Cranberry Return on Investment Calculator

To renovate or not?
If so with what?

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Methods

- Grower interviews
  - Cost of production
  - Cost of renovation
  - Expected returns by variety
- Hybrid vine cost
  - Royalties
  - Vines or plugs, including shipping
  - Planting and establishment cost
- Comparisons
  - Current production status
  - Sanding every 5 years in lieu of renovation
  - Mowing in lieu of renovation
  - Hybrid vines from own beds
  - Hybrids vines – brought
  - Hybrid plugs – brought

Methods

- Interactive Excel Spreadsheet
  - Default cost
  - Own grower cost
  - Default expect bbl/ac yield and $/ac
  - Grower expected bbl/ac yield and $/ac

Input	Default Cost ($/acre)	Grower Cost ($/acre)
Fertilizer	$ 200.00	
Herbicide	$ 400.00	
Insecticide	$ 400.00	
Fungicide	$ 100.00	
Labour, general	$ 500.00	
Labour, harvest	$ 250.00	
Fuel	$ 400.00	
Property taxes	$ 100.00	
Insurance	$ 150.00	
Debt payments	$ 500.00	
Pollination	$ 250.00	
Maintenance & repair	$ 100.00	
Pruning	$ 100.00	
Tissue Sampling	$ 20.00	
IPM consulting	$ 50.00	
Additional Base Cost #1	$ -	
Additional Base Cost #2	$ -	

CURATIVE MANAGEMENT

SANDING, 5-YEAR CYCLE

Input	Default Cost ($/acre)	Grower Cost ($/acre)
Sand, 1 inch	$ 2,000.00	
Additional Sanding Cost #1	$ -	
Additional Sanding Cost #2	$ -	

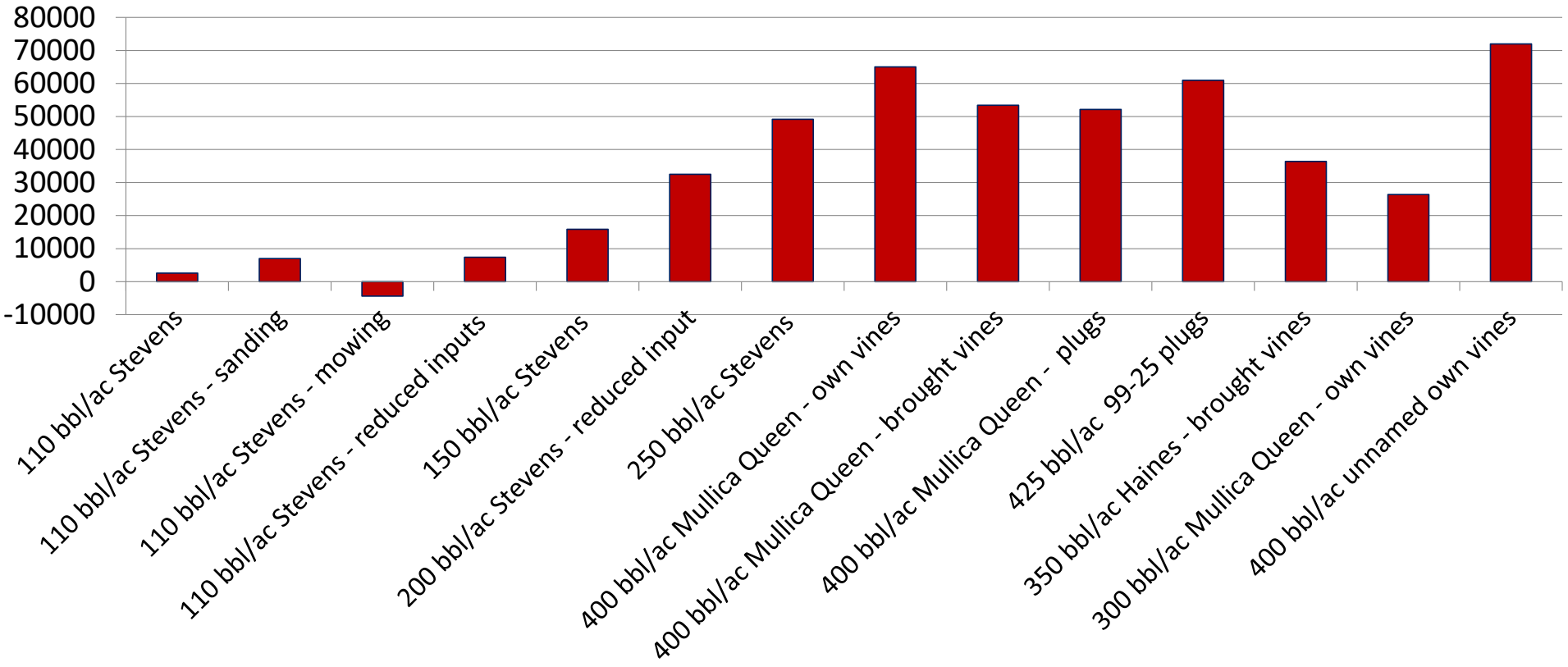
MOWING, 10 YEAR CYCLE

Input	Default Cost ($/acre)	Grower Cost ($/acre)
Mowing	$ 600.00	
Additional Mowing Cost #1	$ -	
Additional Mowing Cost #2	$ -	

VINES, ON-FARM SOURCE	VARIETY: MULLICA QUEEN
Input	Default Value	Grower Value
Yield, mowed bog (bbl/acre)	300	
Acres, mowed bog	5	
Input	Default Cost ($/acre)	Grower Cost ($/acre)
Scalping	$ 2,000.00	
Leveling/Fill	$ 50.00	
Drainage/Irrigation	$ 4,000.00	
Vines, mowed	$ 500.00	
Planting	$ 500.00	
Patent/Licence	$ 2,194.83	
Annual Royalty	$ -	
Additional Vines, On-Farm Cost #1	$ -	
Additional Vines, On-Farm Cost #2	$ -	
Lost revenue from mowed bog	Calculated from acres mowed and bog yield.	

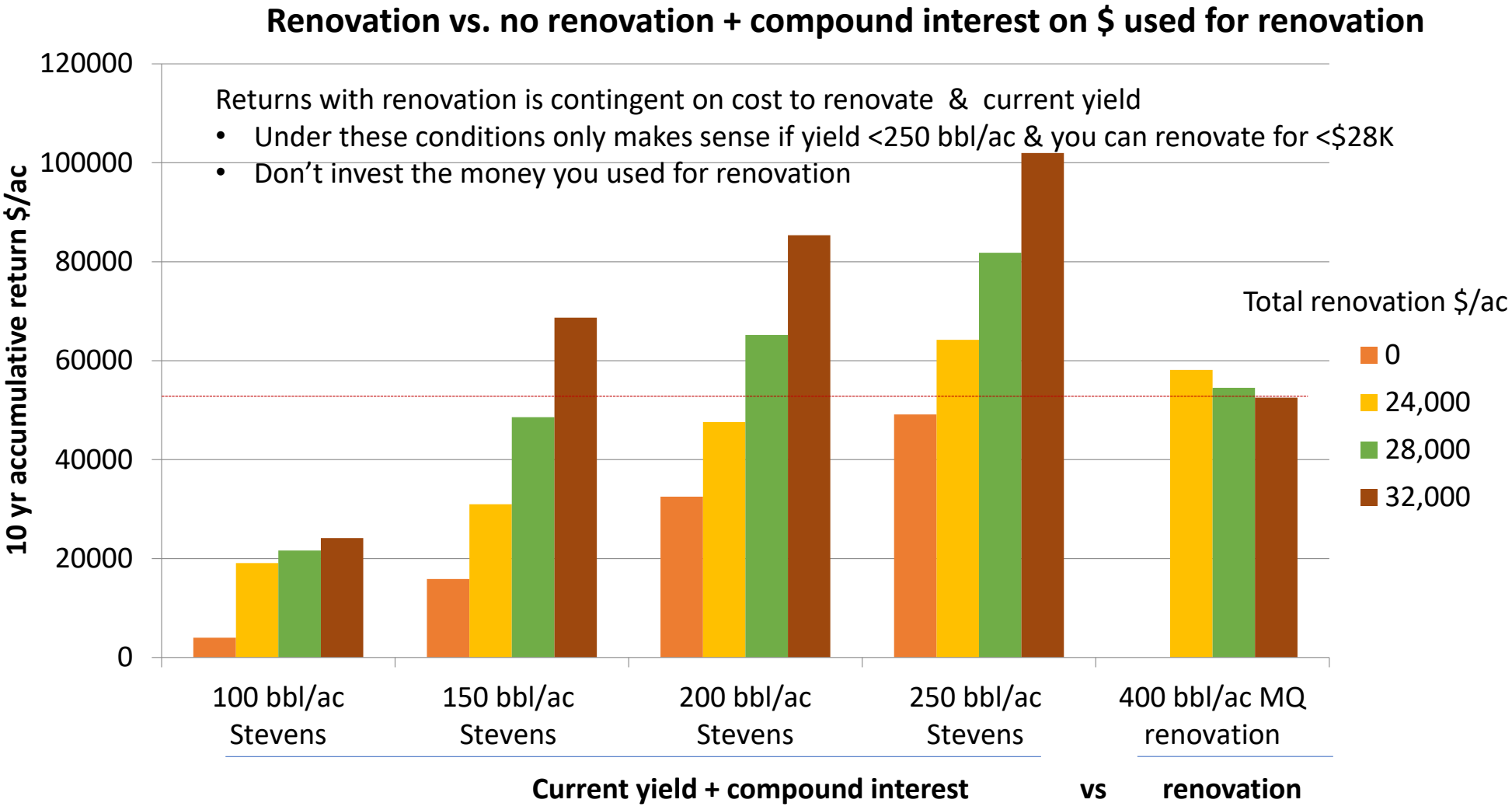
VARIETY	ESTIMATED ANNUAL YIELD (BBL/ACRE)										BREEDER	VINE/PLUG COST		PATENT/LICENCE COST		ANNUAL ROYALTY	
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10		USD	CAD	USD	CAD	USD	CAD
99-25	0	300	350	425	425	425	425	425	425	425	Rutgers	$ 11,000.00	$ 14,632.20	$ 1,800.00	$ 2,394.36	$ -	$ -
CRIMSON QUEEN	0	189	300	350	400	400	400	400	400	400	Rutgers	$ 11,000.00	$ 14,632.20	$ 1,650.00	$ 2,194.83	$ -	$ -
DEMORANVILLE	0	150	200	300	300	300	300	300	300	300	Rutgers	$ 11,000.00	$ 14,632.20	$ 1,650.00	$ 2,194.83	$ -	$ -
HAINES	0	200	250	300	350	350	350	350	350	350	Rutgers	$ 11,000.00	$ 14,632.20	$ 1,800.00	$ 2,394.36	$ -	$ -
MULLICA QUEEN	0	155	400	400	400	400	400	400	400	400	Rutgers	$ 11,000.00	$ 14,632.20	$ 1,650.00	$ 2,194.83	$ -	$ -
WELKER	0	200	300	300	350	350	350	350	350	350	Rutgers	$ 11,000.00	$ 14,632.20	$ 1,700.00	$ 2,261.34	$ -	$ -
BGs	0	150	250	300	300	300	300	300	300	300	Valley Corp	$ 11,000.00	$ 14,632.20	$ -	$ -	$ -	$ -
CRIMSON KING	0	150	300	350	350	350	350	350	350	350	Valley Corp	$ 11,000.00	$ 14,632.20	$ -	$ -	$ -	$ -
GRYGLESKI (GH)	0	100	150	200	200	200	200	200	200	200	Valley Corp	$ 4,000.00	$ 5,320.80	$ -	$ -	$ -	$ -
VALLEY KING	0	150	250	300	300	300	300	300	300	300	Valley Corp	$ 11,000.00	$ 14,632.20	$ 2,500.00	$ 3,325.50	$ -	$ -
HYRED	0	100	150	250	250	250	250	250	250	250	UWisconsin	$ 11,000.00	$ 14,632.20	$ 2,000.00	$ 2,660.40	$ 125.00	$ 166.28
BERGMAN	0	100	150	200	200	200	200	200	200	200	USDA	$ 4,000.00	$ 5,320.80	$ -	$ -	$ -	$ -
PILGRIM	0	100	150	200	200	200	200	200	200	200	USDA	$ 4,000.00	$ 5,320.80	$ -	$ -	$ -	$ -
STEVENS	0	100	150	200	200	200	200	200	200	200	USDA	$ 4,000.00	$ 5,320.80	$ -	$ -	$ -	$ -
WILLAPA RED	0	150	180	180	180	180	180	180	180	180	USDA	$ 4,000.00	$ 5,320.80	$ -	$ -	$ -	$ -

Ten year accumulative budget ($/ac) – 5 acre renovation @$25/bbl returns



Renovation vs investing the money

- What is the better choice?
  - Renovation with new hybrids or continue to farm and invest the money you would have spent on renovation?
  - Comparison:
    - 100, 150, 200 and 250 bbl/ac beds under consideration for renovation
    - $24,000, 28,000 and 32,000 $/ac renovation cost.
    - 5% annual returns over 10 years.


Renovation vs. no renovation + compound interest on $ used for renovation
10 yr accumulative return $/ac
120000
100000
80000
60000
40000
20000
0
Returns with renovation is contingent on cost to renovate & current yield
• Under these conditions only makes sense if yield <250 bbl/ac & you can renovate for <$28K
• Don't invest the money you used for renovation
Total renovation $/ac
0
24,000
28,000
32,000
100 bbl/ac Stevens
150 bbl/ac Stevens
200 bbl/ac Stevens
250 bbl/ac Stevens
400 bbl/ac MQ renovation
Current yield + compound interest
vs
renovation

Bed renovation should be considered along with a **Farm Succession Plan.**

- Farm Succession plans requires a difficult family conversation.
- The next generation may or may not want to continue farming.

Farm Succession Plan meeting:

- Does the farm need to be sustainable (profitable) for future generations?
- Are your children/heirs interesting in farming?
- How many years do you anticipating farming in the future?

- Is cranberry farming a lifestyle that you would continue regardless of profit?

- Will the farm will be sold upon your death?
- Do you have other business profits and need to show farm losses for tax purposes?

- Is your goal to improve your farm profit structure so that you can sell it in the future?

- Is your goal to hold on to the farm with minimal expenditures into the future?

- Does your farm have intrinsic real estate value regardless of the productivity of the cranberry land (e.g. any improvement to cranberry productivity will have minimal net value the future sale of the property)?
- Is your farm a limited partnership with the goal to continue as a cranberry farm for as long as possible? How important are net profits for this partnership?