

Cost of Tart Cherry Production: what we've learned so far

**2014 Northwest Orchard and Vineyard Show
Acme, MI
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Outline

- Premise
- Assessing 2013 costs
- How do 2013 estimates compare with previous estimates?
- What's next?



Premise

- Cost of producing tart cherries was evaluated in a 2010 RAMP project.
- Concern among cherry growers that since then more production challenges have led to increased pesticide applications.
- Objective: Determine changes in chemical costs of insecticide and fungicide applications.



Assessing 2013 costs

- Collected 2013 spray records from five tart cherry growers in NW MI
- Chemical price sheets from NW MI crop consultants were used to generate price estimates
- Calculated cost per acre of reported chemicals for each grower
- Calculated total average cost per acre for insecticides, fungicides, herbicides, PGRs, and overall pest management program
- Used 2010 data and estimates from RAMP project to observe changes in 2013 costs



Summary info on spray records

- All spray records provided contained insecticide, fungicide, and PGR data
- Three of five growers provided records of herbicide, nutrient, and adjuvant data
- 7-18 spray dates:
 - Mostly full cover applications
 - 18 spray dates for grower making mainly alternate row middle or half cover applications



2013 Full Cover Sprays

Type	Range	Average # of sprays
Insecticide	3 – 9	7.3
Fungicide	8.5 – 15	13
Herbicide	2 – 4.5	2.8
PGR	1 – 3	2
Total		25.1



2010 vs. 2013 Full Cover Sprays **RAMP, 2010*

Type	2010 Average # of sprays*	2013 Average # of sprays
Insecticide	5.6	7.3
Fungicide	9.25	13
Herbicide	2	2.8
PGR	2	2
Total	18.85	25.1



2013 Chemical Costs

Type	Range* (\$/acre)	Average Cost* (\$/acre)
Insecticide	\$39.89 – 200.92	\$113.22
Fungicide	\$80.64 – 268.78	\$198.08
Herbicide	\$15.18 – 22.84	\$19.07
PGR	\$4.38 – 10.38	\$8.02
Total		\$338.39

*Estimates do not include time, labor or other inputs

2010 Chemical Costs

Type	Low Pressure Average Cost* (\$/acre)	High Pressure Average Cost* (\$/acre)
Insecticide	\$83.60	\$113.60
Fungicide	\$140.26	\$150.26
Herbicide	\$10.87	\$10.87
PGR	\$10.32	\$10.32
Total	\$245.05	\$285.05

*Estimates do not include time, labor or other inputs

RAMP, 2010

2010 vs. 2013 Chemical Costs

Type	2010 Average Cost* (\$/acre)	2013 Average Cost* (\$/acre)
Insecticide	\$98.60	\$113.22
Fungicide	\$145.26	\$198.08
Herbicide	\$10.87	\$19.07
PGR	\$10.32	\$8.02
Total	\$265.05	\$338.39

*Estimates do not include time, labor or other inputs

2013 Tart Cherry COP Assessment Summary

- Compared with 2010:
 - 2013 estimate is greater than 2010 average estimate (↑ **\$73.34/acre**)
 - The average number of full cover sprays have increased (↑ **6.25**)
 - Increases in applications and costs:
 - Fungicides (↑ **3.75 sprays, ↑ \$52.82/acre**)
 - Insecticides (↑ **1.7 sprays, ↑ \$14.62/acre**)
 - Herbicides (↑ **0.8 sprays, ↑ \$8.15/acre**)

Proportions of 2013 Costs



- Fungicides
- Insecticides
- Herbicides
- PGRs

What's next?

- How will the arrival of **Spotted Wing Drosophila** influence pest management programs, secondary pests, and costs of tart cherry pest management in the future?
- Assess more 2013 spray records to use for comparison with 2014 records
 - Include adjuvant and nutrient costs
 - Calculate other inputs such as labor and time



Photo: Martin Hauser



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