Zwick Center for Food and Resource Policy

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Milk Cost of Production Estimates for October, November, and December 2011

Prepared for the Connecticut Commissioner of Agriculture

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I. Introduction

In July 2009, Connecticut Public Act 09-229 established an agricultural sustainability account to provide financial assistance to Connecticut milk producers during times when the federal milk pay price falls below a minimum sustainable monthly cost of production (COP). This legislation mandates that the Commissioner of Agriculture make payments to Connecticut dairy farmers on a quarterly basis. To determine whether payments are necessary to comply with the legislation, Public Act 09-229 defines the minimum sustainable monthly COP as eighty-two percent of the monthly average COP for a New England state, as calculated by the Economic Research Service (ERS) of the United States Department of Agriculture.

To comply with state legislation, the Commissioner of Agriculture has requested that The Zwick Center for Food and Resource Policy in the Department of Agricultural and Resource Economics at the University of Connecticut provide estimates of the monthly COP for a New England State based on data and variables published by the USDA. Since the PA 09-229, Vermont's milk COP has served as the benchmark for Connecticut's milk COP.

This report is a follow up on previous reports for 2011 quarters two and three that use the current USDA methodology and continues the Vermont and Maine milk COP estimates previously calculated by the USDA's ERS.[1] This report presents milk COP estimates and prices for quarter four of 2011.

II. New USDA Survey Data Availability: The 2010 ARMS

The methodology used to estimate the milk COP for application of Public Act 09-229 relies upon the Agricultural Resource Management Survey (ARMS) to provide an annual milk COP for Vermont and Maine. This survey, updated every five years by the USDA, is used as a benchmark to estimate monthly and annual changes using National Agricultural Statistics Service (NASS) indices. Previous 2011 COP estimates generated used the 2005 ARMS data as a benchmark because the 2010 ARMS data had not been released. This changed on January 30,

[1] See previous Zwick Center COP reports by Rabinowitz and Lopez (2011) at http://zwickcenter.uconn.edu/outreach_reports.php.

2012, when the ERS released the 2010 annual state level milk cost of production using the 2010 ARMS as the base year for 23 states, including only Vermont and Maine in New England.

The 2010 ARMS estimates the annual milk COP for Vermont at $28.99/cwt. This is $6.22/cwt higher than the 2010 annual estimate for Vermont based on the 2005 ARMS. The major contributing factors in this increased cost of production for 2010 are total feed costs that increased $3.68/cwt, opportunity cost of unpaid labor that increased $1.23, and the capital recovery of machinery and equipment that increased $1.28/cwt. Changes to the Maine COP estimate is not as large. The 2010 ARMS estimate is $33.22/cwt, which represents only a $1.73/cwt increase from the 2010 estimate based on the 2005 ARMS. We use the updated 2010 ARMS data to estimate the monthly COP for quarter four of 2011 for both states.

The release of updated data and the significant changes that occurred from the 2005 to 2010 ARMS, for two states in New England that likely have significantly different cost structures, underscores the importance of developing a Connecticut specific benchmark for milk COP. The 2010 ARMS estimate for Vermont increased by 27.3%, for Maine increased only 5.5%, and for New York decreased by 0.2% from one survey year to the next. This highlights why a Connecticut specific COP is the best practice method for continued implementation of the law, as recommended in a COP Dairy Summit hosted by the Zwick Center in November 2011, with Agriculture Commissioners from Connecticut and Massachusetts, dairy farmers from both states, COP experts, and other stakeholders.

III. Monthly Cost of Production and Related Uniform Pricing for Quarter 4, 2011

The estimates for the October, November, and December 2011 milk COP for Vermont and Maine are shown in Table 1. Total operating costs in Vermont for October, November, and December 2011 are $21.09, $20.81, and $20.46/cwt., respectively. The major component of operating costs is the total feed costs of $16.12, $15.80, and $15.59/cwt., respectively. With the exception of the feed cost categories, there is very little variation within cost categories from month to month. Including total allocated overhead, the total milk COP in Vermont is estimated at $33.84 for October, $33.59 for November, and $32.98/cwt. for December, with an average COP for quarter four estimated at $33.47/cwt. The total milk COP in Maine is estimated at $37.81 for October, $36.41 for November, and $37.70/cwt. for December, with an average milk COP for quarter four estimated at $37.31/cwt.

Table 1. Vermont and Maine monthly milk COP: October - December 2011

Item 1/		Vermont			Maine		
		Oct	Nov	Dec	Oct	Nov	Dec
		Dollars per Hundredweight					
	Operating costs:						
	Total feed costs	16.12	15.80	15.59	16.94	16.12	16.78
	--Purchased feed	6.16	6.19	6.05	7.73	7.52	7.78
	--Homegrown harvested feed	9.54	9.21	9.13	9.00	8.40	8.80
	--Grazed feed	0.42	0.40	0.40	0.21	0.19	0.20
	Veterinary and medicine	0.79	0.78	0.76	1.08	1.05	1.08
	Bedding and litter	0.48	0.48	0.47	0.91	0.88	0.91
	Marketing	0.36	0.36	0.36	0.30	0.30	0.30
	Custom services	1.02	1.02	1.00	0.72	0.69	0.72
	Fuel, lube, and electricity	1.37	1.40	1.34	1.88	1.87	1.88
	Repairs	0.92	0.93	0.91	1.31	1.27	1.32
	Other operating costs	0.01	0.01	0.01	0.01	0.01	0.01
	Interest on operating capital	0.02	0.02	0.02	0.02	0.02	0.02
	Total operating costs	**21.09**	**20.81**	**20.46**	**23.17**	**22.21**	**23.01**
	Allocated overhead:						
	Hired labor	1.28	1.28	1.25	2.37	2.29	2.37
	Opportunity cost of unpaid labor	4.37	4.37	4.28	4.72	4.56	4.72
	Capital recovery of machinery and equipment	5.52	5.54	5.44	6.03	5.86	6.08
	Opportunity cost of land (rental rate)	0.08	0.08	0.07	0.03	0.03	0.03
	Taxes and insurance	0.43	0.43	0.42	0.46	0.44	0.46
	General farm overhead	1.08	1.09	1.06	1.04	1.01	1.04
	Total allocated overhead	**12.75**	**12.78**	**12.52**	**14.64**	**14.20**	**14.69**
Total	**All costs listed**	**33.84**	**33.59**	**32.98**	**37.81**	**36.41**	**37.70**

1/ Estimates may be adjusted based on revisions in monthly agricultural price indices and milk production estimates as provided by the USDA.
Source: Based on USDA's 2010 Agricultural Resource management Survey of milk producers and updated using current USDA milk production per cow and production input indexes. See http://www.ers.usda.gov/Data/CostsAndReturns/monthlymilkcosts.htm for methodol

Public Act 09-229 specifies the minimum sustainable monthly COP as eighty-two percent of the monthly average cost of production. As shown in Table 2, eighty-two percent of the Vermont milk COP is $27.75 for October, $27.54 for November, and $27.04/cwt for December. The average of these three months is $27.44/cwt. Eighty-two percent of the Maine milk cost of production is $31.00 for October, $29.86 for November, and $30.92/cwt for December. The average of these three months is $30.59/cwt.

Table 2. New England Milk Cost of Production Estimates, Statistical Uniform Price, and Application of Public Act 09-229

	October	November	December	Quarter 4 Average
	Dollars per Hundredweight			
Total Cost of Production				
Vermont	$33.84	$33.59	$32.98	$33.47
Maine	$37.81	$36.41	$37.70	$37.31
Minimum Sustainable Cost of Production				
Vermont	$27.75	$27.54	$27.04	$27.44
Maine	$31.00	$29.86	$30.92	$30.59
Statistical Uniform Price				
Hartford, CT	$20.32	$20.13	$19.47	$19.97
Statistical Uniform Price Minus Minimum Sustainable Cost of Production				
Vermont	-$7.43	-$7.41	-$7.57	-$7.47
Maine	-$10.68	-$9.73	-$11.45	-$10.62

Source: Total Cost of Production from Tables 1 and 2. Statistical Uniform Price from the USDA Federal Milk Order No. 1.

Farm milk prices in Vermont, Maine and elsewhere in the United States, have been sagging since August 2011 and the downward price trend continues while COP remains stubborn at historically high levels. Table 3 shows the statistical uniform prices (i.e., the blend price) for Hartford, CT for the fourth quarter of 2011. These are $20.32 for October, $20.13 for November, and $19.47/cwt for December; all significantly lower than the minimum sustainable monthly COP calculated using Vermont or Maine data. Using Vermont estimates, the minimum sustainable milk COP exceeded the Hartford-based farm price by $7.43 in October, $7.41 in November, and $7.57/cwt in December. This represents an average statistical uniform price $7.47/cwt below the minimum sustainable monthly COP estimate for Vermont. Using Maine COP estimates, the average statistical uniform price is $10.62/cwt below the minimum sustainable monthly cost of production in Maine.

Similar to quarter three of 2011 when Tropical Storm Irene significantly affected the states of Connecticut and Vermont, a rare snowstorm event hit both states on October 29, 2011, that resulted in extensive damages and power outages, resulting in increased COP for milk and agriculture in general in the following weeks. It is likely that Vermont's milk COP, as well as the one in Connecticut, were significantly higher in the aftermath of this weather shock.

IV. Conclusion

Using the recently released 2010 USDA ARMS update by the U.S. Department of Agriculture, Vermont and Maine milk COP were estimated for the fourth quarter of 2011. Applying Connecticut Public Act 09-229, the minimum sustainable COP based on Vermont's data exceeds the statistical uniform price in Hartford, Connecticut by $7.47/cwt of farm milk, resulting in a significant shortfall to farmers. Using Maine as the benchmark would have resulted in an even a larger shortfall.

Given the dramatic changes in the USDA survey used for Vermont milk COP, the need to have Connecticut COP numbers has never been greater. As recommended in the COP Dairy Summit hosted by the Zwick Center on November 28, 2011, the sustainable way forward is to generate numbers for Connecticut. This effort is now underway by implementing the Dairy Farm Business Summary and Analysis model (the Cornell model) which is the gold standard and has been used elsewhere for more than 50 years without any problems (please note that current users include Maine, New York and Pennsylvania). Aside from Vermont and Maine having quite different cost structures than those faced by Connecticut dairy farmers, continued reliance on the USDA will continue to make the Connecticut program hostage to changes in methodology, relying on outdated benchmark information, or suspended reporting, as we experienced in the past year. Although the initial year will be demanding, as all initial investments are, migrating to Connecticut numbers will be a worthwhile endeavor by applying the best practices to policy decisions and farm management.