

EXTENSION AND ADVISORY TEAM

SUMMARY OF NOVA SCOTIA CROP LOAD MANAGEMENT STUDIES ON HONEYCRISP AND GALA

Reported from 2002 to 2012

Prepared by
Michelle Cortens, M.Sc. P.Ag.
Tree Fruit Specialist | Agri-Services
Perennia Food and Agriculture

HONEYCRISP

Treatment Description	Rate PPM	Rate (product/L of water)	Age & Rootstock	King fruitlet treatment Stage (mm)	Fruit set	Crop load	Harvest fruit size	Red colour	Notes	Project
Blossom Thinners										
ATS	NA	12.5 ml	13 yr MM.106	FB	▼	●	▲	▲	Less fruit with <30% red colour	Embree and Nichols, 2010
ATS	NA	12.5 ml	12 yr M.26	FB	▼	▼	●	●		Embree and Nichols, 2009
ATS	NA	12.5 ml	11 yr M.26	FB	▼	●	▲	●	Better than untreated but relatively small fruit. Increased fruit size is a classic response to early thinning.	Embree and Nichols, 2008
ATS	NA	12.5 ml	8 yr M.26	FB	▼	●	●	●	Rainy weather during bloom may have reduced efficacy.	Embree, 2005
ATS	NA	12.5 ml	7 yr M.106	FB	▼	●	▲	▲		Embree and Nichols, 2004
Lime sulphur	NA	50 ml	12 yr M.26	FB	▼	▼	●	●		Embree and Nichols, 2009
Lime sulphur + Safer's soap	NA	12.5 ml + 12.5 ml	13 yr MM.106	FB	▼	●	●	●		Embree and Nichols, 2010
Lime sulphur + Safer's soap	NA	50 ml + 25 ml	12 yr M.26	FB	▼	▼	▲	▲	More medium fruit with 30-50% red. Foliar damage similar to lime sulphur alone.	Embree and Nichols, 2009
Petal Fall (4-6 mm)										
ATS	NA	12.5 ml	10 yr MM. 111	Early PF	●	●	●	●		Embree and Nichols, 2011
Fruitone N	7.5	0.24 g	10 yr MM. 111	Early PF	●	●	▲	●		Embree and Nichols, 2011
Fruitone N	7.5	0.24 g	9 yr MM.106	PF	▼	▼	●	●		Embree and Nichols, 2011
MaxCel	150	7.5 ml	10 yr MM. 111	Early PF	▼	▼	●	●	Surprisingly no increase in fruit size	Embree and Nichols, 2011
MaxCel	150	7.5 ml	9 yr MM.106	PF	▼	●	●	●		Embree and Nichols, 2011
MaxCel + Fruitone N	100 + 5	5 + 0.16 g	9 yr MM.106	PF	▼	▼	▲	▲	Large and extra large fruit, more large fruit with 51-70% red	Embree and Nichols, 2011
MaxCel + Sevin	100 + 1.25 mL	5 + 1.25 ml	9 yr MM.106	PF	▼	▼	▲	▲	Large and extra large fruit, more extra large fruit with 51-70% red	Embree and Nichols, 2011
Sevin	NA	1.25 ml	9 yr MM.106	PF	●	●	●	●		Embree and Nichols, 2011
Sevin	NA	1.25 ml	11 yr M.26	PF	▼	●	●	●	Better than untreated but relatively small fruit	Embree and Nichols, 2008
Reported for registered products only. FB = Full bloom. PF = Petal fall. NR = Not rated. NA = Not applicable. Reported changes are relative to untreated controls and only significant differences are reported.										
▼ = significant decrease, good result. ▲ = significant increase, good result. ▲ = significant increase, bad result. ▲ ▼ = variable results. ● = no significant change										

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Fruitlet Development (7-14 mm)										
Sevin	NA	1.25 ml	8 yr M.26	10	▼	●	●	●		Embree, 2005
Sevin	NA	1.25 ml	5 yr M.26	12	●	●	●	●		Embree, 2002
Fruitone N	NA	0.24 g	5 yr M.26	12	●	●	●	●		Embree, 2002
Fruitone N + Sevin	5	0.16 g + 1.25 ml	13 yr MM.106	8-9	▼	●	▲	▲	Less small fruit and more medium and large fruit. More fruit with 50-70% red colour	Embree and Nichols, 2010
Fruitone N + Sevin	NA	0.24 g + 1.25 ml	11 yr M.26	10	▼	▼	▲	▲		Embree and Nichols, 2008
Fruitone N + Sevin	NA	0.24 g + 1.25 ml	8 yr M.26	10	▼	▼	▲	●		Embree, 2005
Fruitone N + Sevin	NA	0.24 g + 1.25 ml	7 yr M.106	10	▼	●	▲	▲		Embree and Nichols, 2004
Fruitone N + Sevin	NA	0.16 g + 0.87 ml	5 yr M.26	12	▼	NR	●	●		Embree, 2002
MaxCel	100	7.5 ml	12 yr MM.106	13	●	●	●	NR	Mild response, medium sized fruit	Nichols, 2012
MaxCel + Fruitone N	100 + 5	5 + 0.16 g	9 yr MM.106	10	▼	▼	▲	▲	Medium sized fruit, more large fruit with 30-50% red	Embree and Nichols, 2011
MaxCel + Sevin	75	3.75 ml + 1.25 ml	13 yr MM.106	8-9	▼	▼	▲	▲	Less small fruit and more large fruit. More fruit with >70% red colour	Embree and Nichols, 2010
MaxCel + Sevin	100	5 + 1.25 ml	9 yr MM.106	10	▼	▼	▲	▲	Large and extra large fruit, more large and extra large fruit with >70% red	Embree and Nichols, 2011
Rescue Thinning (15-30 mm)										
MaxCel	100	NR	12 yr MM.106	30	●	▲	▲	●	Increased pygmy fruit at harvest; increased medium sized fruit	Nichols, 2012
Nibble Thinning (multiple stages)										
ATS + Sevin	NA	12.5 ml + 1.25 ml	11 yr M.26	FB + PF	▼	▼	▲	●	More medium sized fruit	Embree and Nichols, 2008
ATS + Sevin + MaxCel	NA	12.5 + 1.25 ml + 7.5 ml	11 yr M.26	FB + PF + 10	Severe	Severe	NA	NA		Embree and Nichols, 2008
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Blossom Thinners										
ATS	NA	12.5 ml	9 yr M.26	FB	●	▼	●	●	Less small fruit	Embree and Nichols, 2008
Fruitlet Development (7-14 mm)										
Fruitone L	7.5	0.24 ml	16 yr M.26	10	▼	▼	●	▲	More medium fruit with >50% red	Embree and Nichols, 2009
Fruitone L	15	0.48 ml	16 yr M.26	10	▼	▼	●	●		Embree and Nichols, 2009
Fruitone L + Sevin	5	0.16 ml + 1.25 ml	16 yr M.26	10	▼	▼	●	●		Embree and Nichols, 2009
Fruitone N	7.5	0.24 g	16 yr M.26	10	▼	▼	●	▲	More medium fruit with >50% red	Embree and Nichols, 2009
Fruitone N	15	0.48 g	16 yr M.26	10	▼	▼	●	●		Embree and Nichols, 2009
Fruitone N	7.5	0.24 g	9 yr M.26	10	●	●	▲	●	More large fruit with 30-50% red	Embree and Nichols, 2008
Fruitone N + Sevin	7.5	0.24 g + 1.25 ml	9 yr M.26	10	●	●	▲	●	More large fruit with 30-50% red	Embree and Nichols, 2008
MaxCel	100	5.0 ml	9 yr M.26	10	●	●	●	●		Embree and Nichols, 2008
MaxCel + Sevin	100	5.0 ml + 1.25 ml	16 yr M.26	10	▼	▼	▲	▲	More large fruit with >50% red	Embree and Nichols, 2009
MaxCel + Sevin	100	5.0 ml + 1.25 ml	9 yr M.26	10	▼	▼	▲	●		Embree and Nichols, 2008
Nibble Thinning (multiple stages)										
ATS + MaxCel + Sevin		12.5 ml + 5.0 ml + 1.25 ml	9 yr M.26	FB + 10 + 10	▼	▼	▲	●	More large fruit with >30% red. Significant 50% reduction in crop load.	Embree and Nichols, 2008
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