

21st January 2021, Strategic Potato Farm Results Week

Managing sprout suppression without CIPC: from field to store

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Maleic hydrazide

Field of use

- sprout control in-store
- sprout control in-field (volunteers)
- second growth
- internal sprouting





Pre-storage: maleic hydrazide



Baseline treatment for many storage regimes this year

Crop yield vs. Ensuring skin set vs. Ensuring MH uptake for sprout suppression









From application to residue uptake

Mean MH residue







MH residue vs sprouting





Plant-to-plant variability

Mean MH residue (10 plants)

■ Maris Piper ■ Sagitta ■ Titan



variety	min	max
Maris Piper	57%	149%
Sagitta	53%	153%
Titan	72%	155%

MH residue distribution (10 plants) 35 30 25 20 15 10 5 0 M. Piper Sagitta Titan

🔳 min 📕 mean 🔳 max



Tuber-to-tuber variability



Titan 100% MH



Best practice for MH application



MH can be very effective but residue data indicates we can get more from many applications

Within the label timings

- check the weather forecast
- avoid stressed crops (follow irrigation)
- avoid high temperature
- apply in the evening
- maximise water volume
- don't tank mix





SPot trials: Development of dormancy rankings

- Varieties selected from esp. top 20 area grown and newer varieties increasing in popularity.
- 50 Tubers per variety, held at 15C in stores at SBCSR
- Assessment for sprouting carried on a weekly basis
- Dormancy duration from tuber initiation (estimated) to 50% of tubers with sprouts 3mm or longer.



Dormancy, relative variety ranking



AHDB

Differences in dormancy between SPot sites



Variety	SPot West, days to 50% sprouting	SPot North, days to 50% sprouting	Differences in dormancy duration between sites (days)
Ivory Russet	233	233	0
Jelly	196	207	11
King Edward	146	164	18
Lady Claire	201	202	1
Lanorma	220	228	8
Laura	186	174	12
Maris Peer	187	182	5
Markies	239	207	32
Melody	189	188	1

Predicting dormancy at actual store temperature AHDB

Innovator Royal Performer Maris Piper



Managing sprout suppression without CIPC

- No silver bullet
- Volatile sprout suppressants
- Variety traits
- Storage environment
- Integrated store management

