# PURDUE | AGRICULTURAL EXTENSION | ECONOMICS



**EC-802-W**Production
Economics

## **Small-Scale Livestock Enterprises:**

### **Dairy Steer Enterprise Budget**

#### Introduction

Are you considering starting a small-scale dairy steer enterprise? Perhaps you are also considering other small-scale livestock operations. This publication will enable you to evaluate alternatives and assess costs and returns for a small-scale dairy steer enterprise. The Purdue Comparative Decision Support (PCDS) matrix and PCDS2 profit/loss analysis tools are designed to help you take cost and price information to identify profitability and resource needs for small-scale livestock enterprises. If you are still considering different small-scale livestock operations you may want to refer to EC-800-W (Small-Scale Livestock Enterprises: Tools for Choosing the Right Enterprise for You) for additional discussion about how to use the PCDS and PCDS2 tools and compare alternative investments. This publication will help you assess the viability of a small-scale dairy steer operation given your needs and resources.

#### **Dairy Steer Budget**

One important goal, if you are going to start a dairy steer operation, is whether or not it will be profitable. Example budgets for operations and investment are presented in Tables 1 and 2. The examples reflect a pasture and grain fed operation where each steer is purchased at a weight of 350 pounds and sold at a weight of 700 pounds. This budget was designed with a 25-head scale. Price data were taken from national estimates when available and are provided to serve as a baseline for your planning process. We encourage you to replace price estimates with your farm level data and local market prices. You can find the budgets, along with the PCDS and PCDS2 tools at https://ag.purdue.edu/agecon/Pages/Livestock-Enterprise.aspx. Click on the "assumptions" sheet of the file, and replace the price values with your own. Working with different input values, you can use the budget templates to optimize the effectiveness of your expected budget.

The operations budget presented in Table 1 (page 2) contains revenue, variable costs, and fixed costs. Input your expected revenue per pound to find your incoming cash flow. Variable costs reflect assumed production decisions (i.e., feed ration and veterinary expenses). Once again, we encourage you to use the spreadsheet tool and adjust your farm estimates whenever possible. A labor expense of \$14 per hour is assumed to take into account the value of your time, and once again you can change that value. Fixed costs reflect the investment portion of the budget on a per-head basis and are presented in Table 2 (page 3). Depreciation, interest, taxes and insurance on the facilities and machinery investment are estimated at 14%. The assumed dairy steer investment captured in these fixed costs in the operating budget is included on page 2 of this publication.

Anna Lee Munns Business Intelligence Manager JBS USA

Joan Fulton & Nicole Olynk Widmar Department of Agricultural Economics Purdue University

**Audience:** Individuals operating or seeking to begin a small-scale dairy steer enterprise.

**Content:** Provides estimates for operating and investment budgets for a small-scale dairy steer enterprise. This publication also provides a framework for individuals to estimate their own input needs and incorporate their expected prices.

**Outcome:** Readers will have a baseline of expected costs and input needs for the assumed dairy steer enterprise from the interactive web-based decision support tools (PCDS and PCDS2) and corresponding budgets found at https://ag.purdue.edu/agecon/Pages/Livestock-Enterprise.aspx. They will be able to modify the estimates to fit their own dairy steer enterprise.



**Table 1. Operating Budget for Small-Scale Dairy Steer Enterprise** 

Dairy Steer—One Steer									
	C	Quantity	/ Price		Cash Flow		Your Farm		
Revenue									
Dairy Steer	700	lbs	\$		lb	\$		\$	
Animal Cost									
Dairy Steer	350	lbs	_\$_		_ lb	\$	331.84	\$	
Variable Costs									
Feed Costs									
Pasture	0.5	acres	\$	35.00	acre	\$	17.50	\$	
Pasture fert, misc costs	0.5	acres	\$	20.00	acre	\$	10.00	\$	
Corn	32	bu	\$	5.50	bu	\$	176.00	\$	
Soybean Meal 48%	340	lbs	\$	19.76	cwt	\$	67.18	\$	
Salt & mineral	18	ILbs	\$	22.00	cwt	\$	3.96	\$	
Total Feed Costs						\$	274.64	\$	
Veterinary and health						\$	20.00	\$	
Death Loss						\$	7.00	\$	
Machinery, equipment, fue	el, and re	epairs				\$	16.00	\$	
Building use						\$	16.00	\$	
Marketing						\$	15.00	\$	
Miscellaneous						\$	9.00	\$	
Interest on variable costs	6	months		9%		\$	31.03	\$	
Labor	2	hours	\$	14.00	hour	\$	28.00	\$	
Total Variable Costs						\$	416.67	\$	
Fixed Costs									
Machinery, equipment, fen	ices					\$	15.33	\$	
Total of all costs						\$	763.84	\$	
Profit						\$		\$	
Breakeven selling price p	er lb.					\$	1.09	\$	
Note: Breakeven selling pri	ce per r	oound assu	ımes a	a 350 lb	dairv st	eer p	urchase p	rice of \$331.84.	

**Table 2. Investment Budget for Small-Scale Dairy Steer Enterprise** 

Dairy SteerInvestment							
Facilities and machinery investment							
(25 head assumed)							
Utility tractor (\$18,000 x 10% steer use)	\$ 1,800.00						
Handling facilities	\$ 1,500.00						
Fences (\$94.00 per acre x 12.5 acres)	\$ 1,175.00						
Feeders and waterers	\$ 1,000.00						
Total	\$ 5,475.00						
Per steer	\$ 109.50						
Depreciation, interest, taxes, insurance @ 14% annually	\$ 15.33						

#### **Conclusions: Making your Decision**

All investment decisions are individual. Investment in a small-scale dairy steer operation is no exception and *only you can decide whether it is right for you*. As you use this publication and the corresponding PCDS and PCDS2 tools, keep the following questions in mind:

- What are your goals and objectives for entering into a smallscale dairy operation?
- What is the worst financial scenario you could encounter with this investment? (Note: you can determine this by inserting the "worst case" values in the "assumptions" sheet and view the outcome.) Do you have the resources to withstand this financial scenario?
- What is the best financial scenario you could encounter with this investment? (Again, use the computer tool to enter the "best case" values into the "assumptions" sheet and view the outcome.) Consider the return you would earn under the "best-case" scenario. Is this investment attractive enough for you to undertake?

If a small-scale dairy steer enterprise is a good match with your goals and objectives and you are comfortable with your responses to the questions associated with return, then it could be rational to proceed. Otherwise, you should consider waiting for the next investment opportunity.

#### Sources

Callan, P., Groover, G., Kauffman, D., Miller, M., Pease, J., White, A., et al. (2011, May 1). 2011 Viriginia Farm Business Management Livestock Budgets. Retrieved November 15, 2011, from Virginia Cooperative Extension: pubs.ext.vt.edu

Ellis, S., Edwards, W., Lawrence, J., & Johanns, A. (2010). *Livestock Budgets for Iowa-2010*. Ames, IA: Iowa State University: University Extension.

Tigner, R. (2005). So you want to raise Holstein Steers: Will it Pay (Accompanying budget). *Managing and marketing quality Holstein steers*. Rochester: University of Minnesota Extension.

USDA-KY Dept of Ag Market News. (2007-2011). *Kentucky Weekly Livestock Summary*. Louisville: USDA-AMS.

USDA-NASS. (2012). *Quick Stats 2.0*. (United States Department of Agriculture) Retrieved January 10, 2012, from National Agricultural Statistics Service: www.nass.usda.gov

#### The PCDS Tools

Find the interactive PCDS tools on the Purdue Agricultural Economics Extension website at

https://ag.purdue.edu/Agecon/Pages/Livestock-Enterprise.aspx.

#### **About the Authors**

Ann Lee Munns is Business Intelligence Manager with JBS USA. She was a MS student at Purdue University, and the material reported in this publication was developed as part of her MS thesis. Joan Fulton is Professor and Associate Department Head, and Nicole Olynk Widmar is Associate Professor, both in the Department of Agricultural Economics Purdue University.

To find out more about how to use the PCDS and PCDS2 tools to compare alternative investments, see EC-800-W (Small-Scale Livestock Enterprises: Tools for Choosing the Right Enterprise for You).



This product was developed with support from the Sustainable Agriculture Research and Education (SARE) program, which is funded by the U.S. Department of Agriculture — National Institute of Food and Agriculture (USDA-NIFA). Any opinions, findings, conclusions or recommendations expressed within do not necessarily reflect the view of the SARE program or the U.S. Department of Agriculture. USDA is an equal opportunity provider and employer.

Jan. 2016

It is the policy of the Purdue University Cooperative Extension Service that all persons have equal opportunity and access to its educational programs, services, activities, and facilities without regard to race, religion, color, sex, age, national origin or ancestry, marital status, parental status, sexual orientation, disability or status as a veteran.

Purdue University is an Affirmative Action institution. This material may be available in alternative formats.



