



## 2008 Blueberry Cost and Return Estimates

October 2008

### Summary

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

### Market Overview

U.S. demand for all berries, especially fresh berries, continues in strength. Many Kentucky direct farm marketers have realized the potential for marketing high-value crops like berries at farmers markets, on-farm markets and direct to restaurants and groceries. There is also potential for Kentucky producers to tap into a wholesale market window for blueberries. Premium fresh prices can be obtained if Kentucky producers can capture the market window falling in between fresh production from Florida (April-May) and Michigan (late June-July). Kentucky blueberry producers in southern and western Kentucky who can begin harvesting marketable blueberries in early June could potentially capture this wholesale market window.

Farmers markets and on-farm sales near urban areas have proven an exceptionally profitable marketing strategy for some Kentucky blueberry producers. Blueberries are a popular crop at Kentucky farmers markets. There is good potential for Kentucky producers wishing to wholesale to regional grocery chains; blueberries can also be sold to local produce stands and to local restaurants. Producers located near Kentucky's produce auctions have also investigated this market channel for blueberries. Kentucky producers already engaging in on-farm marketing, such as orchards and roadside stands, have found Pick Your Own blueberries to be a very complementary, profitable crop to add to their existing market basket of crops. Though PYO eliminates much of the harvest labor and expenses associated with harvest, marketers incur more risk due to on-farm liability concerns. These risks are best identified during a personal visit with your insurance agent to determine what additional coverage you will need on your farm.

Two sets of budgets were revised and updated for the 2008 season: on-farm retail/wholesale and Pick Your Own (PYO). Establishment cost, full-production year return, and payback period are reported in Table 1. Tables 2 and 3 report the sensitivity of returns to varying price and yield combinations.

**Table 1. Estimated Blueberry Profitability For 1 Acre (8500 pints in full production year)**

<b>System</b>	<b>Establishment Cost</b> (Cash Outlays Until Positive Cash Flows are Generated)	<b>Annual Return to Owner Land, Capital, and Management</b> (Full Fruiting Year)	<b>Payback Period</b>
Wholesale/Retail \$1.75/pt	\$8,261	\$6,639	7 Years
Pick Your Own 80% \$1.25/pt PYO 20% @ \$1.75/pt	\$7,682	\$6,778*	7 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 Owner Land, Capital, and Management—Full Production Year**

Price/Pint	Yield (Pints)						
	7000	7500	8000	8500	9000	9500	10,000
\$0.80	-973	-858	-743	-628	-513	-398	-283
\$0.90	-343	-183	-23	137	297	457	617
\$1.00	287	492	697	902	1107	1312	1517
\$1.25	1862	2179	2497	2814	3132	3449	3767
\$1.40	2807	3192	3577	3962	4347	4732	5117
\$1.50	3437	3867	4297	4727	5157	5587	6017
\$1.60	4067	4542	5017	5492	5967	6442	6917
\$1.75	5011	5554	6097	6639	7181	7724	8267
\$2.00	6587	7242	7897	8552	9207	9862	10516
\$2.15	7532	8254	8977	9699	10422	11144	11867
\$2.25	8162	8929	9697	10464	11232	11999	12767
\$2.50	9737	10617	11497	12377	13257	14137	15017

**Table 3. Pick Your Own Blueberry Profitability at Varying Prices and Yields  
\$/Acre Return to Owner Land, Capital & Mgt.—Full Production Year**  
Assumes 80% production goes to PYO, 20% to retail/wholesale

\$1.25/Pint Wholesale	Total Yield (Pints)						
	7000	7500	8000	8500	9000	9500	10,000
PYO Price/Pint							
\$0.75	1952	2286	2619	2953	3286	3620	3953
\$1.00	3212	3636	4059	4483	4906	5330	5753
\$1.25	4472	4986	5499	6013	6526	7040	7554
\$1.50	5732	6336	6939	7543	8146	8750	9353
\$1.75	6992	7686	8379	9073	9766	10460	11153
\$2.00	8252	9036	9819	10603	11386	12170	12953
\$1.75/Pint Wholesale							
PYO Price/Pint							
.75	2582	2961	3339	3718	4096	4475	4853
1.00	3842	4311	4779	5248	5716	6185	6653
1.25	5102	5661	6219	6778	7336	7895	8453
1.50	6362	7011	7659	8308	8956	9605	10253
1.75	7622	8361	9099	9838	10576	11315	12053
2.00	8882	9711	10539	11368	12196	13025	13853

## 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 2008 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. Values were assigned for fixed and variable irrigation costs based on estimates of costs incurred by Kentucky producers. *Irrigation costs 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 need to 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 \$8.50 per hour for hired labor. Management, pesticide application, and other more specialized tasks were assigned a rate of \$15.00 per hour. Due to the labor intensity required in berry 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 \$550 annual fixed cost for refrigeration (half of the estimated \$1100 annual fixed cost for an 8'x8' refrigeration unit). Annual fixed irrigation cost was assumed at \$258; this may increase or decrease depending on type of irrigation system (trickle or overhead) utilized.

*Further budget assumption details may be obtained by contacting Tim Woods at:  
tim.woods@uky.edu*