Utah Urban Small-Scale Mixed Vegetable Production Costs and Returns – 5 Acres, 2014

Kynda Curtis, Associate Professor and Extension Specialist, Department of Applied Economics, Utah State University
Shawn Olsen, Extension Professor, Davis County
Trevor Knudsen, Graduate Research Assistant, Department of Applied Economics
Katie Wagner, Extension Assistant Professor, Salt Lake County

Sample costs and returns to produce mixed vegetables under drip irrigation and sold through direct markets in the Davis, Salt Lake, and Utah County areas of Utah. The practices described are not the recommendations of Utah State University, but rather the production practices considered typical of a well-managed farm in the region. The representative farm consists of 5 acres of land planted in a variety of high value vegetable crops. Vegetable pricing was calculated by taking the average of the local farmers' market and restaurant prices, as the products are marketed to both outlets. A 5% loss rate is applied to all yields to account for spoilage, damage, and unsold product.

Agricultural land lease costs range from $200 to $1,000 annually. A lease rate of $500 per acre is used here. As mixed vegetable production on small acreage is labor intensive the total farm labor (including owner labor) is 3800 hours across the season at a cost of $10/hr. The annual cost is $38,000 for the 5 acre farm, or $7,600/acre. A drip irrigation system is used to irrigate all 5 acres. The cost to install the system is $1,000 per acre, or $5,000 across all acres for pump, filter, mainline, and setup. The annual fee for drip tape is $1,000/acre. The system life averages 7 years (Haward Irrigation, 2014). The irrigation costs include a $500 annual irrigation fee and a $1,500 fee for early season culinary water for seedlings. Marketing fees include market stand costs ($800) and transportation to four markets weekly ($2,300). Labor costs involved in marketing are included in the labor costs described above. Annual food safety/testing include a $12 water test, a $30 scale calibration , and a $1,000 Global GAP inspection fee. The fuel and lube for machinery and vehicles is calculated at 8 percent of the average asset value. Annual repairs on all farm investments or capital recovery items that require maintenance are calculated at 2 percent of the average asset value for buildings, improvements, and equipment and 7 percent of the average asset value for machinery and vehicles. Cash overhead consists of various cash expenses paid out during the year. These costs include property taxes, interest, office expenses, liability, property insurance, and accounting/legal costs.

Capital recovery costs are the annual depreciation (opportunity cost) of all farm investments. Capital recovery costs are calculated using straight line depreciation. All equipment listed is new unless otherwise noted. For used machinery the price is calculated as one-half of the new purchase price and useful life is two-thirds that of new machinery (Painter, 2011).

Salvage value is 10 percent of the purchase price, which is an estimate of the remaining value of an investment at the end of its useful life. The salvage value for land is the purchase price, as land does not normally depreciate.

REFERENCES

Painter, Kathleen (2011). The Costs of Owning and Operating Farm Machinery in the Pacific Northwest 2011. A Pacific Northwest Publication #346. University of Idaho, Washington State University, and Oregon State University.

Haward Irrigation (2014). Personal communication, February 2014.