

***Start here and fill in the appropriate field information in this column

| Field Input | | Fertilizers applied | Herbicides applied | Fungicides applied | Insecticides applied |
|---------------------------|---------------------------|----------------------|----------------------|-----------------------|----------------------|
| Date | Blueberry Field #1 | 1 9-30-11 (Mesz) | 1 Velpar DF | 1 Bravo Zn | 1 Immidan 70 WP |
| # of acres | 18 acres | 0 12-22-15 (Mesz) | 0 Spartan 75 DF | 0 Proline 480 SC | 0 Assail 70 WP |
| % vine coverage | 70 % | 0 11-52-0 (MAP) | 0 Ultim DF | 1 Tilt 250 E | 0 Decis 5 EC |
| Average yield | 7500 lb/acre | 0 18-46-0 (DAP) | 0 Sinbar WDG | 0 Allegro 500 F | 0 Delegate WG |
| Blueberry price | \$0.20 /lb | 0 Calcium (foliar) | 1 Venture L | 0 Captan Supra 80 WDG | 0 Success 480 SC |
| Box tare | 0.0 % | 0 Zinc (foliar) | 0 Poast Ultra | 0 Pivot 418 | 0 Sevin XLR |
| BB producers dues | \$0.010 /lb | 0 Boron (foliar) | 0 Merge | 0 Fontellis | 0 Other |
| Crop insurance dues | \$0.00 total | 0 Iron (foliar) | 0 Option 2.25 OD | 0 Quilt | 0 Other |
| Yearly land cost | \$0.00 total | 0 Magnesium (foliar) | 0 UAN | 0 Switch 62.5 WG | 0 Other |
| Soil samples | \$0.00 total | 0 Other | 1 tm Callisto 480 SC | 0 Pristine WG | 0 Other |
| Tissue samples | \$0.00 total | 0 Other | 0 Kerb SC | 0 Other | 0 Other |
| Insect monitoring | \$0.00 total | 0 Other | 0 Chateau WDG | 0 Other | 0 Other |
| Field scouting | \$0.00 total | 0 Other | 0 Ignite 15 SN | 0 Other | 0 Other |
| Irrigation | \$0.00 total | 0 Other | 0 Authority 480 | 0 Other | 0 Other |
| Frost control | \$0.00 total | 0 Other | 0 Other | 0 Other | 0 Other |
| Weed wiping | \$0.00 total | 0 Other | 0 Other | 0 Other | 0 Other |
| Spraying cost | Contractor → \$25 /acre | 0 Other | 0 Other | 0 Other | 0 Other |
| Fertilizer spreading cost | Contractor → \$25 /acre | 0 Other | 0 Other | 0 Other | 0 Other |
| Honey bee hives | 1 hive/acre → \$130 /acre | | | | |
| Bumble bee quads | No quads → \$0 /acre | | | | |
| Harvest method | Mechanical | | | | |
| Harvesting cost | Contractor → \$0.11 /lb | | | | |
| Trucking cost | Contractor → \$0.02 /lb | | | | |
| Pruning method | Fail mower | | | | |
| Pruning cost | Contractor → \$70 /acre | | | | |

Wild Blueberry Management Tool - v1.1 NS

| Field Costs | | Field Output | |
|-------------------|---------------------|------------------------|--------------------|
| BB producers dues | \$ 1,350.00 | Actual blueberry price | \$ 0.20 /lb |
| Crop insurance | \$ - | Total acres | 18 acres |
| Land cost | \$ - | Vine coverage | 12.6 acres |
| Soil samples | \$ - | Bare ground | 5.4 acres |
| Tissue samples | \$ - | Avg field yield | 7,500 lb/acre |
| Insect monitoring | \$ - | Avg vine yield | 10,714 lb/acre |
| Field scouting | \$ - | Total field yield | 135,000 lb |
| Irrigation | \$ - | Wasted agrochemical | \$ 124.37 /acre |
| Frost control | \$ - | Wasted agrochemical | \$ 2,238.66 total |
| Weed wiping | \$ - | Yield revenue | \$ 1,500.00 /acre |
| Herbicide | \$ 2,962.80 | Yield revenue | \$ 27,000.00 total |
| Fungicide | \$ 1,747.80 | Additional income | \$ - total |
| Insecticide | \$ 1,060.56 | Additional expenses | \$ - total |
| Fertilizer | \$ 1,691.05 | Revenue after expenses | \$ 164.57 /acre |
| Pollination | \$ 2,340.00 | Revenue after expenses | \$ 2,962.21 total |
| Harvesting | \$ 14,850.00 | | |
| Trucking | \$ 2,700.00 | | |
| Pruning | \$ 1,260.00 | | |
| Total | \$ 29,962.21 | | |

[Click here to see detailed field input costs](#)

[Click here to see breakeven charts](#)

Fig. 1: Wild Blueberry Management Tool User Interface

Background

The wild blueberry industry is facing record low berry prices that has resulted in major concerns for growers, especially in Atlantic Canada and the US. Farm input and other costs to produce wild blueberries continue to increase, while farmers face record low blueberry prices (in 2016 and 2017). The cost-price squeeze has prompted growers to look for innovative methods to remain financially viable and sustainable. Ideally, farmers should keep detailed production, management and financial records that can be used to estimate production, harvest, and marketing costs, but such data and records are not typically compiled by wild blueberry producers.

A decision tool was developed to assist farmers in compiling such records and determine the economic viability of wild blueberry production based on vine coverage and actual field inputs.

Methodology

A Microsoft Excel-based tool was developed and customized for wild blueberry production (Fig. 1). The spreadsheet allows for compiling specific field input parameters (i.e., field name, size, percent vine coverage, average yield, blueberry price, number of soil and leaf samples collected, irrigation, number of honey bee hives, pruning method and harvest technique), and automatically tabulates the minimum, average and maximum agrochemical input costs required to manage the wild blueberry field over a two-year production cycle (Fig. 1). Local agrochemical retail prices are embedded into the spreadsheet to calculate herbicide, fungicide, insecticide and fertilizer costs. Custom rates for fertilizer spreading, agrochemical spraying, harvesting and pruning are used as default values, but also has flexibility for the user to modify such parameters for specific farm conditions. To enhance user-friendliness, the spreadsheet tool also automatically tabulates and summarizes costs into categories for both unit area, as well as a cost per unit weight of blueberries produced. Pie charts visually display field input cost comparisons so farmers can easily determine areas of high demand (Fig. 2). Break-even charts display the results to show what types of yields or blueberry vine coverage are required to remain sustainable (Fig. 3, Fig. 4). Farmers were given free access to download the spreadsheet to help them manage their input costs in each field to remain sustainable (Fig. 5).

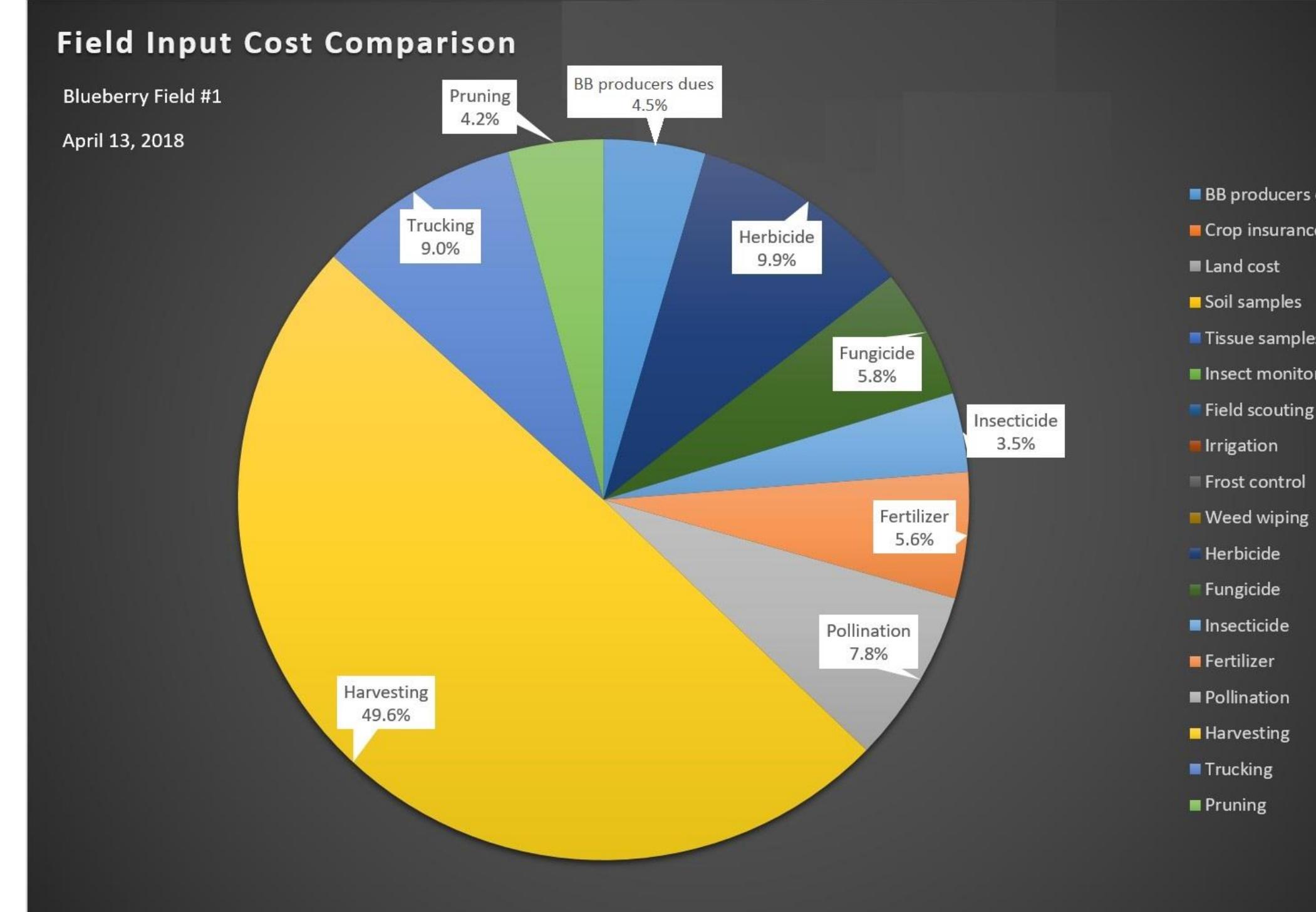


Fig. 2: Wild Blueberry Field Input Cost Comparison

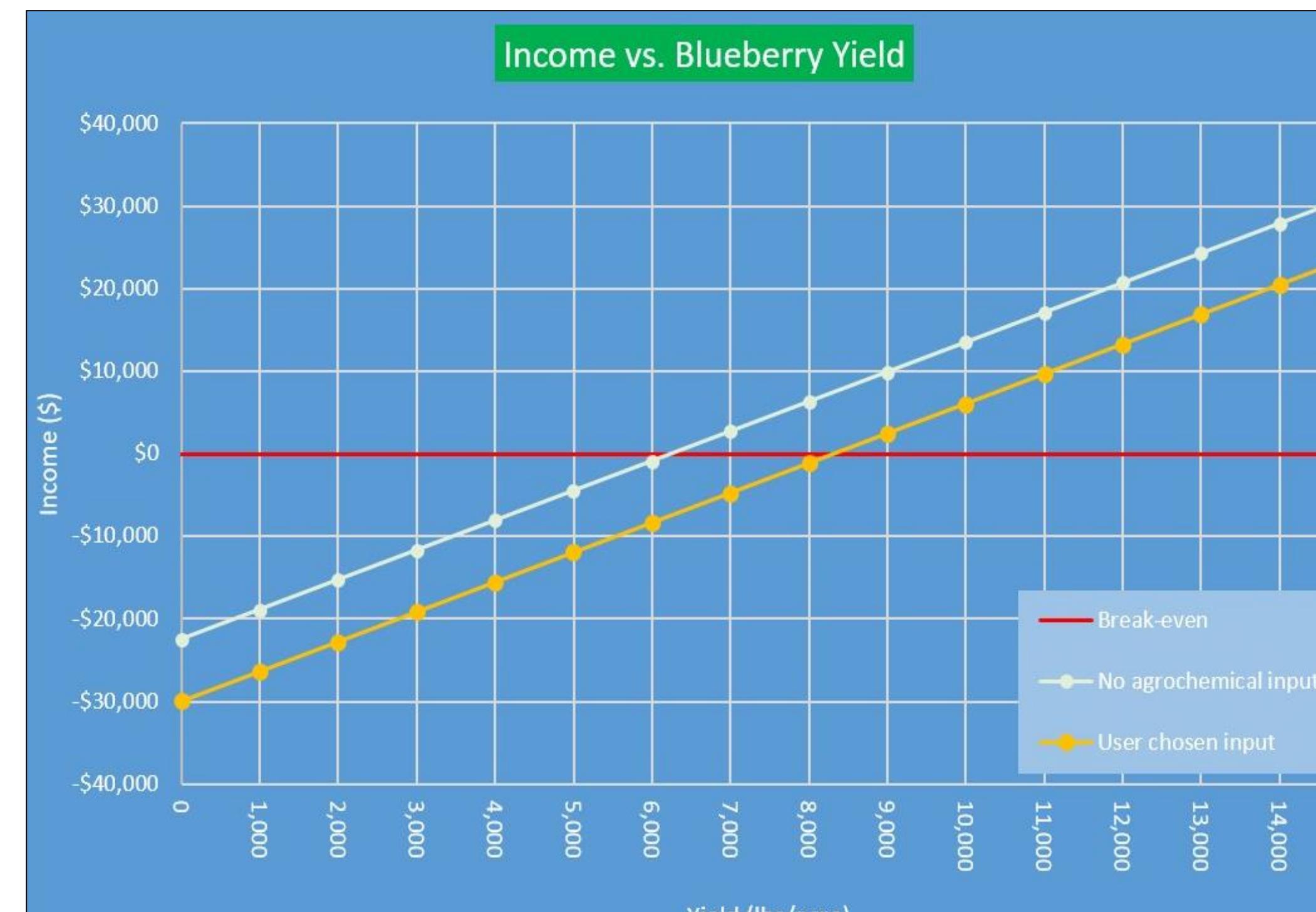


Fig. 3: Field Income Based on Wild Blueberry Yield

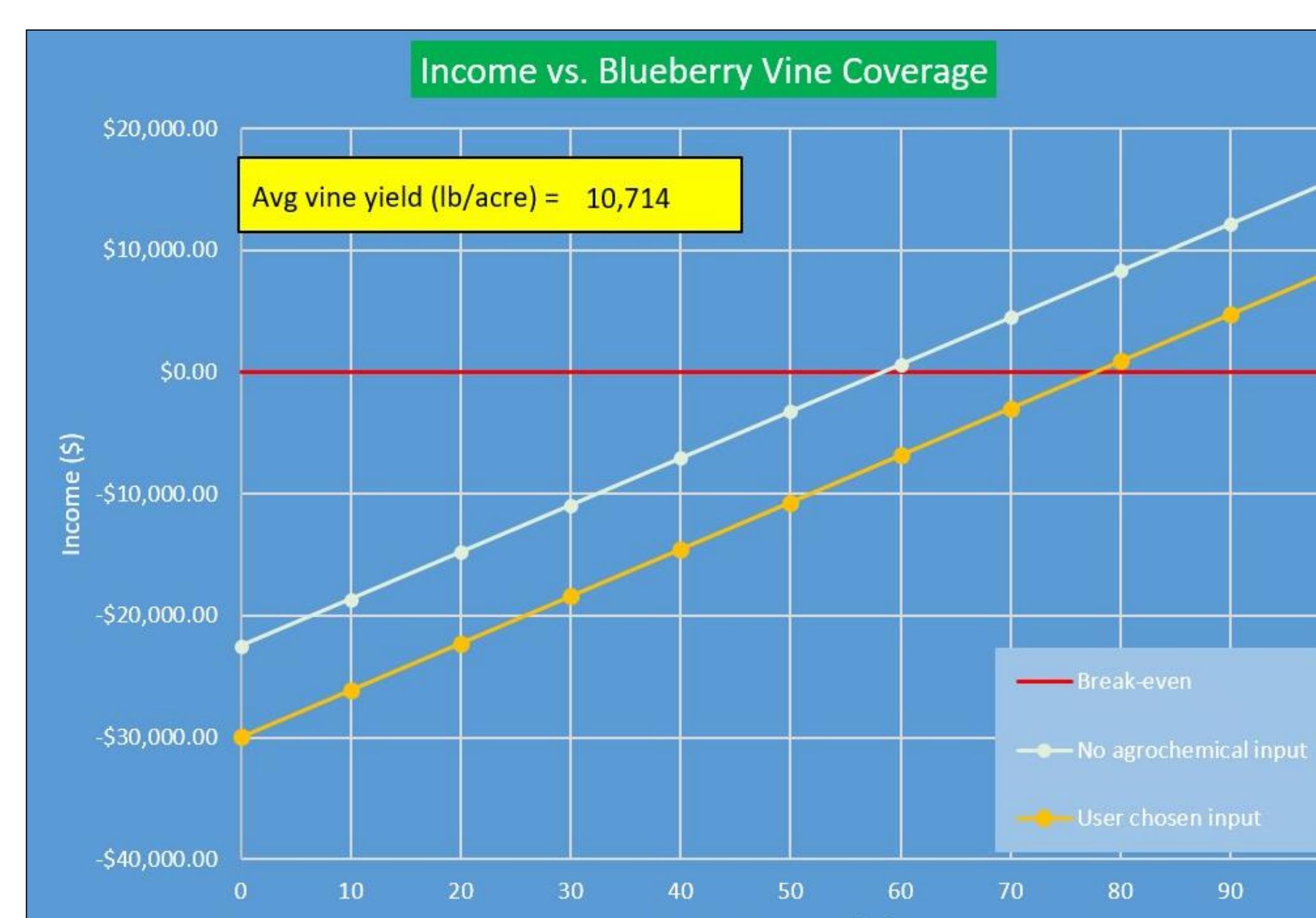


Fig. 4: Field Income Based on Wild Blueberry Vine Coverage

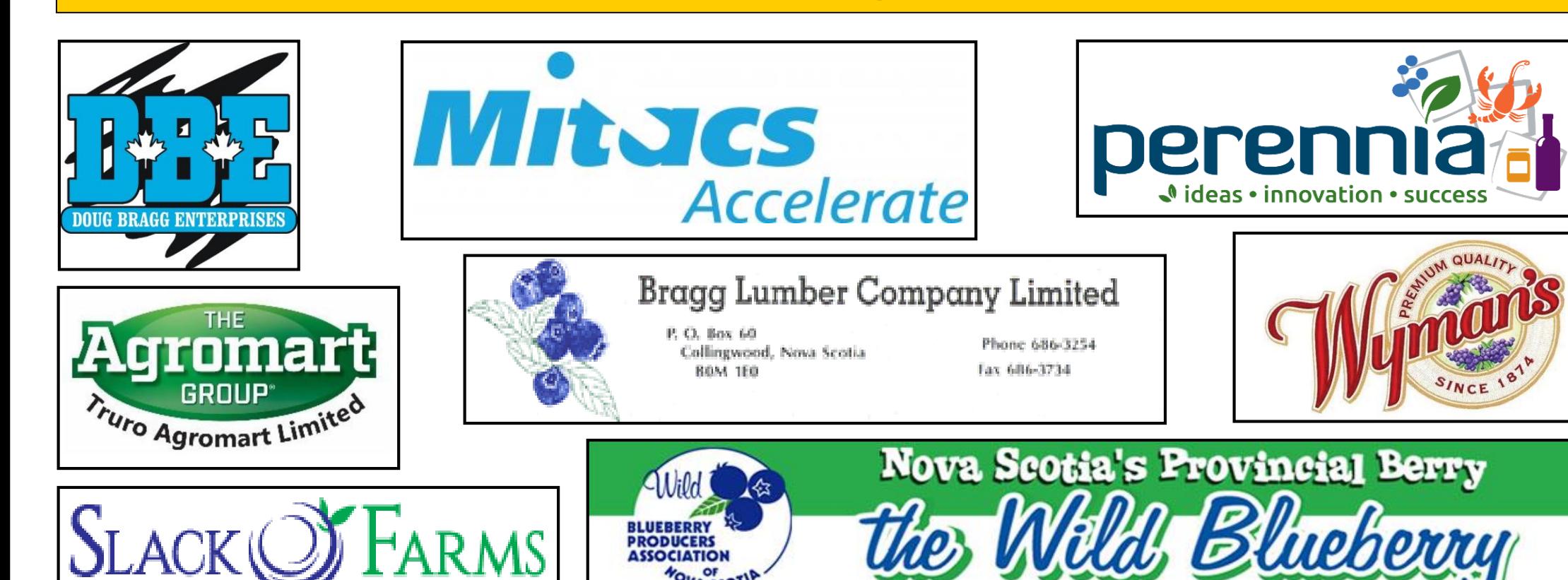


Fig. 5: Wild Blueberry Management Tool Download Link

Conclusion

The economic and functional tool developed has been piloted and tested by several wild blueberry farmers in Atlantic Canada and the US state of Maine, and helped them make logical investment, management and economic decisions to sustain blueberry farm operations in a period of low fruit prices. For example, growers with low producing fields have found an economic benefit by letting such fields rest, while improving management of their higher yielding fields.

Acknowledgements



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