

Powdery Mildew Curative Trial 2014



Presented by:
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Farmlands
Horticulture



What are growers using

Cabrio + Spreadwet	Lime Sulphur 1%
Citrox (0.5%)	Lime Sulphur 3%
Citrox (1.5%)	Nimbus (sulphur) + Protector
Citrox (1%) + Sulphur	Nordox (copper) + Nimbus (sulphur) + Protector 0.5%
100% leaf removed from fruit zone	Nordox (copper) + Protector 0.5%
Control	Nordox Copper
Excel Oil 2%	Pendant + Nimbus (sulphur) + Spreadwett
Excel Oil Plus 2%	Pendant + Spreadwet
HML32 + Nordox	Phosgard
HML32 + Potassium Bicarb + Nimbus (sulphur)	Phosphoric Acid + Molassas
HML32 + Potassium Bicarb + Nordox	Potassium Bicarb + Spreadwet
Teracep	Pristine + Spreadwet
JMS Stylet Oil (1%) + Duwet	Prostar + Spreadwet
JMS Stylet Oil 2%	Proxima + Spreadwet

Applications

day 0

20th Jan

day 7

27th Jan

day 14

3rd Feb

day 21

10th Feb

1st application
made

2nd application
made

Assess trial
Photo's taken



All applications made with high
water rate to the point of run off
(1000lt/Ha)

Coverage (Excel oil)



Front of Bunch



Back of Bunch

Leaf Score Effect

0 ← → 10



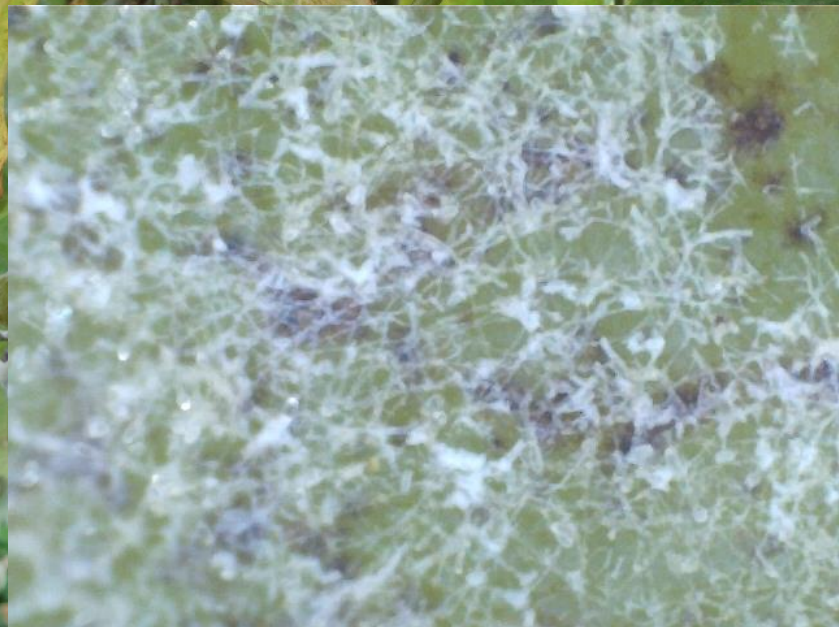
Phosgard



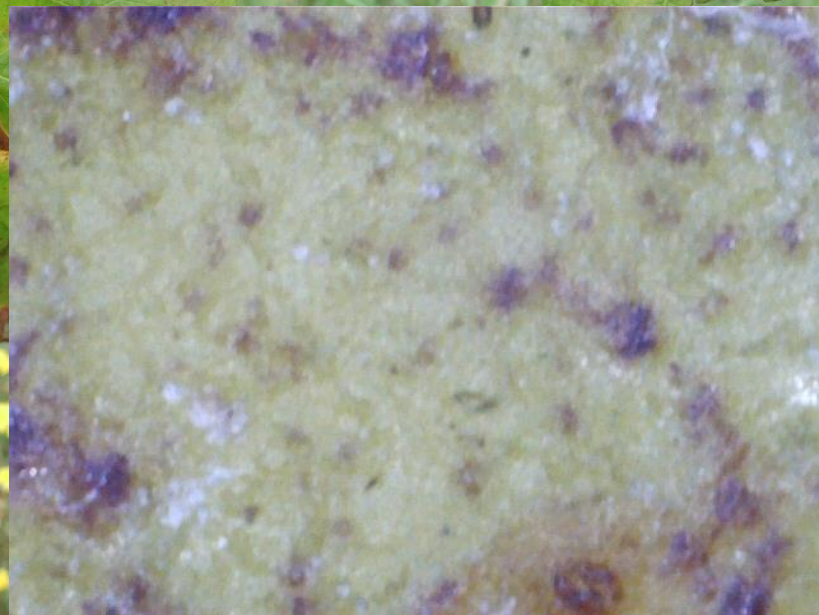
HML32 + Pot Bicarb + Nordox

Berry Score Effect

0 ← → 10



Cabrio + Spreadwet



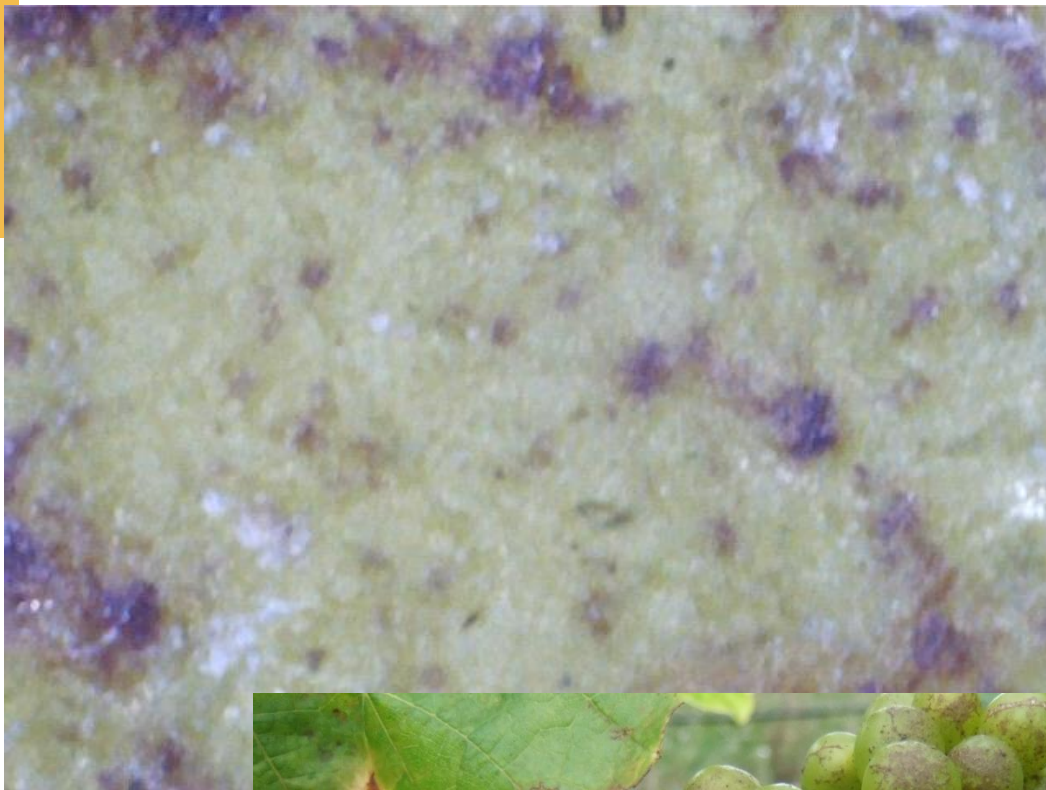
Excel Oil Plus



OF
UCH

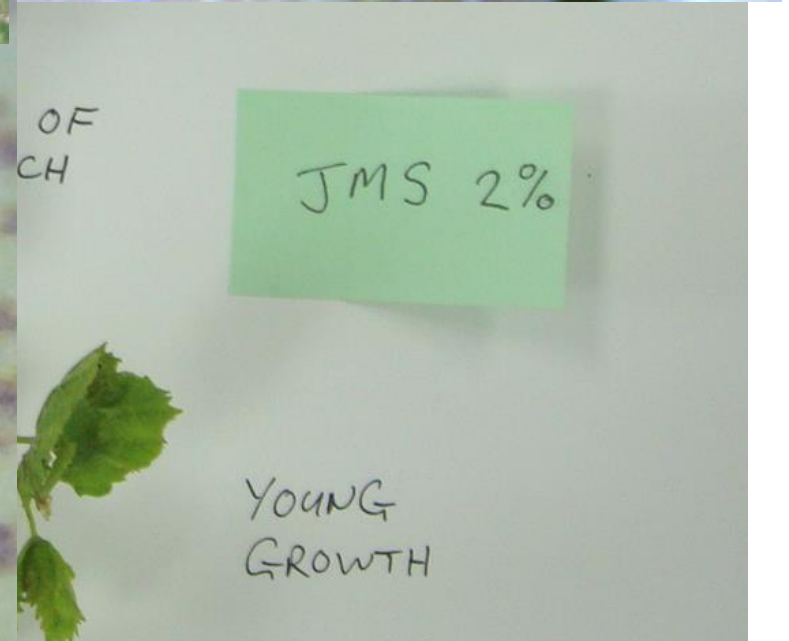
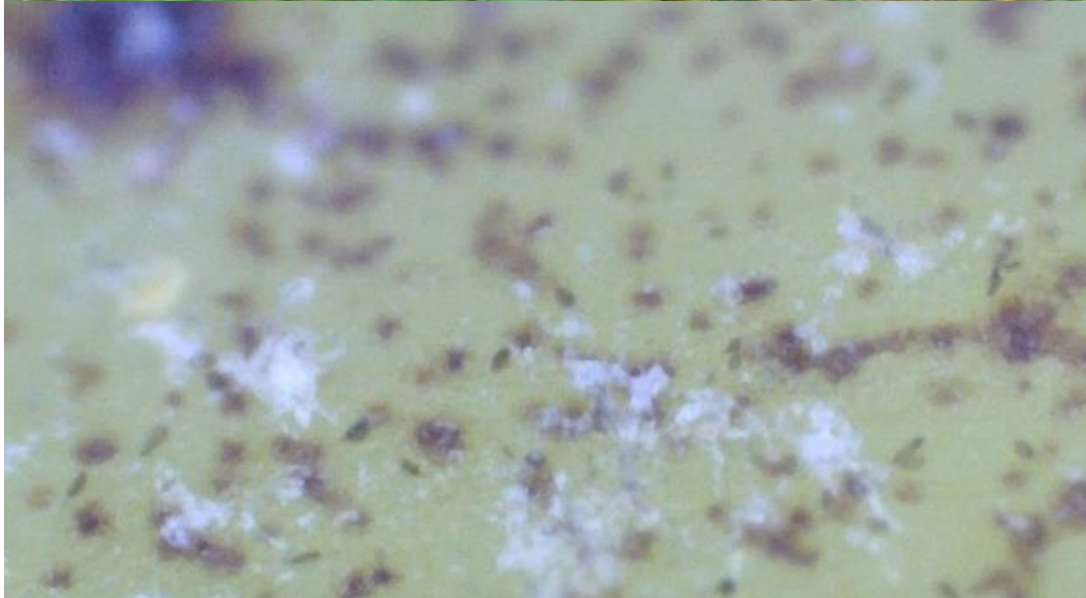
UNTREATED
CONTROL

YOUNG
GROWTH



EXCEL PLUS
OIL
2%

TH





HML 32
POTASSIUM
BICARB
NORDOX

YOUNG
GROWTH

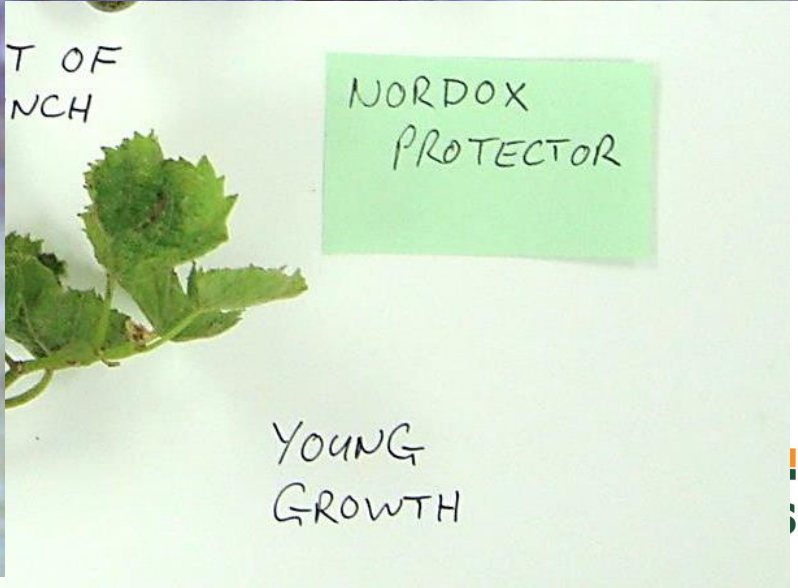
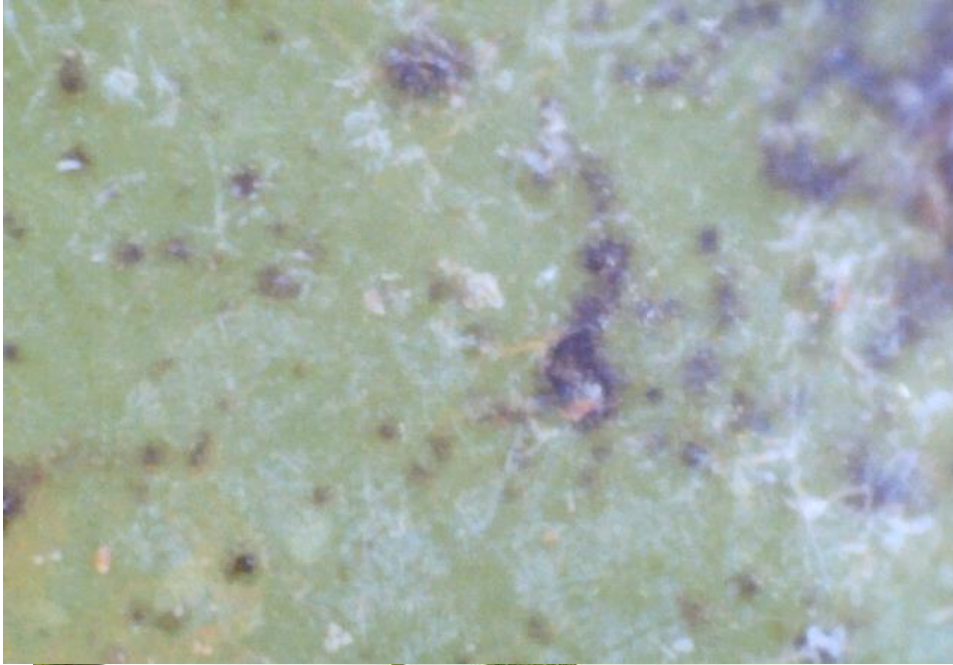
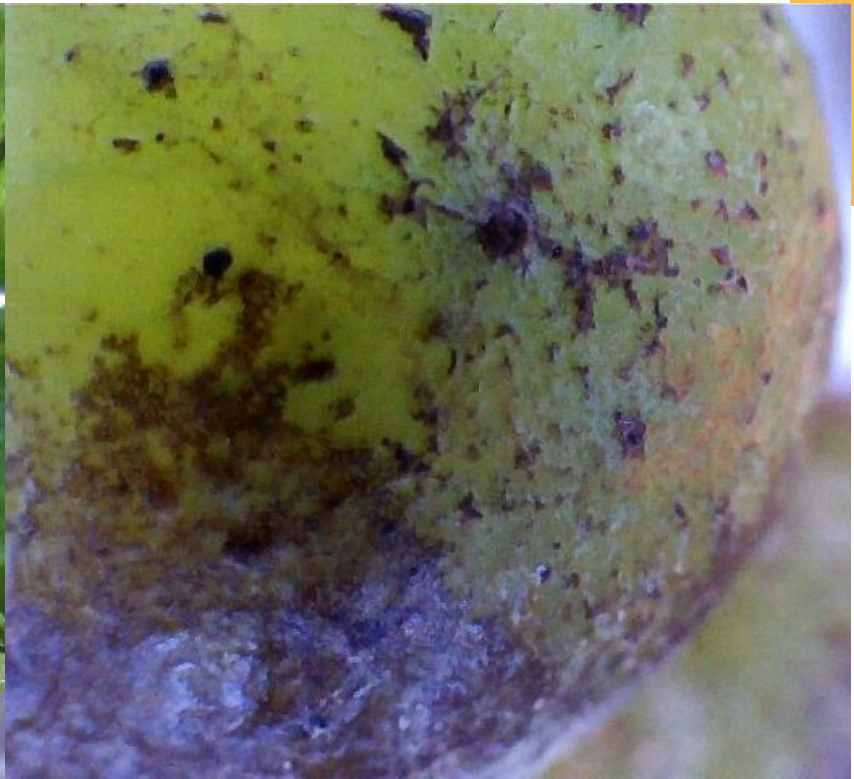


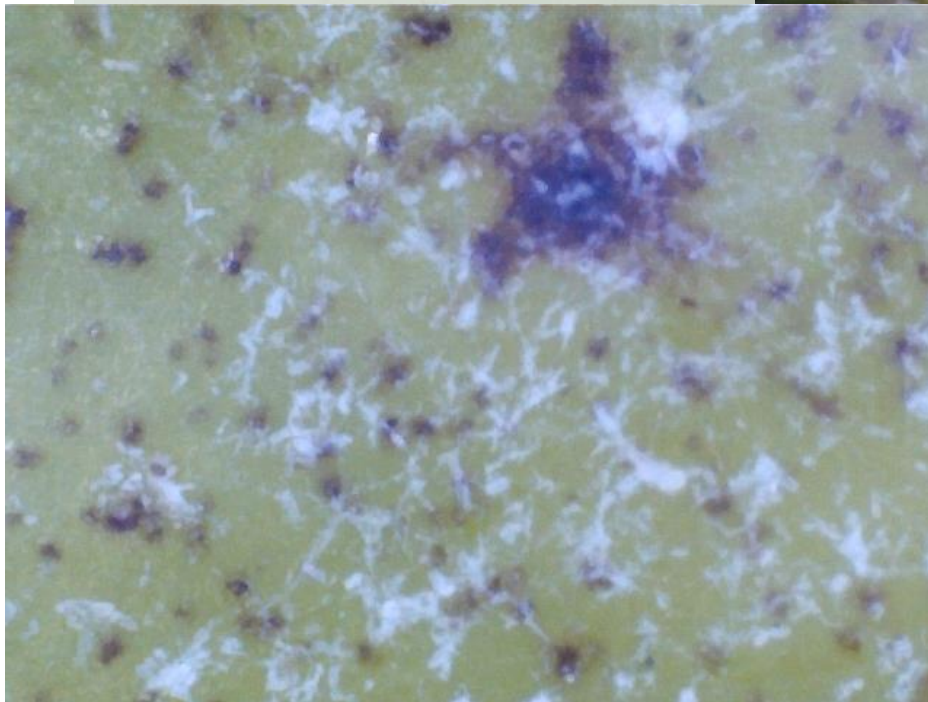
IT OF
INCH

HML 32
NORDOX



YOUNG
GROWTH

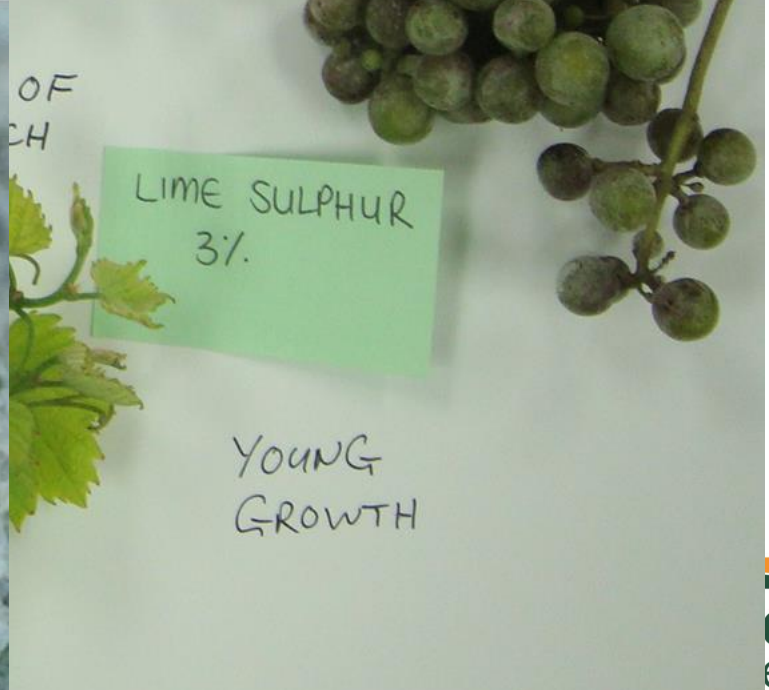




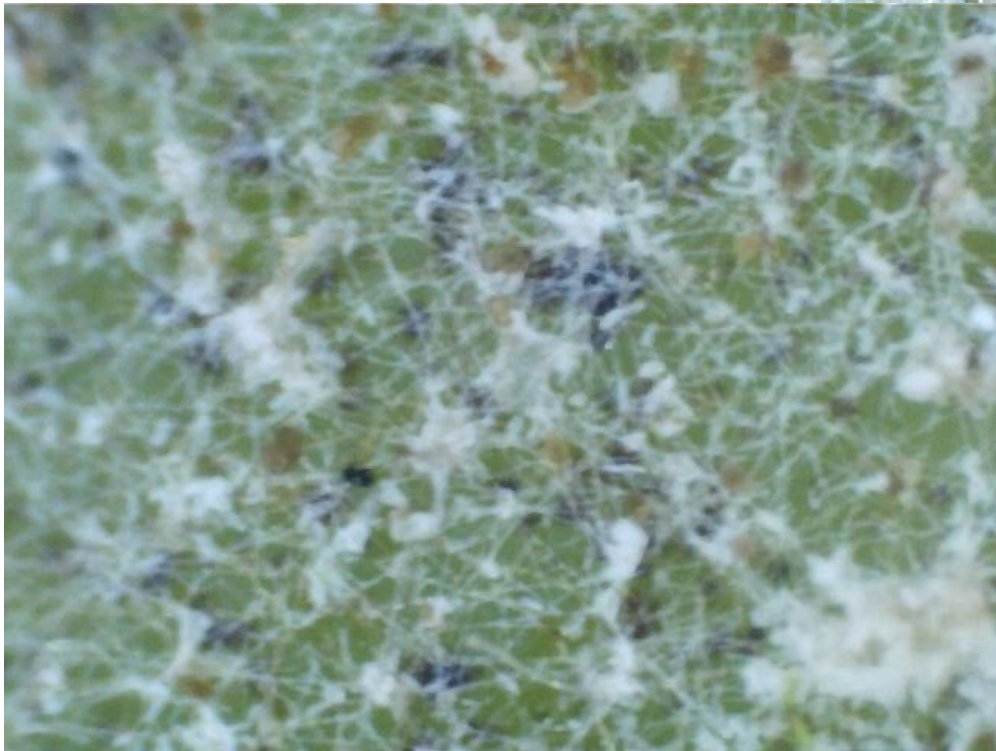
OF
CH

JMS 1%
+
DUWET

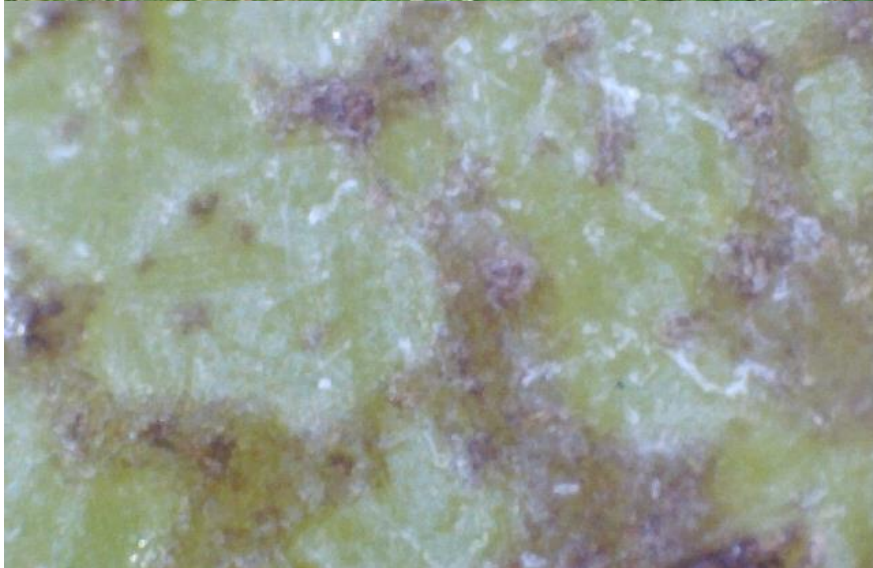
YOUNG
GROWTH



Wettable Sulphur + Protector



Should not be used as curative



Pendant (Penconazole)



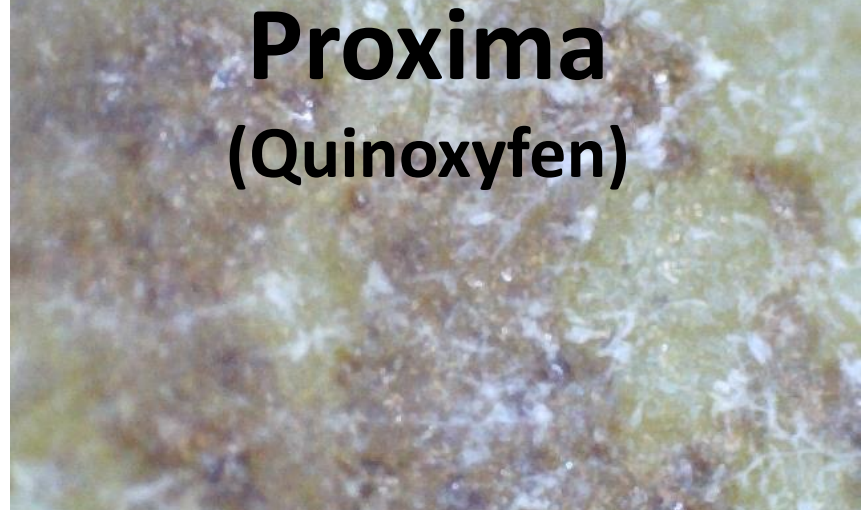
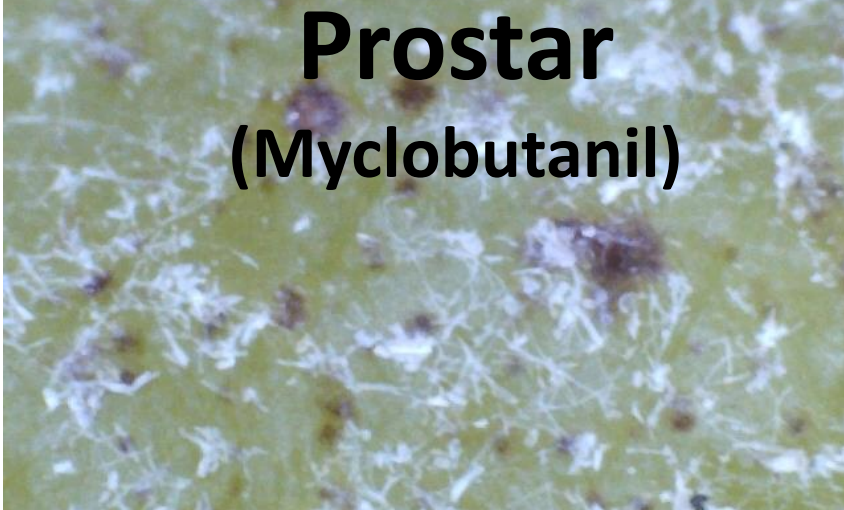
Should not be used as curative



Prostar
(Myclobutanil)



Proxima
(Quinoxifen)



Should not be used as curative



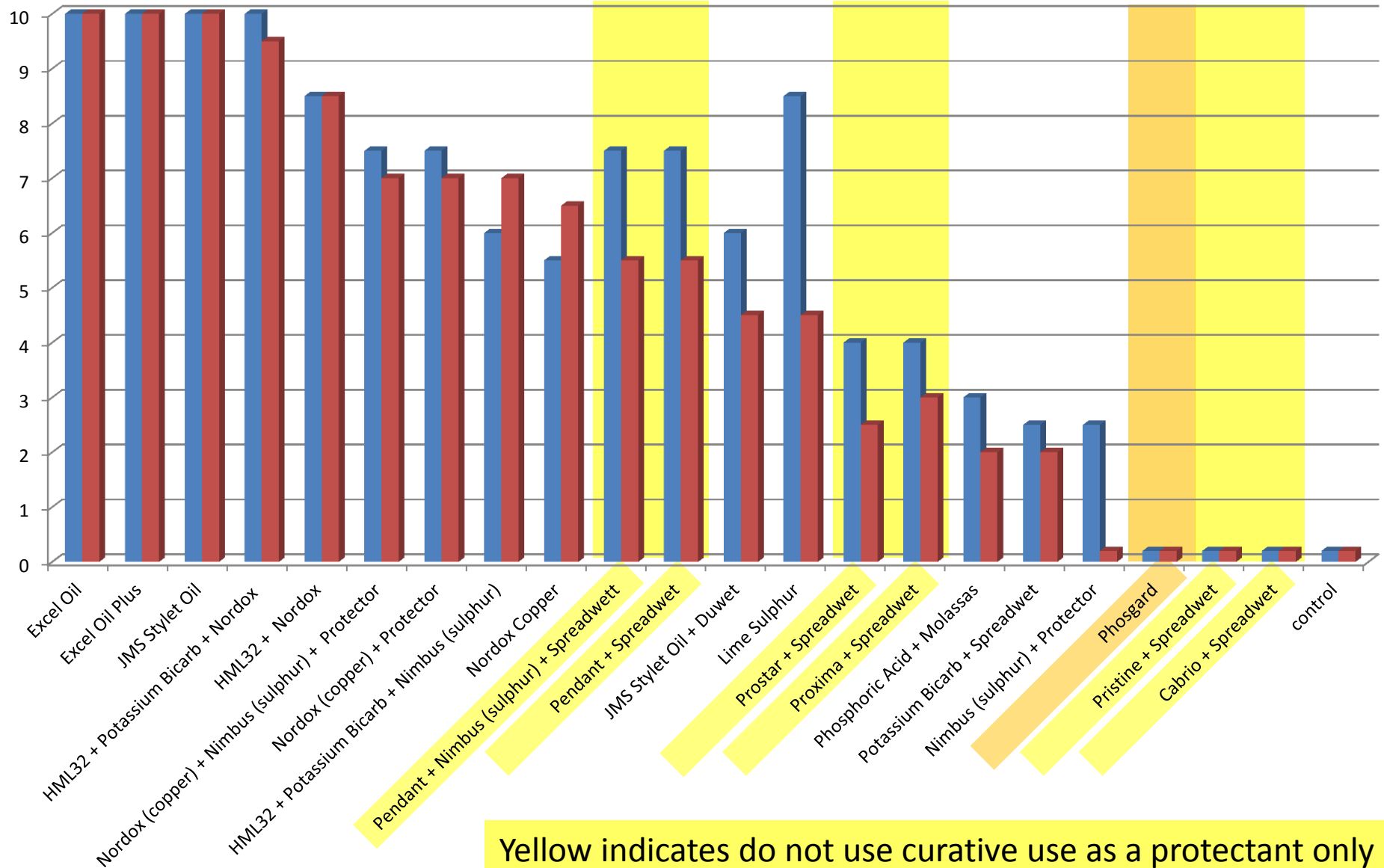
Pristine
(Boscalid +
Pyraclostrobin)



Cabrio
(Pyraclostrobin)

Curative Trial Results

■ Leaf Control ■ Berry Control



Conclusion

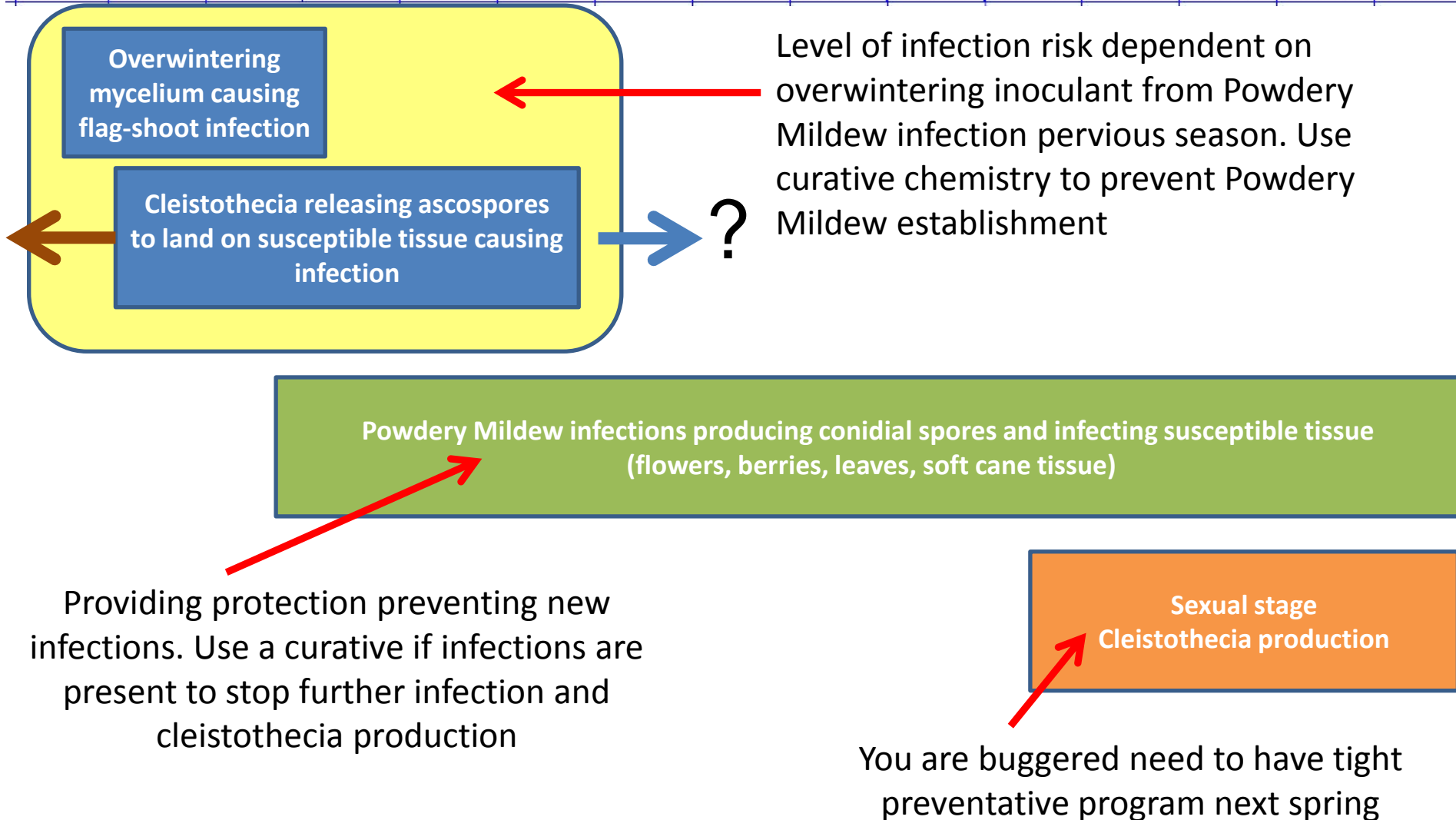
- good curative chemistry
 - Oils (Excel oil, Excel Plus oil, JMS Stylet oil)
 - HML32 (in particular mixed with Potassium Bicarbonate and Nordox)
 - Nordox (label claim for powdery mildew control)
- Do not over use chemistry prone to resistance, always use as protectants and minimize use under high disease pressure.

Conclusion

- **Coverage** is essential the best curative will not work if it has not reached the target. Poor coverage just allows surviving spores to reinfect treated tissue
- Understand the differences of curative and protectant chemistries, and target to what you are trying to achieve.



Infection timing



Timing is critical

														
Late Dormant	Advanced Bud Swell	Bud Burst to Leaf Unfold	Shoot Development		Pre-Flowering	5% Cap Fall – Flowering – 80% Cap fall			Bunch Development	Pre Bunch Closure	Veraison		Pre – Harvest	Harvest
August	Aug – Sept	September	October	October	November	November	November	December	December	January	January	February	February	March

Critical period to prevent overwintering Ascospores or mycelium from establishment and then producing conidial which can then spread to flowers and berries

Protectants must be maintained to prevent conidial spores from establishment on leaf, flowers and berries
















Too late for prevention. If present use a curative to try and reduce the production of cleistothecia for next season

Critical

Important

Too late

Right products at right time

														
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August	Aug – Sept	September	October	October	November	November	November	December	December	January	January	February	February	March
Curative		Curative	Protectant	Protectant	Curative	Protectant	Protectant	Protectant	Protectant	Curative	Protectant	Curative only if required to reduce cleistothecia production		

Curative

Lime Sulphur

HML32

Nordox

Oil's - Excel Oil, Excel plus, JMS

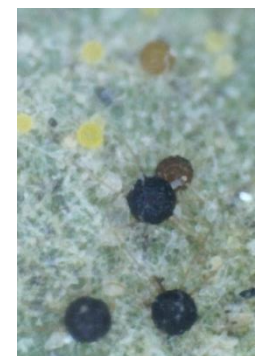
Protectant

Wettable Sulphur – Sulclean, Nimbus

Penconazole – Topas, Pendant

Pristine

Quinoxifin – Proxima -Qintec



Winter – Flag shoot development



Winter

No green tissue
nil risk of
infection no
spraying required



Advanced bud swell

Critical timing for
curative spray

Lime Sulphur

OR

Excel Oil



Flag shoot development

Critical timing for
curative spray

Lime Sulphur

OR

Excel Oil

Powdery Mildew in Organic's

- 2013 – 2014 organic vineyards maintained good levels of powdery control.
- Plenty of chemistry available to maintain good control of powdery mildew.
 - Lime Sulphur
 - Wettable Sulphur
 - HML32
 - Nordox
 - Excel Oil
 - Protector
 - Potassium Bicarbonate