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Production Budget for Bell Peppers in Southwest Florida[1]

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Overview

Bell peppers are an important crop to the state of Florida, with southwest Florida being the second largest production area. Statewide, Florida harvested 17,500 acres of bell peppers during the 2006–07 growing season, valued at $183 million dollars (Table 1). In 2007, acreage planted to bell pepper in Florida decreased 10 percent while acreage harvested increased by 6.7 percent. Yield per acre (28-pound bushels) peaked in the 2003–04 season at a state average of 1,107 bushels, and has averaged in the range of 861 to 886 bushels over the last three seasons. Production in Florida increased 7 percent in 2007 while value per bushel (dollars) decreased 8.2 percent. Overall, the total value of Florida's bell pepper crop has decreased 16 percent since the 2003 season.

Production Practices

Bell pepper production practices vary considerably across the major Florida production areas. Most of the state's bell pepper crop is transplanted in double rows on polyethylene-mulched raised beds using either drip or seep irrigation technology. Methyl bromide in combination with chloropicrin is applied prior to planting transplants on more than 70 percent of Florida's bell pepper acreage for the management of soil insects, pathogens, nematodes, and weeds (especially nutsedge), all of which are major pests in bell pepper production. Approximately 33 percent of the Florida growers use stakes and twine around the bed perimeter to construct "corrals" to contain the plants. Standard spacing is six feet between bed centers, with plants typically planted ten inches apart. Bell peppers are usually hand harvested at least twice during the growing season. South Florida pepper growers may harvest up to five times in profitable market conditions.

Production Budgets

Table 2 is a per-acre composite budget breaking down specific cost components used to estimate the budget expense categories and total estimated production cost per acre. The budget is intended to reflect the cost of production using representative production practices that are considered typical for bell peppers grown in southwest Florida. What

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constitutes a representative production practice is defined by a consensus of opinion of UF/IFAS field experts, industry experts, and various producers in the production area. Cost estimates resulting from this process do not represent the average cost of production in a statistical sense, and the production practices listed are not necessarily recommended production practices. The intent of these cost budgets is to establish a benchmark within a comprehensive range of potential costs that could be expected to produce the crop. The budget also contains a *Your Cost* column that enables you to enter your individual expenses for comparative purposes.

The production budget for 2008 indicates that the pre-harvest variable costs for bell peppers in southwest Florida totaled an estimated $7,282 per acre, an increase of 20 percent over pre-harvest variable costs estimated in 2006. The fixed costs for a representative grower totaled $4,403 per acre in 2008, a 20 percent increase over the fixed costs in 2006. With an assumed yield of 1,000 bushels per acre, harvest and marketing costs totaled $4,450 per acre, bringing the total cost of production to an estimated $16,134 per acre, or $16.13 per bushel, an increase of 13 percent over the 2006 costs. The cost item that has increased most significantly since the 2005–06 budget is fertilizer, which increased 315 percent. Overall, labor costs (general farm labor and tractor driver wages), miscellaneous costs (including hand weeding, driving stakes, tying plants, plastic mulch disposal preparation), and transplants increased 10 percent, 2 percent, and 11 percent, respectively, over this period.

Additional Resources

We have developed interactive workbooks containing data used to create the UF/IFAS estimated budget in Table 2. These workbooks can be used to produce cost estimates broken down by specific groups (e.g., herbicide). Included in these workbooks are pesticide worksheets listing all of the currently labeled pesticides so that users can estimate their own pesticide costs, and machinery worksheets listing the machinery cost coefficients so that users can estimate their own fixed and variable costs. The International Agricultural Trade and Policy Center internet site (http://www.iatpc.ifas.ufl.edu) contains a link to download these interactive Excel workbooks. These workbooks enable users to compare their production expenses to the UF/IFAS estimates presented. These workbooks may be saved to your computer and printed in their entirety or printed as individual worksheets.

The following information is provided as a convenience to your research and decision making efforts.

- Botany: Family-Solanaceae, Pepper-Capsicum annuum
- Related crops in the Solanaceae Family: Tomato, Potato, Eggplant
- Common Bell Pepper Varieties for Commercial Production:
  - Common Varieties: Aladdin, Aristotle, Brigadier, Crusader, Double-Up, Enterprise-X3R, Excursion II, Heritage, Lafayette, Legionnaire, Olympus, Orion, Paladin, Patriot, Polaris, Revolution, Sentry, Snapper, Telestar, Wizard-X3R.
  - Specialty Varieties: Cubanelle, Aruba, Biscayne, Key Largo, Ancho Villa, Cherry Bomb, Grande, Hercules, Inferno, Large Red Thick, Mesilla, Mitla, Ventura.

For further information on pepper production in Florida please refer to EDIS publication HS732 (http://edis.ifas.ufl.edu/CV130) or contact your local Extension specialists.

References

Olson, S.M., Simone, W.M. Stall, K.L. Pernezny, S.E. Webb, T.G. Taylor and S.A. Smith. 2007. Chapter 34, Pepper Production in Florida. In *Vegetable Production Handbook for Florida 2006-2007*. Electronic Data Information Source (EDIS) CV130. Horticultural Sciences Department, University of Florida, Gainesville, FL. http://edis.ifas.ufl.edu/CV130

USDA/NASS. 2009. *Crop Statistics*. United States Department of Agriculture, National Agricultural Statistics Service, Washington, D.C. http://quickstats.nass.usda.gov/

Table 1. Florida bell pepper acreage, production, and value, crop years, 2002–03 through 2006–07.

Season	Planted	Harvested	Yield	Production	Unit Value	Total Value
	(acres)	(acres)	(28-lb bushels)	(1,000 bushels)	(dollars)	(1,000 dollars)
2002–03	17,800	17,700	1,000	17,700	10.05	177,920
2003–04	18,500	18,300	1,107	20,261	10.78	218,411
2004–05	19,400	19,000	861	16,357	13.05	213,428
2005–06	19,800	16,500	876	14,450	12.96	187,330
2006–07	18,000	17,500	886	15,500	11.82	183,148

Source: USDA/NASS, http://quickstats.nass.usda.gov/

Table 2. Estimated costs of producing one acre of bell peppers in southwest Florida, 2007–08.

Based on Yield of 1,100 Units Per Acre	Unit	Quantity	Price	Value	Your Cost
			(dollars)	(dollars)	
Pre-Harvest Variable Costs					
Transplants				1,000.00	
Fertilizer, mixed and lime				1,438.50	
Fumigant				600.00	
Herbicide				31.19	
Insecticide				630.55	
Fungicide				307.71	
Tractor + machinery				1,190.42	
Truck (pickup)				39.00	
Labor				452.36	
Plastic mulch				330.00	
Scouting				35.00	
Level land				100.00	
Drive stakes				83.49	
String, stakes, and plastic disposal				399.30	
Stakes				120.00	
Tie plants				36.30	
Interest on operating capital (10%)				462.76	
Total Pre-Harvest Variable Costs				7,281.58	

Table 2. Estimated costs of producing one acre of bell peppers in southwest Florida, 2007–08.

Based on Yield of 1,100 Units Per Acre	Unit	Quantity	Price (dollars)	Value (dollars)	Your Cost
Pre-Harvest Fixed Costs					
Tractor + machinery				253.29	
Land rent				500.00	
Overhead and management				3,649.23	
Total Pre-Harvest Fixed Costs				4,402.52	
Total Pre-Harvest Costs				11,684.10	
Harvest and Marketing Costs					
Pick/pack/haul	bushel	1,000	3.00	3,000.00	
Sell	bushel	1,000	0.50	500.00	
Containers	each	1,000	0.95	950.00	
Total Harvest and Marketing Costs				4,450.00	
Total Costs				16,134.10	