A Comparison of 2013 Dairy Policy Alternatives on Dairy Markets

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Division of Applied Social Sciences
University of Missouri
215 Mumford Hall
Columbia, MO 65211
(573) 882 – 3861
http://amap.missouri.edu

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Contact authors for the report are Scott Brown (brownsc@missouri.edu) and Daniel Madison (madisondc@missouri.edu).

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Executive Summary

This report provides a comparison of the discussion draft released by Chairman Frank Lucas of Oklahoma and Ranking Member Collin Peterson of Minnesota of the House Agriculture Committee entitled the "Federal Agriculture Reform and Risk Management Act of 2013'' referred to in this report as "DSA" and the April 25th, 2013 release by Congressman Bob Goodlatte of Virginia and Congressman David Scott of Georgia entitled the "Dairy Freedom Act" referred to in this report as "DFA".

This analysis takes a monthly approach using a structural econometric model to determine what the effects of the two dairy policy proposals would have been over the 2009 to 2012 period. The results show:

1) Both proposals raise producer net revenue over the period with DSA up $0.55 per cwt. and DFA up by $0.48 per cwt.,
2) Government costs are $1 billion higher over the 2009 to 2012 period under DFA as a result of an assumed higher coverage rate choice and no supply adjustment mechanism as found in DSA,
3) Milk production on average is virtually unchanged under either option, although DSA DMSP operation resulted in a few instances of short-term reductions in milk supplies up to 3 percent,
4) Market prices for milk increase on average by $0.06 per cwt. under DSA and decline on average under DFA by $0.19 per cwt.,
5) Exports of dairy products decline under DSA when DMSP operates,
6) Farms representative of various inventory size typically experience the largest increase in net revenue under the DSA program,
7) Producers would experience the largest revenue increase under DFA with a $7.00 coverage rate while under DSA the $6.50 coverage rate is the most attractive due to differences in the premium structure of both programs.

These results depend on the period of time chosen. Operation of these two programs under alternative margin outcomes will change the results presented here. The forward-looking outlook for margin volatility must be discussed in determining appropriate dairy policy strategies. Each of these programs could spend nothing or billions of dollars depending on the exact margin path experienced.

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Introduction

U.S. dairy policy alternatives continue to receive attention from all dairy market participants as members of the U.S. Congress continue efforts to pass new farm legislation in 2013. The wide-ranging discussion surrounding dairy policy is not surprising given that all present proposals represent a major shift in policy direction for the industry. It remains clear by the alternative policy proposals on the table that a move from a price-based safety net for producers to a margin-based safety net is underway.

The margin approach under discussion covers milk prices and feed costs but is not a measure of a dairy producer's profitability. These two components have been the most volatile for producers over the past few years. The current policy environment has offered two possible alternatives to facilitate this move to a margin-based program. One dairy policy alternative includes a supply reduction program in low margin environments while the other only includes a margin-based program.

This report provides a comparison of the discussion draft released by Chairman Frank Lucas of Oklahoma and Ranking Member Collin Peterson of Minnesota of the House Agriculture Committee entitled the "Federal Agriculture Reform and Risk Management Act of 2013'' referred to in this report as "DSA" and the April 25th, 2013 release by Congressman Bob Goodlatte of Virginia and Congressman David Scott of Georgia entitled the "Dairy Freedom Act" referred to in this report as "DFA".

This analysis takes a monthly approach to model the effects of the two dairy policy proposals over the 2009 to 2012 period. This period of time has seen unprecedented volatility in dairy industry input costs and milk prices. The choice of time period to analyze these policy alternatives is critical. The depth and length of time of low producer margins affects policy alternative impacts. Regardless of the policy enacted, the effects depend in large part on the future path of milk prices and feed costs, and whether the 2009 to 2012 period is a good representation of the future will only be known after the fact. The future path of dairy margins will determine whether either program spends billions or no government dollars on the program. Although the policy discussion has included information about what might be determined actuarially fair premiums, the exact time path will differ to long-run average margins.

The monthly model used in this analysis is a structural econometric approach that is similar to the forward-looking annual framework that has been used in my previous work with the Food and Agricultural Policy Research Institute (FAPRI) or my more recent work within Agricultural Markets and Policy (AMAP). See fapri.missouri.edu/outreach/publications/2004/FAPRI_UMC_Report_12_04.pdf for a description of the annual model. The monthly model is simpler in structure but similar to the annual framework.

Assumptions

There are some critical assumptions that must be made to provide quantitative analysis of DSA or DFA. The first step in the process was to determine the amount of aggregate milk production that would participate under DSA and DFA. Based on the pool of analysis that has been done to date and examination of the expected payout over the 2009 to 2012 period it is assumed in this work that 70 percent of the U.S. milk production base will participate under either policy proposal.

The analysis uses 2008 annual milk production as the quantity necessary to establish the base for payments, since it is assumed that the DSA and DFA programs begin in January 2009. Preliminary analysis looked at alternative levels of participation, and both proposals would suggest high levels of participation from a purely economic standpoint. Actual participation in either DSA or DFA will depend on factors in addition to pure economic choices.

Under the DSA proposal, the base for base program payments remains fixed at the 2008 starting point while the supplemental base grows or contracts depending on milk marketings each year. Under the DFA proposal the base remains fixed at the 2008 level over the four-year period.

This analysis assumes that under DSA in the periods of time that the Dairy Market Stabilization Program (DMSP) operates, producers reduce their marketings to allowed DMSP levels. There has been ample discussion about DMSP effects and some have concluded producers would continue to market at levels above the allowed DMSP level. That is, producers would not make any adjustment in marketings as a result of DMSP operation to maintain future supplemental base quantity and allow for quick adjustment once DMSP ceased operation.

It remains important to understand that a producer is not paid for any milk marketed above the allowed DMSP level. That makes it difficult to conclude from an economic viewpoint that marketings above DMSP levels would occur. The recent milk supply reduction programs implemented in California provide evidence that producers do adjust their marketings downward quickly to remain within allowed levels when the economic penalty is large. The analysis further assumes that one month after DMSP operation is suspended there is a 25 percent carryover in reduced marketings from DMSP operation but by the 2nd month after DMSP operates, producers are back to marketing levels independent of DMSP operation. In reality there will be a varying effect on a producer by producer basis.

In calculating the monthly margin program under these policy alternatives, preliminary NASS estimates are not used, which delays by one month the triggering of DMSP that would occur from using preliminary NASS estimates. Interpretation of Congressional intent by the U.S. Department of Agriculture could result in an earlier triggering of DMSP than shown in this analysis. This analysis does incorporate the world to U.S. price triggers into the analysis of DSA. The DMSP program analysis can be very sensitive to these triggers.

Perhaps the largest difference in assumptions between DSA and DFA rests in the coverage level and rate chosen under each option. Under the DSA option it is assumed that producers on aggregate take 90

percent supplemental coverage at a $6.50 level while under the DFA option it is assumed that producers on aggregate take 80 percent historical base coverage at a $7.00 level. The analysis does not vary the choice of coverage over the four year period despite the fact that producers will have an annual choice of the dollar level and coverage quantity they wish to cover.

The reason for the different coverage level choices rests in large part on the premiums to be paid at the different levels. The higher $7.00 level is chosen under DFA as a result of the $0.18 per cwt. premium for the first 4 million pounds rising to $0.38 per cwt. above 4 million pounds. This is a lower premium rate than the $0.434 offered under DSA at all marketing levels. This analysis considered the entire range of choices in terms of coverage rate and levels under DSA and DFA before selecting the combination which provides the largest economic benefits under each program alternative.

Program Operation

Every component of the proposed dairy proposals depends on the calculated margin defined by the programs. The margin is defined under both policy alternatives as:

Margin = U.S. all milk price (USDA/NASS)

- 1.0728 x U.S. corn price (USDA/NASS)

- 0.00735 x soybean meal price (USDA/AMS, Central IL)

- 0.0137 x U.S. alfalfa price (USDA/NASS).

The margin is calculated on a monthly basis with program triggers based on combinations of these monthly margins. Margin payments are calculated on a bi-monthly basis. DMSP under the DSA option uses the monthly margin for the trigger. Again, this margin calculation includes only feed costs and is not meant to cover producer's total margin. Although often lost in the discussion of other portions of these programs, protecting the margin tends to reduce government outlays relative to a policy that only considers prices received or costs paid because over the longer term the positive correlation between feed costs and milk prices keeps the margin from going as low as would be the case if there was zero or negative correlation.

Premium rates under DFA and DSA are similar but are not identical. The largest difference between the two sets of premiums is at the $7.00 coverage rate. Table one shows that under DSA the premium at $7.00 coverage is $0.434 per cwt. for all levels of marketings while for DFA the first 4 million pounds of coverage has a premium of $0.18 per cwt. and even above 4 million pounds the premium of $0.38 per cwt. remains lower than that for DSA. The lower premium for $7.00 coverage drives the higher coverage option chosen under DFA relative to DSA.

Table 1. Premium Levels Based on Milk Marketings

	DSA Supplemental Premium Rate		DFA Premium Rate	
Coverage Rate	First 4 million lbs	Above 4 million lbs	First 4 million lbs	Above 4 million lbs
$4.00			$0.000	$0.030
$4.50	$0.010	$0.015	$0.010	$0.045
$5.00	$0.025	$0.036	$0.020	$0.066
$5.50	$0.040	$0.081	$0.035	$0.110
$6.00	$0.065	$0.155	$0.045	$0.185
$6.50	$0.090	$0.230	$0.090	$0.290
$7.00	$0.434	$0.434	$0.180	$0.380
$7.50	$0.590	$0.590	$0.600	$0.830
$8.00	$0.922	$0.922	$0.950	$1.060

The Results

Tables two through eight provide a summary of the results of the DSA and DFA scenarios. These results incorporate market dynamics from the assumptions made above in terms of how each of these program alternatives would have operated over the 2009 to 2012 period.

Table two shows the effect of both programs on markets prices for milk. This table provides a good comparison in the approaches of each of the policy alternatives. Under DFA, the reduction in all milk prices is a result of larger milk supplies due to the direct payments, which encourage more milk production. On average milk prices are $0.19 per cwt. lower over the 2009 to 2012 period under DFA. Under DSA, all milk prices are $0.06 per cwt. higher over the 2009 to 2012 period as the effect of DMSP outweighs the effect of direct payments and raises milk prices. DMSP operates for two months in 2009 and an additional two months in 2012. July 2009 and August 2012 are the starting months for the two DMSP events. In both cases, DMSP is stopped after two months because of the world to U.S. product price triggers. While both programs have small average effects on milk prices, DFA lowers average milk prices while the DMSP component of DSA slightly raises milk prices. DSA raises milk prices by nearly $3 per cwt. during 2009 DMSP operation.

Milk production over the 2009 to 2012 period is similar under the two alternatives as shown in table three. Milk production is slightly higher on average under DFA while it is virtually unchanged on average under DSA. However, the time path is very different between the two proposals. Under DSA, monthly milk production falls during DMSP operation by nearly 500 million pounds.

Table four shows the expected direct payments that would be made on milk that participates under either program. Payment rates are higher under the DFA option due to the $7.00 coverage rate chosen for that policy alternative. Because of the higher coverage rate under DFA, there are three additional bi-monthly periods of direct payments. Payments made under DFA are based on a producer's 2008 historical base while supplemental payments under DSA are made on a producer's supplemental base which depends over time on the amount of production by the operation.

The effect on aggregate net revenue is calculated in table five. Under the effects of direct payments and DMSP operation, the program adds an average of $0.55 per cwt. to aggregate net revenue. With the DFA option, net revenue increases by $0.48 per cwt. The month by month differences are larger between the two alternatives depending on whether DMSP is in operation.

Government costs of both alternatives are shown in table six. DFA would cost $3.6 billion over the 2009 to 2012 period while DSA would cost $2.6 billion. The reason for the higher cost for DFA is the higher coverage rate chosen relative to DSA ($7.00 versus $6.50) and the fact that DMSP reduces government outlays for DSA. The highest bi-monthly cost is $755 million in 2009. This highlights that in really economically stressed periods of time, government outlays will be large. Whether this level of spending occurs in the future depends on the severity of the next margin downturn. DSA uses a combination of taxpayer and consumer dollars for the program's overall effect while DFA uses only taxpayer funds in program operation.

Tables seven and eight provide results of these programs on dairy product markets. Nonfat dry milk exports are reduced under DSA when the DMSP operates and market prices for nonfat dry milk are higher. Under DFA, nonfat dry milk prices are unchanged to lower over the period. The DSA results show nonfat dry milk exports returning to actual levels shortly after the DMSP event ends.

Table nine takes three different-sized dairy farms (75, 350 and 2,000 cow operations) to determine what their best coverage rate and percentage would be given the aggregate sector-level assumption that 70 percent of U.S. milk participates at the maximum coverage levels for each policy and a coverage rate of $7.00 for DFA and $6.50 for DSA. This investigates whether an individual operation can choose a different strategy than the average to maximize profitability.

One important point is that it would have made little economic sense to reduce the coverage percentage from the maximum from 2009 to 2012. Under both DFA and DSA these three farms show the largest gains from maximizing coverage over the period. These farms were not allowed to change coverage percentages each year. Opting out of DSA to avoid the effects of DMSP would have been a poor economic decision over the 2009 to 2012 period. Larger increases in returns result from program participation.

DFA provides the highest increase in returns at $7.00 coverage with 80 percent of base marketings covered for all three farms sizes. DSA typically provides the highest return at $6.50 coverage with 90 percent supplemental coverage. In all three cases the highest increase in returns is found under the DSA program. However, these results will remain sensitive to the exact path of margin outcomes.

Summary

DSA and DFA are program options that provide different mechanisms to provide margin support to dairy producers. Both programs are different than the traditional price-based support programs of the past. Although they each attempt to provide support to the margin, they accomplish that in very different ways. DFA constructs a historical base to which payments are made during low-margin times. A producer that grows will not see their base change under the DFA option. DSA uses a market stabilization program to reduce milk supplies in low margin outcomes coupled with a direct payment program that has a base component that some have likened to catastrophic insurance and a supplemental component that allows a producer to grow over time and get added coverage on the new production. These programs both raise the net revenue to producers over the 2009 to 2012 period.

Table 2. Milk Prices under the DSA and DFA Dairy Policy Alternatives

	Actual	DSA, $6.5, 90% Supp., 70% Part.		DFA, $7.0, 80% Cov., 70% Part.	
		Level	Δ from Actual	Level	Δ from Actual
		(Dollars per cwt.)			
Jan-09	13.30	13.30	0.00	13.30	0.00
Feb-09	11.60	11.60	0.00	11.60	0.00
Mar-09	11.70	11.70	0.00	11.70	0.00
Apr-09	11.90	11.90	0.00	11.90	0.00
May-09	11.60	11.58	-0.02	11.58	-0.02
Jun-09	11.30	11.23	-0.07	11.22	-0.08
Jul-09	11.30	13.53	2.23	11.14	-0.16
Aug-09	12.10	16.06	3.96	11.91	-0.19
Sep-09	13.00	14.62	1.62	12.71	-0.29
Oct-09	14.30	13.57	-0.73	13.92	-0.38
Nov-09	15.40	14.45	-0.95	14.92	-0.48
Dec-09	16.50	15.76	-0.74	15.89	-0.61
Jan-10	16.10	15.43	-0.67	15.52	-0.58
Feb-10	15.80	15.03	-0.77	15.20	-0.60
Mar-10	14.80	14.00	-0.80	14.12	-0.68
Apr-10	14.60	13.88	-0.72	14.00	-0.60
May-10	15.00	14.46	-0.54	14.60	-0.40
Jun-10	15.40	14.82	-0.58	14.95	-0.45
Jul-10	15.90	15.36	-0.54	15.46	-0.44
Aug-10	16.70	16.25	-0.45	16.31	-0.39
Sep-10	17.70	17.28	-0.42	17.36	-0.34
Oct-10	18.50	18.11	-0.39	18.19	-0.31
Nov-10	17.90	17.55	-0.35	17.63	-0.27
Dec-10	16.70	16.43	-0.27	16.50	-0.20
Jan-11	16.70	16.45	-0.25	16.53	-0.17
Feb-11	19.10	18.86	-0.24	18.93	-0.17
Mar-11	20.40	20.17	-0.23	20.24	-0.16
Apr-11	19.60	19.34	-0.26	19.40	-0.20
May-11	19.60	19.44	-0.16	19.53	-0.07
Jun-11	21.10	20.96	-0.14	21.04	-0.06
Jul-11	21.80	21.67	-0.13	21.74	-0.06
Aug-11	22.10	21.96	-0.14	22.01	-0.09
Sep-11	21.10	20.98	-0.12	21.04	-0.06
Oct-11	20.00	19.96	-0.04	20.05	0.05
Nov-11	20.50	20.47	-0.03	20.54	0.04
Dec-11	19.70	19.65	-0.05	19.69	-0.01
Jan-12	19.00	18.97	-0.03	19.00	0.00
Feb-12	17.70	17.68	-0.02	17.73	0.03
Mar-12	17.20	17.18	-0.02	17.23	0.03
Apr-12	16.80	16.79	-0.01	16.83	0.03
May-12	16.20	16.20	0.00	16.24	0.04
Jun-12	16.20	16.20	0.00	16.23	0.03
Jul-12	16.90	16.91	0.01	16.92	0.02
Aug-12	18.10	20.01	1.91	18.07	-0.03
Sep-12	19.60	23.31	3.71	19.52	-0.08
Oct-12	21.50	23.18	1.68	21.34	-0.16
Nov-12	22.00	21.36	-0.64	21.75	-0.25
Dec-12	21.10	20.24	-0.86	20.77	-0.33
Average	16.94	17.00	0.06	16.75	-0.19

Table 3. Milk Production under the DSA and DFA Dairy Policy Alternatives

	Actual	DSA, $6.5, 90% Supp., 70% Part.		DFA, $7.0, 80% Cov., 70% Part.	
		Level	Δ from Actual	Level	Δ from Actual
			(Billion Pounds)		
Jan-09	16.14	16.14	0.00	16.14	0.00
Feb-09	14.75	14.75	0.00	14.75	0.00
Mar-09	16.49	16.49	0.00	16.49	0.00
Apr-09	16.15	16.15	0.00	16.15	0.00
May-09	16.81	16.82	0.02	16.82	0.02
Jun-09	15.94	15.50	-0.44	15.96	0.03
Jul-09	16.02	15.54	-0.47	16.05	0.04
Aug-09	15.74	15.68	-0.06	15.78	0.05
Sep-09	15.04	15.14	0.10	15.10	0.06
Oct-09	15.42	15.54	0.12	15.49	0.07
Nov-09	15.07	15.17	0.10	15.15	0.08
Dec-09	15.78	15.88	0.10	15.86	0.08
Jan-10	16.02	16.12	0.10	16.10	0.08
Feb-10	14.76	14.84	0.09	14.83	0.08
Mar-10	16.61	16.71	0.09	16.69	0.08
Apr-10	16.42	16.50	0.08	16.49	0.07
May-10	17.04	17.12	0.08	17.11	0.07
Jun-10	16.35	16.42	0.07	16.41	0.06
Jul-10	16.44	16.50	0.06	16.49	0.06
Aug-10	16.09	16.15	0.05	16.14	0.05
Sep-10	15.54	15.58	0.04	15.58	0.04
Oct-10	15.90	15.94	0.04	15.94	0.04
Nov-10	15.50	15.53	0.03	15.53	0.03
Dec-10	16.15	16.18	0.03	16.18	0.03
Jan-11	16.39	16.42	0.03	16.42	0.03
Feb-11	15.08	15.10	0.02	15.10	0.02
Mar-11	16.99	17.01	0.02	17.01	0.02
Apr-11	16.65	16.67	0.02	16.67	0.02
May-11	17.28	17.30	0.02	17.29	0.02
Jun-11	16.52	16.53	0.01	16.53	0.01
Jul-11	16.48	16.49	0.01	16.49	0.01
Aug-11	16.42	16.43	0.01	16.43	0.01
Sep-11	15.78	15.79	0.01	15.79	0.01
Oct-11	16.28	16.28	0.01	16.28	0.01
Nov-11	15.82	15.83	0.01	15.82	0.00
Dec-11	16.56	16.56	0.00	16.56	0.00
Jan-12	17.01	17.01	0.00	17.01	0.00
Feb-12	16.31	16.31	0.00	16.31	0.00
Mar-12	17.70	17.70	0.00	17.70	0.00
Apr-12	17.22	17.22	0.00	17.22	0.00
May-12	17.59	17.59	0.00	17.59	0.00
Jun-12	16.67	16.67	0.00	16.67	0.00
Jul-12	16.59	16.26	-0.33	16.60	0.01
Aug-12	16.42	16.09	-0.33	16.43	0.02
Sep-12	15.68	15.63	-0.05	15.71	0.02
Oct-12	16.26	16.32	0.06	16.29	0.03
Nov-12	16.01	16.08	0.07	16.05	0.04
Dec-12	16.83	16.90	0.07	16.87	0.05
Average	16.22	16.22	0.00	16.25	0.03

Table 4. Direct Payments under the DSA and DFA Dairy Policy Alternatives

	Actual	DSA, $6.5, 90% Supp., 70% Part.		DFA, $7.0, 80% Cov., 70% Part.	
		Level	Δ from Actual	Level	Δ from Actual
		(Dollars per Eligible Cwt.)			
Jan/Feb 09	0.00	2.66	2.66	3.16	3.16
Mar/Apr 09	0.00	2.95	2.95	3.45	3.45
May/Jun 09	0.00	4.05	4.05	4.56	4.56
Jul/Aug 09	0.00	0.00	0.00	3.59	3.59
Sep/Oct 09	0.00	0.17	0.17	1.45	1.45
Nov/Dec 09	0.00	0.00	0.00	0.00	0.00
Jan/Feb 10	0.00	0.00	0.00	0.00	0.00
Mar/Apr 10	0.00	0.00	0.00	0.31	0.31
May/Jun 10	0.00	0.00	0.00	0.00	0.00
Jul/Aug 10	0.00	0.00	0.00	0.00	0.00
Sep/Oct 10	0.00	0.00	0.00	0.00	0.00
Nov/Dec 10	0.00	0.00	0.00	0.00	0.00
Jan/Feb 11	0.00	0.00	0.00	0.00	0.00
Mar/Apr 11	0.00	0.00	0.00	0.00	0.00
May/Jun 11	0.00	0.00	0.00	0.00	0.00
Jul/Aug 11	0.00	0.00	0.00	0.00	0.00
Sep/Oct 11	0.00	0.00	0.00	0.00	0.00
Nov/Dec 11	0.00	0.00	0.00	0.00	0.00
Jan/Feb 12	0.00	0.00	0.00	0.27	0.27
Mar/Apr 12	0.00	1.92	1.92	2.38	2.38
May/Jun 12	0.00	3.06	3.06	3.52	3.52
Jul/Aug 12	0.00	2.68	2.68	4.15	4.15
Sep/Oct 12	0.00	0.00	0.00	0.49	0.49
Nov/Dec 12	0.00	0.00	0.00	0.00	0.00
Average	0.00	0.73	0.73	1.14	1.14

Table 5. U.S. Revenue under the DSA and DFA Dairy Policy Alternatives

	Actual	DSA, $6.5, 90% Supp., 70% Part.		DFA, $7.0, 80% Cov., 70% Part.	
		Level	Δ from Actual	Level	Δ from Actual
		(Dollars per Cwt.)			
Jan/Feb 09	12.45	14.68	2.23	14.80	2.35
Mar/Apr 09	11.80	14.28	2.48	14.35	2.55
May/Jun 09	11.45	14.64	3.19	14.70	3.25
Jul/Aug 09	11.70	14.65	2.95	14.06	2.36
Sep/Oct 09	13.65	14.09	0.44	14.20	0.55
Nov/Dec 09	15.95	14.95	-1.00	15.17	-0.78
Jan/Feb 10	15.95	15.08	-0.87	15.12	-0.83
Mar/Apr 10	14.70	13.78	-0.92	14.06	-0.64
May/Jun 10	15.20	14.48	-0.72	14.53	-0.67
Jul/Aug 10	16.30	15.64	-0.66	15.64	-0.66
Sep/Oct 10	18.10	17.54	-0.56	17.53	-0.57
Nov/Dec 10	17.30	16.84	-0.46	16.83	-0.47
Jan/Feb 11	17.90	17.49	-0.41	17.48	-0.42
Mar/Apr 11	20.00	19.59	-0.41	19.58	-0.42
May/Jun 11	20.35	20.05	-0.30	20.06	-0.29
Jul/Aug 11	21.95	21.66	-0.29	21.65	-0.30
Sep/Oct 11	20.55	20.32	-0.23	20.32	-0.23
Nov/Dec 11	20.10	19.91	-0.19	19.88	-0.22
Jan/Feb 12	18.35	18.17	-0.18	18.34	-0.01
Mar/Apr 12	17.00	18.62	1.62	18.69	1.69
May/Jun 12	16.20	18.83	2.63	18.83	2.63
Jul/Aug 12	17.50	20.76	3.26	20.59	3.09
Sep/Oct 12	20.55	23.09	2.54	20.59	0.04
Nov/Dec 12	21.55	20.64	-0.91	21.03	-0.52
Average	16.94	17.49	0.55	17.42	0.48

Table 6. U.S. Government Outlays under the DSA and DFA Dairy Policy Alternatives

	DSA, $6.5, 90% Supp., 70% Part.				DFA, $7.0, 80% Cov., 70% Part.		
	Base Program	Supp. Program	Premiums	Net Outlays	Payments	Premiums	Net Outlays
				(Million Dollars)			
Jan/Feb 09	29	487	34	482	561	53	508
Mar/Apr 09	79	499	35	543	611	53	558
May/Jun 09	275	499	35	739	808	53	755
Jul/Aug 09	-	-	34	(34)	637	53	584
Sep/Oct 09	-	33	34	(1)	257	53	204
Nov/Dec 09	-	-	34	(34)	-	53	(53)
Jan/Feb 10	-	-	34	(34)	-	53	(53)
Mar/Apr 10	-	-	34	(34)	54	53	1
May/Jun 10	-	-	34	(34)	-	53	(53)
Jul/Aug 10	-	-	34	(34)	-	53	(53)
Sep/Oct 10	-	-	34	(34)	-	53	(53)
Nov/Dec 10	-	-	34	(34)	-	53	(53)
Jan/Feb 11	-	-	35	(35)	-	53	(53)
Mar/Apr 11	-	-	35	(35)	-	53	(53)
May/Jun 11	-	-	35	(35)	-	53	(53)
Jul/Aug 11	-	-	35	(35)	-	53	(53)
Sep/Oct 11	-	-	35	(35)	-	53	(53)
Nov/Dec 11	-	-	35	(35)	-	53	(53)
Jan/Feb 12	-	-	36	(36)	47	53	(6)
Mar/Apr 12	-	397	36	361	422	53	369
May/Jun 12	99	516	36	579	625	53	572
Jul/Aug 12	32	509	35	506	735	53	682
Sep/Oct 12	-	-	35	(35)	88	53	34
Nov/Dec 12	-	-	36	(36)	-	53	(53)
Total	515	2,939	837	2,617	4,846	1,277	3,569

Table 7. U.S. Nonfat Dry Milk Prices under the DSA and DFA Dairy Policy Alternatives

	Actual	DSA, $6.5, 90% Supp., 70% Part.		DFA, $7.0, 80% Cov., 70% Part.	
		Level	Δ from Actual	Level	Δ from Actual
		(Million Pounds)			
Jan-09	0.85	0.85	0.00	0.85	0.00
Feb-09	0.83	0.83	0.00	0.83	0.00
Mar-09	0.84	0.84	0.00	0.84	0.00
Apr-09	0.86	0.86	0.00	0.86	0.00
May-09	0.87	0.86	-0.01	0.86	-0.01
Jun-09	0.90	1.15	0.25	0.89	-0.01
Jul-09	0.91	1.08	0.17	0.89	-0.01
Aug-09	0.95	0.87	-0.08	0.93	-0.02
Sep-09	1.02	0.90	-0.11	1.00	-0.02
Oct-09	1.23	1.18	-0.05	1.20	-0.03
Nov-09	1.30	1.26	-0.04	1.26	-0.03
Dec-09	1.37	1.32	-0.05	1.33	-0.03
Jan-10	1.37	1.32	-0.05	1.33	-0.03
Feb-10	1.21	1.17	-0.03	1.18	-0.03
Mar-10	1.11	1.09	-0.03	1.09	-0.02
Apr-10	1.24	1.21	-0.03	1.22	-0.02
May-10	1.32	1.28	-0.03	1.29	-0.03
Jun-10	1.31	1.28	-0.03	1.29	-0.02
Jul-10	1.26	1.24	-0.02	1.24	-0.02
Aug-10	1.22	1.20	-0.02	1.20	-0.02
Sep-10	1.23	1.22	-0.02	1.22	-0.01
Oct-10	1.24	1.23	-0.01	1.23	-0.01
Nov-10	1.23	1.22	-0.01	1.23	-0.01
Dec-10	1.26	1.25	-0.01	1.25	-0.01
Jan-11	1.35	1.34	-0.01	1.34	-0.01
Feb-11	1.57	1.56	-0.01	1.56	-0.01
Mar-11	1.62	1.61	-0.01	1.62	0.00
Apr-11	1.59	1.58	-0.01	1.59	0.00
May-11	1.65	1.64	-0.01	1.64	0.00
Jun-11	1.68	1.67	-0.01	1.68	0.00
Jul-11	1.66	1.65	0.00	1.66	0.00
Aug-11	1.58	1.58	0.00	1.58	0.00
Sep-11	1.54	1.54	0.00	1.54	0.00
Oct-11	1.49	1.49	0.00	1.49	0.00
Nov-11	1.47	1.47	0.00	1.47	0.00
Dec-11	1.45	1.45	0.00	1.45	0.00
Jan-12	1.43	1.43	0.00	1.44	0.00
Feb-12	1.38	1.38	0.00	1.38	0.00
Mar-12	1.31	1.31	0.00	1.31	0.00
Apr-12	1.23	1.23	0.00	1.24	0.00
May-12	1.17	1.17	0.00	1.17	0.00
Jun-12	1.20	1.20	0.00	1.20	0.00
Jul-12	1.24	1.45	0.21	1.24	0.00
Aug-12	1.40	1.59	0.19	1.40	0.00
Sep-12	1.53	1.47	-0.06	1.53	-0.01
Oct-12	1.54	1.44	-0.10	1.53	-0.01
Nov-12	1.55	1.50	-0.05	1.53	-0.02
Dec-12	1.57	1.53	-0.04	1.55	-0.02
Average	1.29	1.29	0.00	1.28	-0.01

Table 8. Nonfat Dry Milk Exports under the DSA and DFA Dairy Policy Alternatives

	Actual	DSA, $6.5, 90% Supp., 70% Part.		DFA, $7.0, 80% Cov., 70% Part.	
		Level	Δ from Actual	Level	Δ from Actual
			(Million Pounds)		
Jan-09	48.4	48.4	0.0	48.4	0.0
Feb-09	27.8	27.8	0.0	27.8	0.0
Mar-09	34.7	34.7	0.0	34.7	0.0
Apr-09	39.6	39.7	0.0	39.7	0.0
May-09	44.7	44.8	0.2	44.8	0.2
Jun-09	45.0	39.4	-5.5	45.2	0.3
Jul-09	62.1	56.6	-5.5	62.4	0.3
Aug-09	62.6	63.5	0.9	63.0	0.4
Sep-09	43.6	47.7	4.1	44.1	0.5
Oct-09	64.5	67.7	3.2	65.2	0.7
Nov-09	43.7	45.7	2.0	44.5	0.8
Dec-09	31.9	33.3	1.4	32.6	0.7
Jan-10	28.7	29.8	1.0	29.4	0.7
Feb-10	33.9	34.5	0.6	34.4	0.5
Mar-10	56.4	56.7	0.2	56.6	0.2
Apr-10	59.9	60.1	0.2	60.0	0.2
May-10	88.4	88.7	0.3	88.7	0.3
Jun-10	79.9	80.2	0.3	80.2	0.3
Jul-10	66.5	66.8	0.2	66.8	0.2
Aug-10	78.8	78.8	0.1	78.9	0.1
Sep-10	95.5	95.5	0.0	95.5	0.0
Oct-10	109.5	109.4	0.0	109.4	0.0
Nov-10	74.5	74.4	0.0	74.4	-0.1
Dec-10	74.9	74.9	0.0	74.9	0.0
Jan-11	86.1	86.1	0.0	86.1	0.0
Feb-11	78.7	78.8	0.1	78.7	0.0
Mar-11	82.6	82.6	0.1	82.6	0.0
Apr-11	73.6	73.6	0.0	73.5	-0.1
May-11	76.5	76.5	0.0	76.5	0.0
Jun-11	83.5	83.5	0.0	83.4	0.0
Jul-11	81.7	81.7	0.0	81.6	-0.1
Aug-11	80.0	80.0	0.0	79.9	-0.1
Sep-11	85.2	85.1	-0.1	85.1	-0.2
Oct-11	76.1	76.0	0.0	76.0	-0.1
Nov-11	82.3	82.3	0.0	82.2	-0.1
Dec-11	74.2	74.2	0.0	74.1	-0.1
Jan-12	85.3	85.3	0.0	85.2	-0.1
Feb-12	87.7	87.6	0.0	87.6	-0.1
Mar-12	86.9	86.8	0.0	86.8	-0.1
Apr-12	86.6	86.6	0.0	86.5	-0.1
May-12	100.1	100.1	0.0	100.1	0.0
Jun-12	86.3	86.3	0.0	86.2	0.0
Jul-12	70.2	65.8	-4.5	70.3	0.1
Aug-12	93.7	88.5	-5.3	93.9	0.1
Sep-12	74.1	74.6	0.4	74.4	0.2
Oct-12	73.0	76.4	3.4	73.3	0.3
Nov-12	65.0	67.8	2.9	65.4	0.4
Dec-12	61.5	63.5	2.0	61.9	0.4
Average	69.3	69.3	0.1	69.4	0.1

Table 9. 2009 to 2012 Change in Net Revenue for Three Representative Farms

Assumes Aggregate Participation at 70 Percent with DSA ($6.5, 90%) and DFA ($7.0, 80%)

		Coverage Percentage													
		25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%
75 Cow Operation		(Thousand Dollars)													
DFA															
	$ 5.50	-2.6	-1.3	0.1	1.4	2.8	4.2	5.5	6.9	8.2	9.6	11.0	12.3		
	$ 6.00	-0.8	1.0	2.7	4.4	6.2	7.9	9.6	11.4	13.1	14.8	16.6	18.3		
	$ 6.50	0.7	2.7	4.8	6.8	8.8	10.8	12.9	14.9	16.9	18.9	21.0	23.0		
	$ 7.00	2.2	4.5	6.8	9.1	11.4	13.7	16.1	18.4	20.7	23.0	25.3	27.6		
	$ 7.50	0.0	1.9	3.8	5.6	7.5	9.4	11.3	13.2	15.1	16.9	18.8	20.7		
DSA	$ 5.50	9.2	10.0	10.8	11.5	12.3	13.1	13.8	14.6	15.3	16.1	16.9	17.6	18.4	19.2
	$ 6.00	10.5	11.5	12.5	13.5	14.5	15.5	16.5	17.5	18.5	19.5	20.6	21.6	22.6	23.6
	$ 6.50	11.8	13.1	14.3	15.6	16.9	18.1	19.4	20.7	21.9	23.2	24.5	25.8	27.0	28.3
	$ 7.00	9.9	10.8	11.6	12.5	13.4	14.3	15.2	16.1	17.0	17.9	18.7	19.6	20.5	21.4
	$ 7.50	11.1	12.2	13.3	14.4	15.5	16.7	17.8	18.9	20.0	21.2	22.3	23.4	24.5	25.7
350 Cow Operation															
DFA															
	$ 5.50	-16.1	-9.1	-2.2	4.8	11.7	18.7	25.7	32.6	39.6	46.5	53.5	60.4		
	$ 6.00	-7.7	1.0	9.6	18.3	26.9	35.5	44.2	52.8	61.5	70.1	78.8	87.4		
	$ 6.50	-1.3	8.6	18.6	28.5	38.4	48.3	58.3	68.2	78.1	88.0	97.9	107.9		
	$ 7.00	6.6	18.1	29.6	41.1	52.6	64.1	75.6	87.1	98.6	110.1	121.6	133.1		
	$ 7.50	-5.9	3.1	12.1	21.1	30.1	39.1	48.2	57.2	66.2	75.2	84.2	93.2		
DSA	$ 5.50	53.0	56.9	60.8	64.7	68.7	72.6	76.5	80.4	84.3	88.2	92.1	96.0	99.9	103.8
	$ 6.00	58.4	63.3	68.3	73.3	78.2	83.2	88.2	93.1	98.1	103.1	108.0	113.0	118.0	122.9
	$ 6.50	64.1	70.2	76.4	82.5	88.6	94.7	100.8	107.0	113.1	119.2	125.3	131.4	137.5	143.7
	$ 7.00	57.5	62.3	67.1	71.9	76.7	81.5	86.3	91.1	95.8	100.6	105.4	110.2	115.0	119.8
	$ 7.50	63.9	70.0	76.0	82.1	88.2	94.3	100.3	106.4	112.5	118.5	124.6	130.7	136.8	142.8
2,000 Cow Operation															
DFA															
	$ 5.50	-123.6	-80.9	-38.1	4.6	47.4	90.1	132.9	175.6	218.4	261.1	303.9	346.6		
	$ 6.00	-82.4	-31.4	19.6	70.6	121.6	172.5	223.5	274.5	325.5	376.5	427.5	478.5		
	$ 6.50	-53.5	3.2	60.0	116.8	173.5	230.3	287.1	343.8	400.6	457.4	514.1	570.9		
	$ 7.00	-1.3	65.9	133.1	200.3	267.5	334.8	402.0	469.2	536.4	603.6	670.8	738.0		
	$ 7.50	-90.7	-41.4	7.9	57.3	106.6	155.9	205.2	254.6	303.9	353.2	402.6	451.9		
DSA	$ 5.50	327.4	351.4	375.4	399.4	423.5	447.5	471.5	495.5	519.5	543.5	567.5	591.5	615.6	639.6
	$ 6.00	351.7	380.6	409.4	438.3	467.2	496.1	524.9	553.8	582.7	611.5	640.4	669.3	698.2	727.0
	$ 6.50	378.6	412.8	447.1	481.3	515.6	549.8	584.1	618.3	652.6	686.8	721.1	755.3	789.6	823.8
	$ 7.00	366.2	398.0	429.7	461.5	493.3	525.0	556.8	588.6	620.4	652.1	683.9	715.7	747.4	779.2
	$ 7.50	408.6	448.8	489.1	529.3	569.6	609.8	650.1	690.3	730.6	770.8	811.1	851.3	891.5	931.8