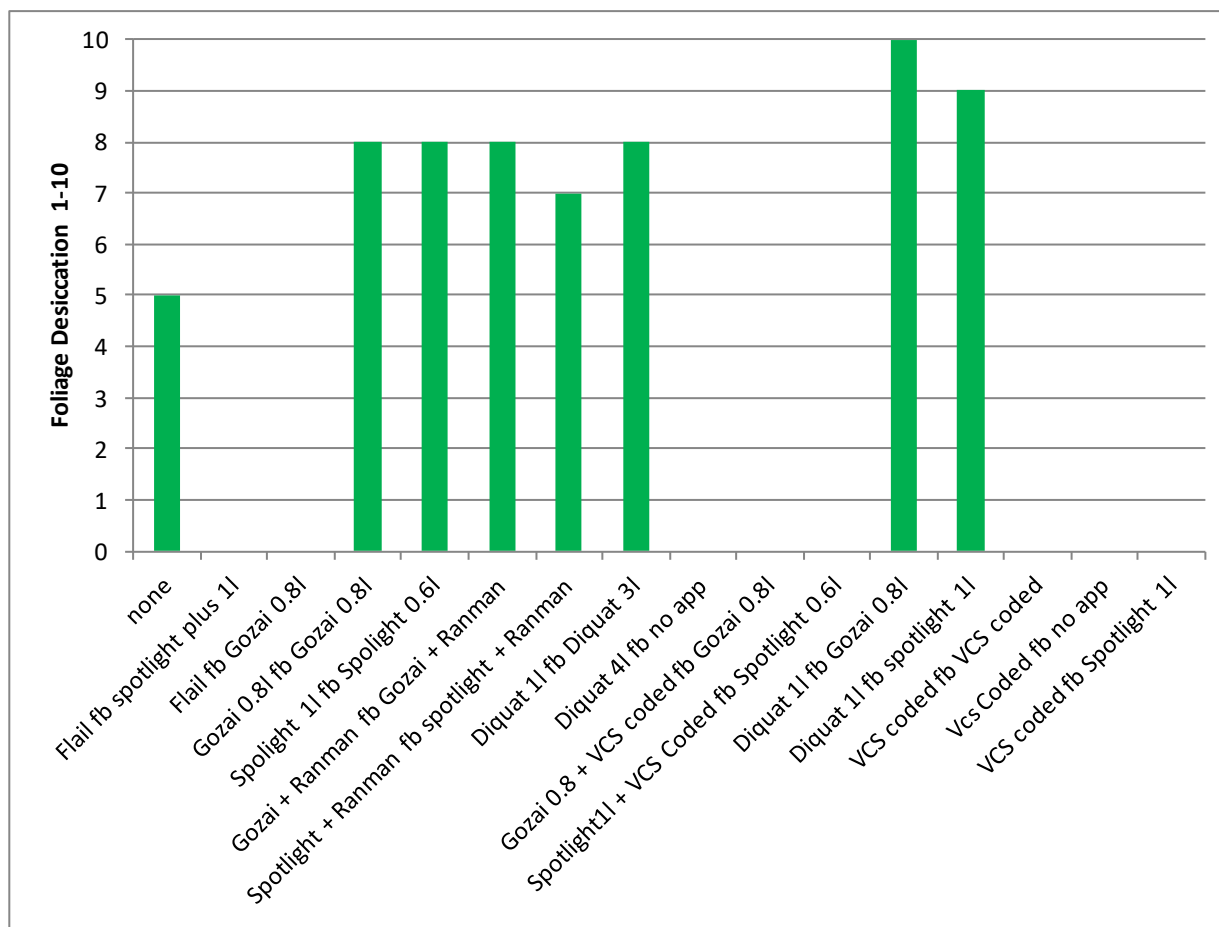
- Flail fb Spotlight Plus or Gozai + Toil

Note:  
\*All Gozai applications include adjuvant

0 Full canopy – 10 complete Foliage and Stem desiccation - Variety Markies

# Desiccation 2018

Foliage and Stem Desiccation assessments 6<sup>th</sup> October



- better performance with T1 diquat

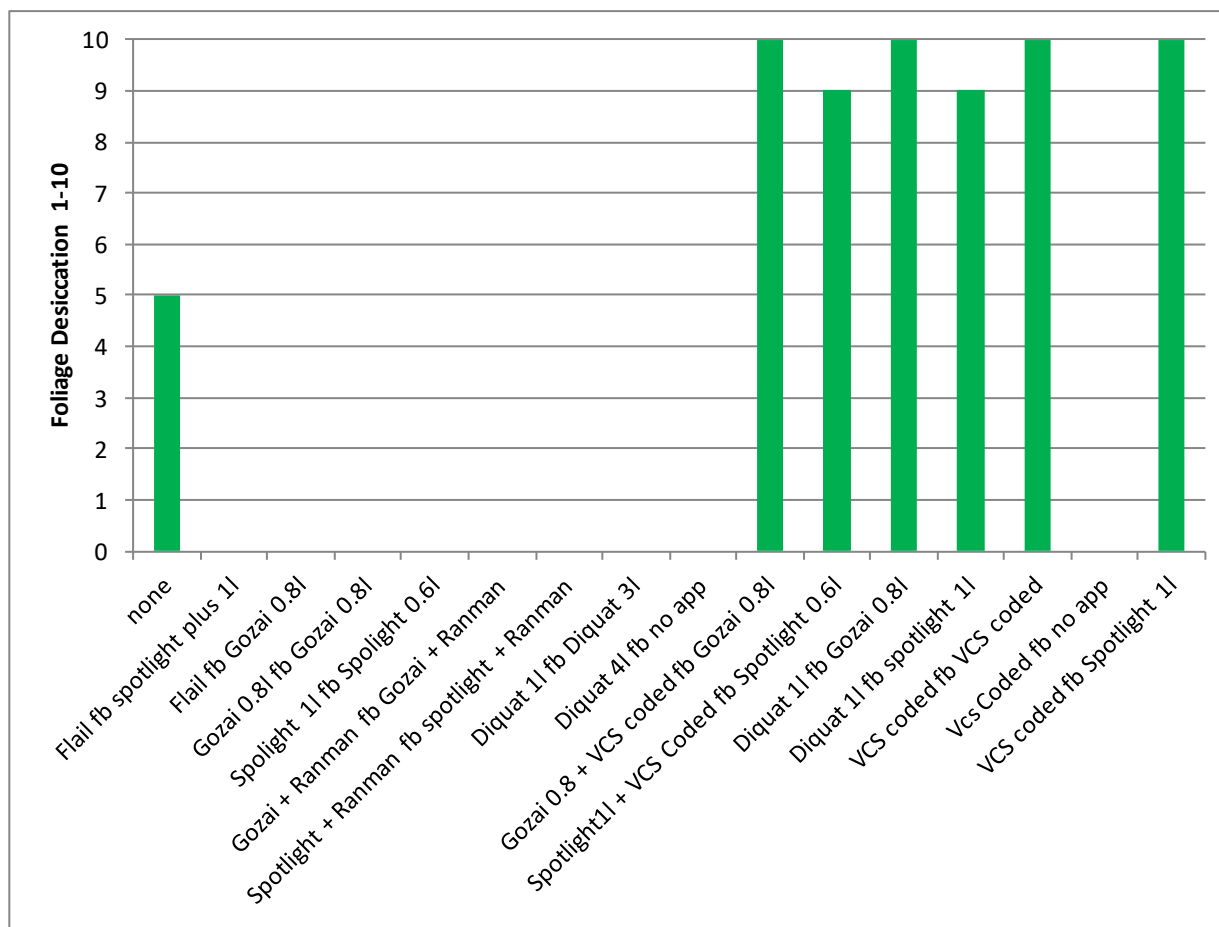
- No improvement with Ranman Top

Note:  
\*All Gozai applications include adjuvant

0 Full canopy – 10 complete Foliage and Stem desiccation - Variety Markies

# Desiccation 2018

Foliage and Stem Desiccation assessments 6<sup>th</sup> October



- Good performance from coded product as a T1 in combination with Gozai/Spotlight or alone

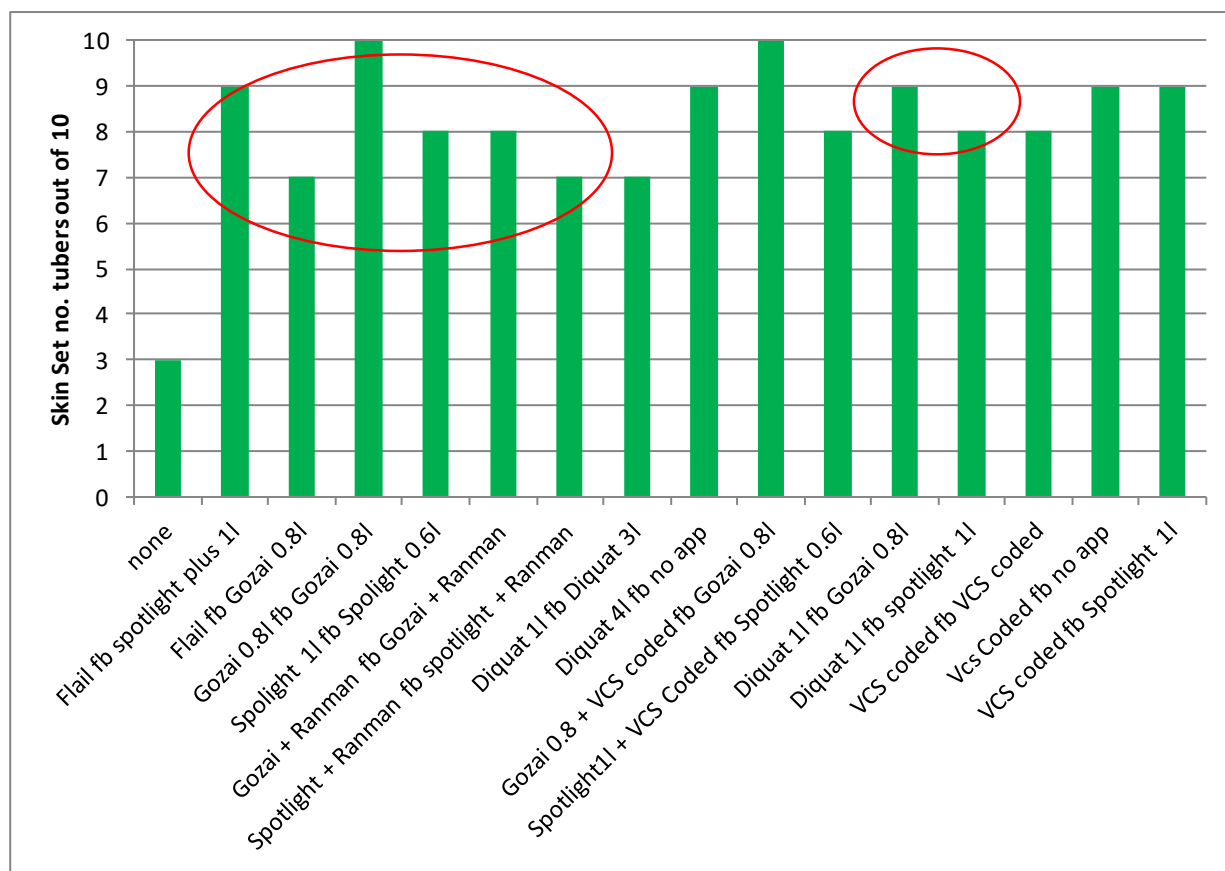
Note:  
\*All Gozai applications include adjuvant

0 Full canopy – 10 complete Foliage and Stem desiccation - Variety Markies



# Desiccation 2018

Skin Set assessments 6<sup>th</sup> October



- Crop approaching skin set on most advanced treatments

- Slower skin set where some stem remained

Note:  
\*All Gozai applications include adjuvant

# 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

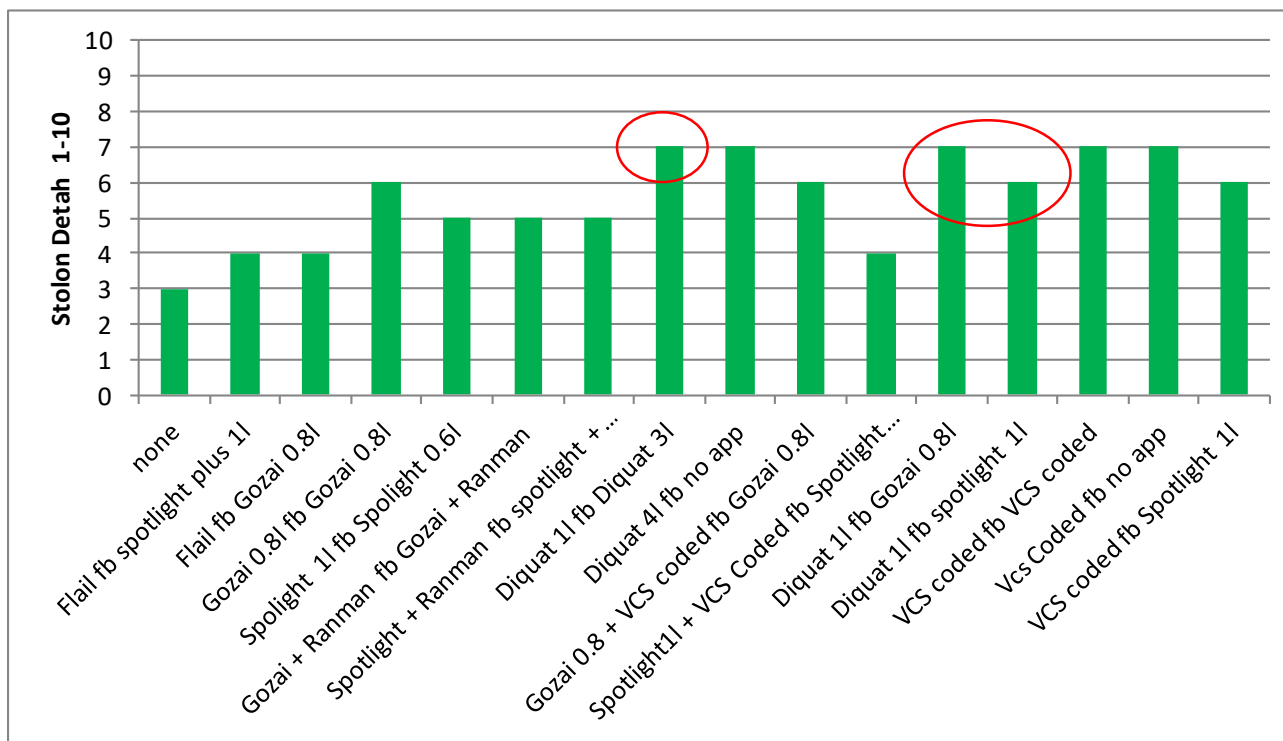
Flailed fb Spotlight Plus 1l/ha

- Slow stolon death , untreated/flailed



# Desiccation 2018

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



- Slow stolon death on all treatments

- small improvement in stolon death with T1 diquat 1l/ha

Note:  
\*All Gozai applications include adjuvant

# Desiccation 2018

Vascular Browning assessments 6<sup>th</sup> October



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 pull
- 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 Potatoes Ltd would like to thank RJ & JE Godfrey and AHDB potatoes for their assistance with this demonstration



A vibrant landscape of a green field at sunset. A path leads from the foreground towards the horizon where the sun is setting, casting a warm glow. The sky is filled with colorful clouds. The text is overlaid in the center of the image.

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



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