



2002 Blueberry Cost and Return Estimates: Summary and Assumptions

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Summary

Blueberries are emerging as a crop with excellent profitability potential for Kentucky producers willing to invest the time, capital, and management into establishing well-managed blueberry acreage. Blueberries have the advantage of having lower establishment costs than other berry crops that may require trellis systems for production. Once established, properly managed blueberry bushes can produce for years.

Market Overview

Kentucky producers, particularly in western and southern Kentucky, face excellent market opportunities for blueberries. Premium prices can be obtained if Kentucky producers can capture the market window falling between fresh production from Florida (April-May) and Michigan (late June-July). Kentucky blueberry harvesters who begin harvesting marketable blueberries in early June can capture this fresh market window.

Blueberries can be marketed wholesale to local retailers' farm stands. There is also some market potential for Kentucky producers wishing to wholesale to regional grocery chains. Farmers' markets have proved to be a profitable marketing strategy for some Kentucky producers. Pick your own production tends to generate higher profits because it eliminates much of the harvest labor and expenses associated with harvest.

Detailed production budgets were developed during 2002 to analyze potential profitability of blueberries in Kentucky. Two sets of budgets were developed: on-farm retail/wholesale and Pick Your Own (PYO). The PYO budgets indicate this system will be more profitable for the producer in the long run; however, producers need to be aware of additional liability risks incurred when people come onto their farm. These risks are best addressed by a personal visit with your insurance agent to determine what additional coverage you will need on your farm.

Table 1. Blueberry Profitability

System	Estimated Establishment Cost (Cash Outlays Until Positive Cash Flows are Generated)	Estimated Annual Return to Land, Labor, and Management (Full Production)	Estimated Present Value of 10-Year Cumulative Return (9% Discount Rate)	Estimated Payback Period (Land, Labor & Management)
Wholesale/Retail	\$4,811	\$5,873	\$12,010	5 Years
Pick Your Own	\$4,598	\$8,325*	\$22,840	5 Years

* PYO return assumes owner/operator supervision of PYO customers

Table 2. On-Farm Retail/Wholesale Blueberry Profitability at Varying Prices and Yields \$/Acre Return to Land, Labor, and Management—Full Production Year

Price/Pint	Yield (Pints)						
	7000	7500	8000	8500	9000	9500	10,000
\$0.70	-436	-363	-289	-216	-143	-70	3
\$0.80	191	309	427	545	663	781	898
\$0.90	818	981	1143	1306	1469	1631	1794
\$1.00	1445	1652	1860	2067	2275	2482	2689
\$1.10	2072	2324	2576	2828	3081	3333	3585
\$1.20	2700	2996	3293	3590	3886	4183	4480
\$1.30	3326	3667	4009	4351	4692	5034	5376
\$1.40	3952	4339	4725	5112	5498	5885	6271
\$1.50	4579	5011	5442	5873	6304	6736	7167
\$1.60	5206	5682	6158	6634	7110	7586	8062
\$1.70	5833	6354	6875	7395	7916	8437	8958
\$1.80	6460	7025	7591	8157	8722	9288	9853

Table 3. Pick Your Own Blueberry Profitability at Varying Prices and Yields \$/Acre Return to Land, Labor, and Management—Full Production Year

Assumes 80% production goes to PYO, 20% to retail/wholesale

\$1.00/Pint Wholesale	Total Yield (Pints)						
	7000	7500	8000	8500	9000	9500	10,000
PYO Price/Pint	7000	7500	8000	8500	9000	9500	10,000
\$0.75	3304	3635	3966	4297	4628	4959	5290
\$1.00	4631	5057	5483	5908	6334	6760	7186
\$1.25	5958	6478	6999	7520	8040	8561	9081
\$1.50	7285	7900	8515	9131	9746	10361	10977
\$1.75	8612	9322	10032	10742	11452	12162	12872

\$1.50/Pint Wholesale							
PYO Price/Pint	7000	7500	8000	8500	9000	9500	10,000
.75	3967	4346	4724	5103	5481	5860	6238
1.00	5294	5768	6241	6714	7187	7660	8134
1.25	6621	7189	7757	8325	8893	9461	10029
1.50	7948	8611	9274	9936	10599	11262	11925
1.75	9275	10032	10790	11547	12305	13063	13820

2002 Kentucky Blueberry Costs and Returns Budget Assumptions

Pre-Planting: Standard cultural practices for cover crop establishment are followed. Assumes 650 pounds of sulfur is applied to lower soil pH.

Planting: University of Kentucky recommended cultural practices (fertilization, pesticides, cultivation, etc.) were followed in these budgets. Labor estimates were developed using data from current growers. Equipment costs (irrigation and machinery) were estimated using 2002 university standards.

Plant population was assumed to be 605 plants per acre. This population is well suited for PYO production; operations that wish to focus exclusively on wholesale production may desire to plant higher populations.

A trickle irrigation system was assumed beginning the year after planting. An arbitrary \$15/month variable cost of irrigation was assigned for table grapes; this cost can vary greatly according to water source and irrigation system.

Harvest: Harvested berries were assumed to be sorted into 1-pt plastic clamshells. No cost was assigned for picking containers. Purchase of these containers may occur in years 3 or 4. A marketing expense of 10% of the gross sales was assumed. Cost for an adequate refrigeration system to hold berries was assumed on the basis of being utilized for 2 acres of berry crops, blueberries or otherwise.

Labor: Labor costs were assigned at a wage rate of \$9.00 per hour for untrained labor due to the care needed in many of the ordinary duties of berry production. Management, pesticide application, and other more specialized tasks were assigned a rate of \$12.00 per hour. Due to the labor intensity required in grape production, lower wage rates could significantly raise profitability.

Fixed Costs

Fixed machinery costs were also calculated using recommended cultural practices and the Iowa State machinery cost generator. A \$220 annual cost for bird and wildlife pest control was

assigned per acre of fruiting blueberries. Blueberry production costs include a \$341 annual fixed cost for refrigeration. Annual fixed irrigation cost was assumed at \$348; this may increase or decrease depending on type of irrigation system (trickle or overhead) utilized.

Further budget assumption details may be obtained by contacting Matthew Ernst at:
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