

Final report to the BC Cranberry Research Commission

AN ECONOMIC STUDY TO DETERMINE THE ROI FOR RENOVATION OF CRANBERRY BEDS IN BC

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Introduction: Cranberry farmers in BC are facing a serious economical dilemma. The projection of crop returns for the foreseeable future are not favorable for sustainability. To remain competitive growers will be required to renovate to high producing varieties. The options for renovation are numerous. The cost and long-term returns of each of these renovation options are uncertain and may or may not be in the grower's best economic interest. The decisions required for renovation are confounded by an array of complicated variables that are unique to each farm. To add in the renovation decision making process a dynamic Excel spreadsheet was developed called 'Returns on Investment Calculator'. This spreadsheet calculator contains default grower production cost, renovation cost, and projected returned for an array of renovation options and varieties. It also provides for options for grower to input their own variables into the model.

Method. This project was completed in four phases.

1) Determine all the input variable for the spreadsheet model. These variables included existing farm conditions (debt load, growers age and long term plans for the farm (transition to young generations or selling off asset), current yield and returns, etc.), and renovation cost and projected returns (loss of revenue when bed is out of production, cost of vine, cost of planting and growing until in full production, projected yield and \$ returns, etc.).

2) Capture all data for use in the model. A facilitated meeting with a group of BC growers representing the entire array of farm sizes, and farm condition and locations was conducted to collect default input data.

3) Model building and testing. An Excel spreadsheet modeling was constructed and tested under an array of different conditions and inputs from growers. Refinements to the spreadsheet were made with each new beta testing.

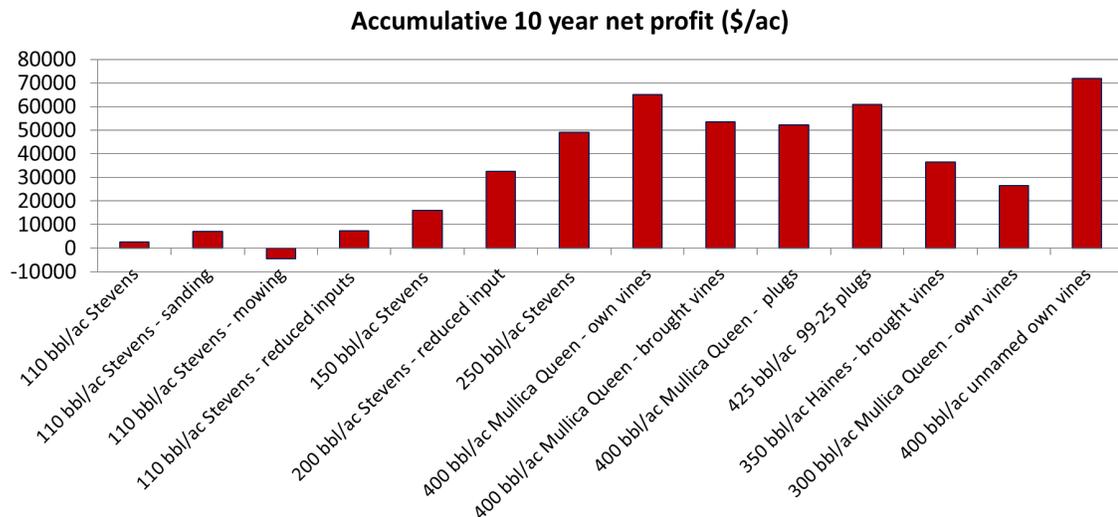
4) Model outreach. Outreach of the beta Excel spreadsheet models was provided at several venues including NARCEW in August and BC 2019 Harvest Review meeting in November. A demonstration of the final version of the model was provided at BC Cranberry Winter Congress February 2020. The Spreadsheet is available to growers by downloading from the BC Marketing Commission.

Results:

The final Excel ROI spreadsheet is attached as a separate file. Conclusions made from this model should be based on the input values provided by individual growers. However, based on the default values for renovation cost and annual cost of production there are numerous inferences that can be made for different renovation scenarios.

- The breakeven yield in BC using the defaults cost of productions is 106 bbl/ac.
- Renovation using sanding or mowing provided limited or no net profit after a decade.
- Renovating an existing high producing Stevens bed (>250 bbl/ac) with newer expensive hybrid vines was often not fiscally advantageous.

- The cost to procure high-producing hybrid vines was a minor consideration in net returns compared to the potential for significantly higher yield those vines produced.
- The renovation scenario that produced the highest accumulative 10-year net profit (\$/ac) was when growers mowed their own high producing vines (see figure below).



The intent of this model was also to assure a grower develop a Farm Succession Plan. A section within the spreadsheet contains a series of question that each farmer and their family should ask themselves.

- 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 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?
- 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?

Conclusion:

A dynamic 'Return on Investment Calculator' was produced to allow growers to obtain realistic returns that they can expect under different renovation and/or cost of production scenarios. This calculator can be used to make critical decisions to help secure the future of the farm. In addition, it will aid in the development of farm succession plan.