

RESPONSE TO CRITICISMS OF INFORMA'S DMSP STUDY

Prepared for:

International Dairy Foods Association



Prepared by:



April 2011

Table of Contents

Executive Summary	1
I. Overview	2
II. Impact on Exports	5
III. Over-base Milk Deliveries	9
IV. Regional Differences	13
V. Conclusion	15
References	17

List of Exhibits

Exhibit 1: Assumption and Estimated Withholdings.....	4
Exhibit 5: Estimated Manufacturing Milk Price, Bi-Weekly	5
Exhibit 6: U.S. Milk Equivalent Exports vs. Price Spread to Oceania.....	6
Exhibit 7: Estimated World Manufacturing Milk Prices, Monthly	7
Exhibit 8: U.S. Milk Equivalent Exports vs. Price Spread to Oceania.....	8
Exhibit 2: Milk Check Revenue and Quantity of Milk Delivered	10
Exhibit 3: U.S. Milk Production per Cow.....	11
Exhibit 4: DMSP Margin and Periods of Activation	12
Exhibit 9: Quarterly Change in Wisconsin Dairy Herd and DMSP Margin.....	13
Exhibit 10: Quarterly Change in Idaho Dairy Herd and DMSP Margin	14
Exhibit 11: Quarterly Change in Dairy Cow Numbers in Response to +1 St. Dev. Shock in Feed Costs at Time = t (Relative to Trend)	15

Executive Summary

There have primarily been three criticisms of Informa Economics report, *Regional and Farm Level Impacts of the Foundation for the Future's Dairy Market Stabilization Program*. Critics charge that no adjustment was made for the potential increase in demand for dairy products generated by the Dairy Market Stabilization Program (DMSP), no adjustment was made for the potential reduction in milk deliveries in response to the incentives created by the DMSP, and that we failed to support our conclusion that dairy farmers in the Upper Midwest and Northeast would potentially face larger withholdings than those in the West and Southwest.

The first charge by critics is that we did not account for the potential demand-boosting provisions of the DMSP which they argue would raise milk prices and shorten the period of low margins. The U.S. dairy market has gone through a period of globalization over the last five years, with exports absorbing more than 10% of the milk produced during 2009. Exports are sensitive to the spread between prices in the U.S. and the prices offered by other major exporters. Any significant increase in U.S. prices relative to prices on the world market will reduce U.S. exports. In part II of this report we show that if prices had reached the levels modeled by FAPRI and NMPF in 2009, reduced exports would have more than offset cheese purchased under the DMSP to result in a net decrease in demand for U.S. dairy products.

The second criticism that we did not account for potential reduction in milk production is false. In our study we reduced the number of months the program would have been active by 30% to account for the potential adjustment in milk production. We did assume that all of the milk produced while the program was active would have been delivered. Other studies have assumed a lower percentage. There is no clear historical guide to how dairy farmers will react to the DMSP, so the assumed percentage reduction is open for debate. We outline a number of potential reasons that farmers would continue to deliver milk above their base level in part III of this report.

The last criticism is that Informa failed to support our conclusion that the farmers in the Upper Midwest and Northeast could have proportionally larger withholdings compared to farmers in the West and Southwest. The conclusion was based on the fact that dairy farmers in the UMW and Northeast are relatively insulated from month to month changes in feed costs because they grow a larger share of their own feed compared to dairy farmers in the West and Southwest. Consequently, dairy farmers in the UMW and Northeast may be slower to react to changes in the DMSP margin, while dairy farmers who purchase most of their feed may be reducing production prior to the DMSP being activated, resulting in less over-base milk in the Western and Southwestern states. We support that conclusion in part IV of this report.

I. Overview

Informa's report, *Regional and Farm Level Impacts of the Foundation for the Future's Dairy Market Stabilization Program*¹, estimated the amount of money that would have been withheld from dairy farmers under the proposed Dairy Market Stabilization Program if it had been in place between 2000 and 2009. In that study, Informa estimated that a total of \$390 million dollars would have been withheld from dairy farmers in 2009 if the Dairy Market Stabilization Program (DMSP) had been active.

Since the release of the Informa study, the National Milk Producers Federation (NMPF) and the Food and Agricultural Policy Research Institute (FAPRI) have released their own estimates of withholdings from dairy farmers during 2009.^{2,3} The estimated withholding from the three studies varied from the \$390 million estimated by Informa to approximately \$129* million by NMPF.

The two largest determinants of the estimated withholdings are the amount of milk that farmers deliver above their base level, and the number of months the program would have been active. Based on the actual provisional prices released during 2009, the DMSP would have been active for nine months, but if the program were actually in place during 2009, the incentives created by the program would have reduced the supply of milk to the market, and the money withheld from dairy farmers would have been used to purchase dairy products, potentially boosting demand.

When analyzing a change in government policy, researchers tend to look for a similar policy that has been enacted previously to examine how the program changed behavior. Unfortunately, history can't shed much light on how dairy farmers will react to the DMSP. In the Informa study, we stated,

*It's likely that farmers who know they are about to go over their base production level while the program is active will try to limit production during that month, but with no historical comparison in the US, it's nearly impossible to say exactly what the impact on milk production will be.*¹

FAPRI made a similar statement in their report.

*Judging how producers would respond or adjust their milk marketings to these program features is a difficult task given the unique operation of the DMSP...Although the industry has had other supply management programs in place previously, these examples do not provide much evidence to how producers will respond to this program.*²

* NMPF does not explicitly state their total estimated withholdings, but their estimated purchases of cheese with the withheld money totaled 91 million pounds during the first six months of 2009. CME block cheese averaged \$1.17 during those six months, and assuming 25 cents in transportation and packaging costs, it would have required $(91 * (\$1.17 + \$0.25)) = \$129,220,000$ to purchase and distribute the cheese.

While the changes in supply are difficult to estimate based on past programs, the impact on the demand side is a little easier. The money withheld from dairy farmers would be used to purchase dairy products which would be donated to food banks. Both FAPRI and NMPF assumed that all of the money would be used to purchase cheese. FAPRI estimated that 108 million pounds of cheese would be purchased by the program during 2009, and NMPF estimated 91 million pounds would be purchased. Both studies found that the combined effects of lower milk deliveries, and the cheese purchases, would have significantly raised dairy prices during 2009. Neither study discussed in detail the impact the higher dairy prices would have had on domestic demand for dairy products, or on exports of dairy products.

Using the milk prices generated by FAPRI's simulation of the DMSP program during 2009, we estimated the impact on exports of U.S. dairy products in part II of this report. We found that if FAPRI's simulated milk prices had actually occurred during 2009, milk equivalent exports would have fallen 2 billion pounds from the actual level, which would have more than offset the estimated 91 to 108 million pounds of cheese purchased under the DMSP. The results suggest that either U.S. dairy prices would not have been able to reach the levels projected by FAPRI's model, and consequently the DMSP would have remained active for longer than they estimated. Or if prices had attained the levels projected by FAPRI, exports would have been significantly lower, leaving surplus product in U.S. inventory and depressing prices for a longer period of time, potentially retriggering DMSP again.

Recognizing that the program would have some affect on the supply of milk, when estimating the amount of money withheld from farmers, we reduced the duration of the program by 30% relative to the period of low margins that existed without the program in place. From the original Informa study,

If the program had been in place, some would argue that the periods of low margins would not have lasted as long as they did. To account for this possibility, we reduced the period the program would be active by 30%, rounded to the nearest whole number. For example, based on the actual margins, the program would have been active from April through December, or 9 months during 2009. Reducing that by 30%, we only estimated the withholdings from April to September, 6 months.¹

In the NMPF's analysis of the impact of DMSP, they were highly critical of the Informa report and stated,

*In particular, the study essentially makes no attempt to estimate dairy producer reactions to the reduction in payments for milk when the DMSP program would be in effect, nor how those reactions would have resulted in changes in the milk volumes marketed,...*³

Informa clearly stated that the duration of the program was reduced by 30% in recognition of potential adjustments in the milk supply. But given the lack of a clear historical analog and potential strategic behavior by farmers, we did not assume any

reduction in the amount of over-base milk that would be delivered during the months that the program was activated.

Looking at the results from the three studies, both Informa and FAPRI assumed the DMSP would have been active for six months during 2009, though they differ with respect to the particular months the program would have been active. NMPF estimated that the program would have only been active for three months.

Exhibit 1: Assumption and Estimated Withholdings

	Months Active in 2009	Assumed Milk Deliveries Above Base	Estimated Withholdings	Withholdings Per Month
Informa	6	100%	\$390,000,000	\$65,000,000
FAPRI	6	50%	\$256,200,000	\$42,700,000
NMPF	3	Not Stated	\$129,220,000 *	\$43,073,333 *

* Estimated based on reported cheese purchases

Informa assumed 100% of the above base milk would have been delivered, FAPRI assumed 50% would be delivered, and NMPF did not state what percentage they assumed would be delivered. Regarding the 50% reduction assumption, the FAPRI report states,

This analysis assumes that only 50% of milk that would have been produced above the allowable level is marketed. This is a critical assumption that is an important driver [of] the analysis presented here.²

But the FAPRI report doesn't give any arguments that support the choice of 50%. Informa's assumption of 100% is obviously on the high side of the potential range, but we give some strategic reasons why farmers may not reduce over-base deliveries in part III of this report. As FAPRI pointed out, the DMSP is a unique program and judging how producers would respond is a difficult task with no comparable programs to compare against.

Despite the differences in assumptions and methodologies, the estimated withholdings on a per month basis range between \$43 million and \$65 million. If Informa also assumed that only 50% of the over-base milk would be delivered, our estimated monthly withholdings would be very comparable too, or actually below, those estimated by FAPRI and NMPF.

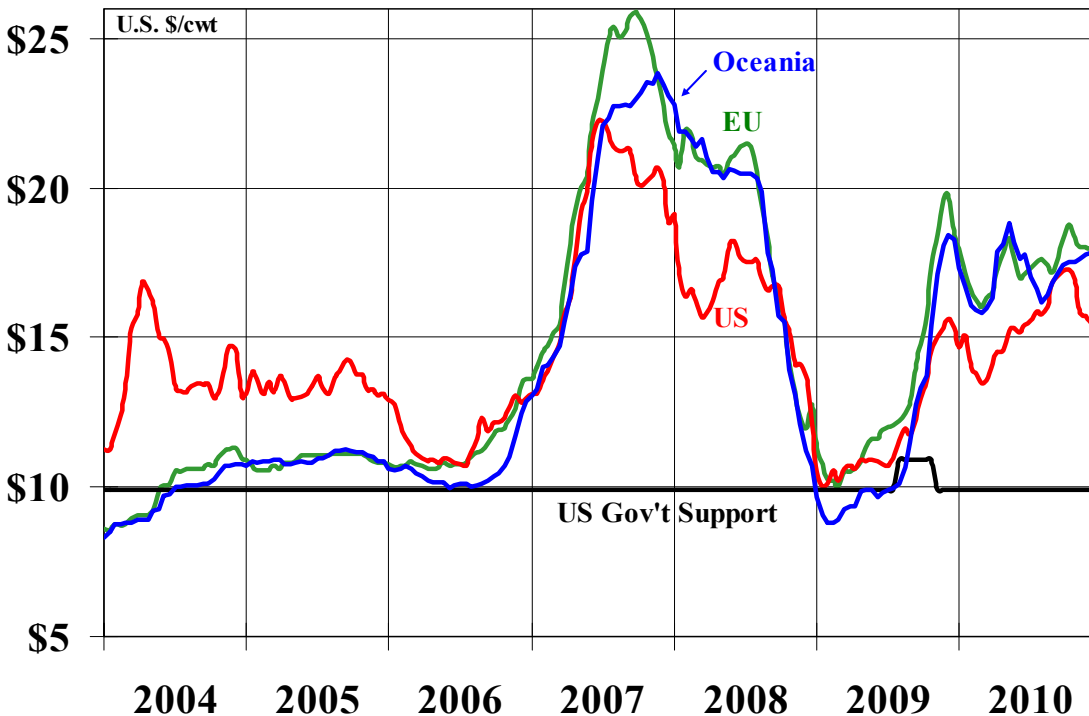
NMPF was also very critical of Informa's conclusion that dairy farmers in the Upper Midwest and Northeast would potentially face larger withholdings (as a percentage of total revenue) than farmers in the West or Southwest. Informa's conclusion was drawn from the fact that dairy farmers in the West and Southwest tend to purchase

most or all of their feed, while farmers in the UMW and Northeast grow a larger share of their feed, giving them a level of insulation from the month to month changes in feed costs. In part IV of this paper we show that dairy farmers in Idaho are relatively sensitive to changes in the DMSP margin and feed costs compared to farmers in Wisconsin. As the margin tightens, farmers in Idaho are more likely to be reducing production prior to the DMSP being activated, which could reduce their withholdings (as a percentage of revenue) compared to dairy farmers in Wisconsin.

II. Impact on Exports

Exports are a growing and significant portion of overall demand for U.S. dairy products. Prior to 2004, exports accounted for approximately 4% of U.S. milk production on a milk equivalent basis. The percentage of the U.S. milk supply that is being exported has been expanding, and we estimate that exports absorbed about 10.5% of the milk produced in 2010. Our estimates are on the conservative side, the U.S. Dairy Export Council estimates that 12.8% of production was exported in 2010.³

Exhibit 2: Estimated Manufacturing Milk Price, Bi-Weekly

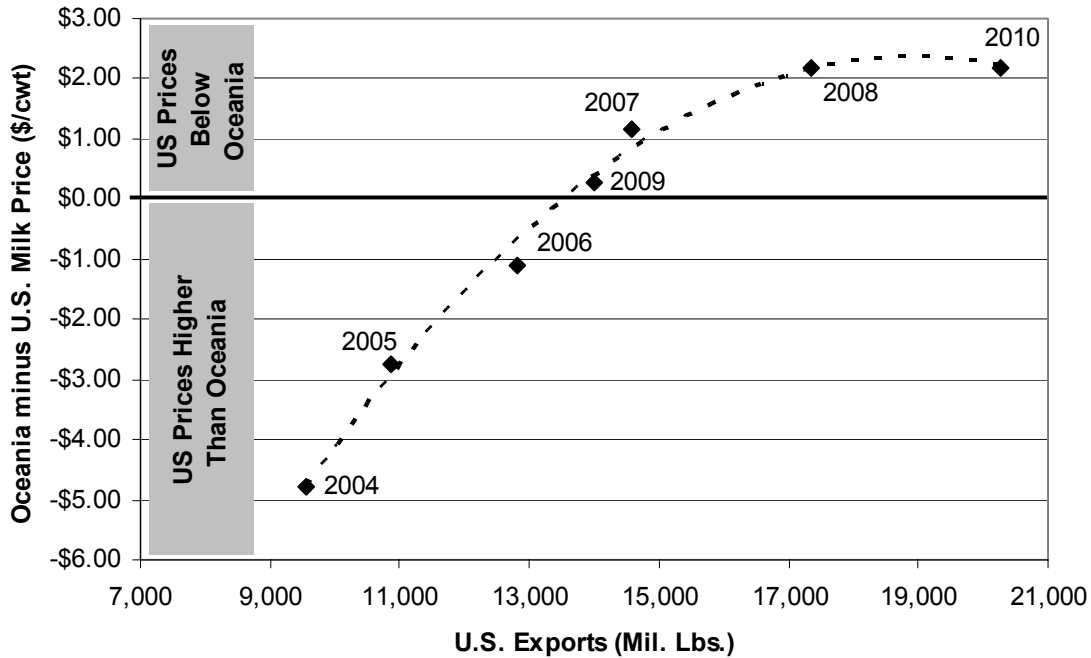


The growth in exports has been possible because prices[†] on the world market have risen significantly since 2004, making U.S. exports profitable. The largest dairy exporters

[†] We use the Class III and Class IV milk price formulas, adjusted for differences in product specifications on the world market, to estimate manufacturing milk prices based on reported spot prices from the CME and USDA-AMS.

are the EU-27, New Zealand and Australia (Oceania), and now the U.S. When dairy prices in Oceania or the EU rise significantly above U.S. prices, U.S. product becomes more attractive to importers. When the spread narrows, U.S. product looks less attractive. Since 2004, the spread between the U.S. and world market prices explain most of the changes in exports.

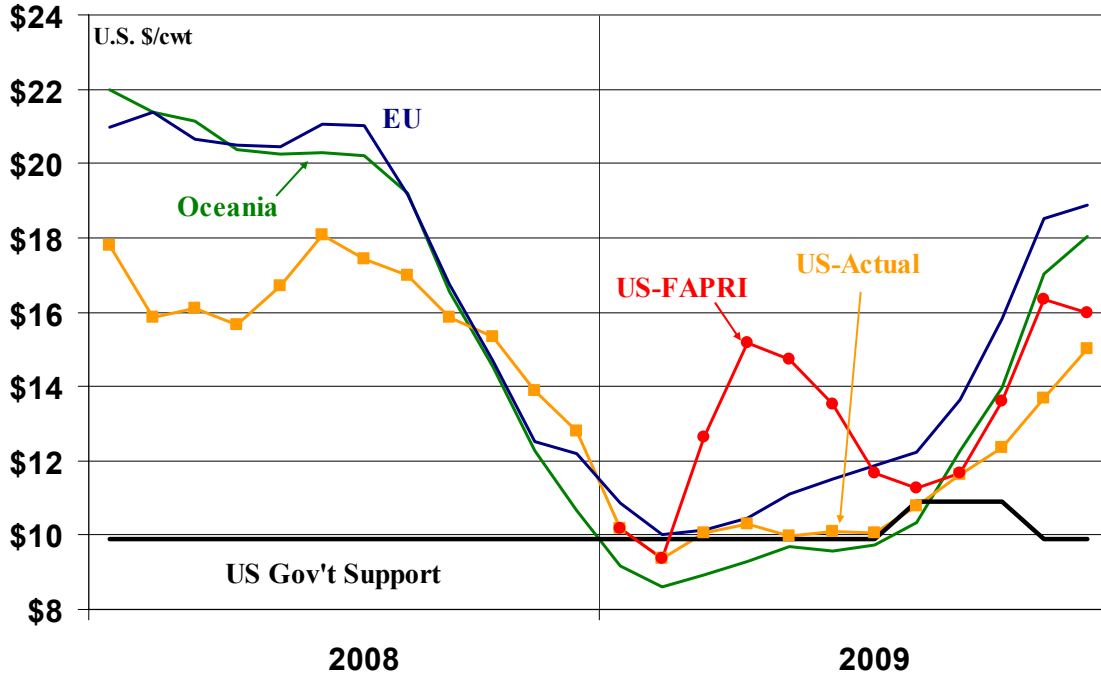
Exhibit 3: U.S. Milk Equivalent Exports vs. Price Spread to Oceania



In 2004, 2005, and 2006, when U.S. prices were above Oceania, the U.S. exported less than 13 billion pounds of milk annually. In 2007, 2008, and 2009, when prices in Oceania were above the U.S., the U.S. exported 14 to 20 billion pounds of milk. Over the past seven years, any time U.S. dairy prices have risen above prices on the world market, exports have suffered.

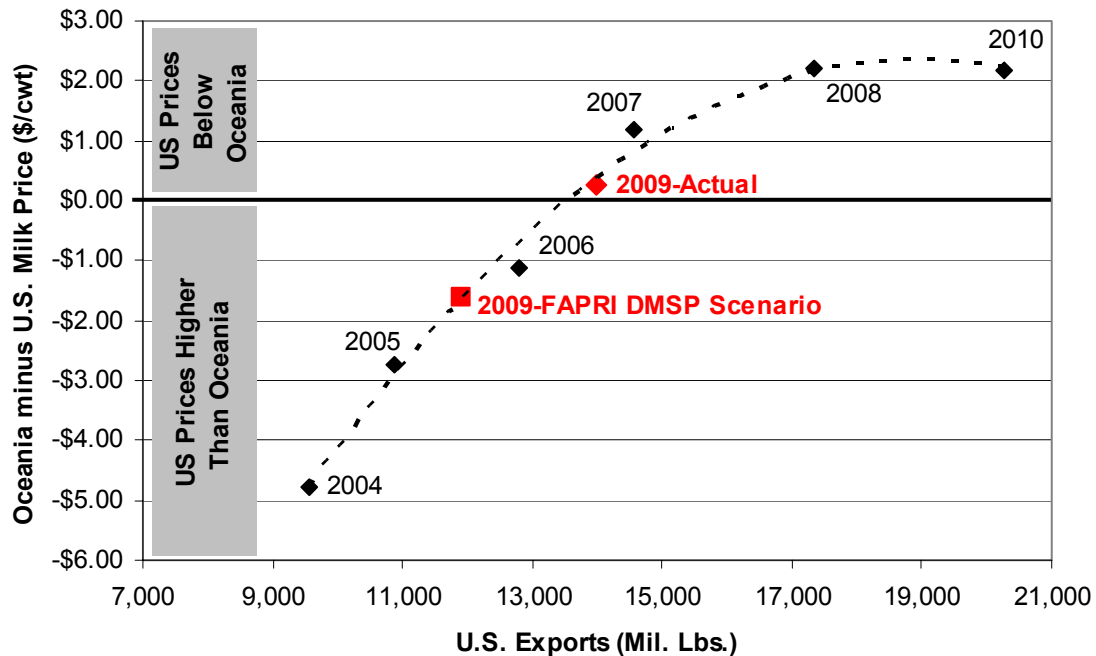
The Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri modeled the impact of DMSP on the U.S. dairy industry¹. Their modeled results showed that the DMSP would have significantly increased U.S. milk prices in 2009. They estimated that the Class III milk price would have averaged \$2.91 (+27%) higher if the program had been in place, while the Class IV price would have been \$0.86 (+8%) higher⁴.

Exhibit 4: Estimated World Manufacturing Milk Prices, Monthly



It is extremely unlikely that higher prices in the U.S. would have also raised prices on the world market. Other major dairy exporters were also facing a surplus of product due to a collapse in demand during late 2008 and early 2009. Instead, higher U.S. prices simply would have resulted in fewer U.S. exports. In the graph above we show the resulting average of the Class III and Class IV milk prices from FAPRI's analysis, graphed against the actual average Class III and Class IV prices as well as the equivalent prices for the EU and Oceania. FAPRI's DMSP scenario price diverges significantly from the actual prices during 2009, and from the overall trend in the world market at the time.

Exhibit 5: U.S. Milk Equivalent Exports vs. Price Spread to Oceania



FAPRI's estimated average Class III and Class IV prices would have averaged \$1.62 more than the equivalent prices in Oceania, which likely would have reduced U.S. exports from 14 billion pounds of milk equivalent to just 12 billion pounds, a more than 14% reduction.

The DMSP would use the money withheld from farmers to purchase cheese, which would be donated to food banks. The donated cheese would not increase total consumption of cheese on a 1-for-1 basis because the donated cheese would reduce commercial sales. Some consumers who receive the free cheese from a food bank would have purchased it commercially if it had not been made available for free. NMPF assumed that 15% of the donated cheese would offset commercial sales. In their analysis of the DMSP, FAPRI only assumed 10% of the donated cheese would offset commercial sales, which is inconsistent with other studies they have done on commercial displacement of donated food products. In a 2009 study of the likely impact of government purchases and donations of dairy products, FAPRI assumed a 30% displacement of commercial sales⁶, three times higher than their assumption in the DMSP study.

FAPRI estimated that “[cheese] purchases average 12 million pounds a month over the April to December 2009 period.” That would be approximately 108 million pounds of cheese. It takes roughly 10 pounds of milk to make 1 pound of cheese, so the 108 million pounds of cheese donated to food shelves represents approximately 1.08 billion pounds of milk. Assuming a commercial displacement rate between 10 and 30%,

the donated cheese would only increase domestic consumption of milk between 0.76 to 0.97 billion pounds[‡].

The DMSP does have a provision that would deactivate the program if U.S. prices were more than 20% higher than the world market for two consecutive months, but by the time U.S. prices have reached a 20% premium to the world market for two consecutive months, the damage to export sales will already be done.

In FAPRI's analysis, they stress the importance of the cheese purchasing portion of the DMSP in raising U.S. milk prices. However, the sharply higher U.S. prices would have had a significant impact on U.S. exports, which would have more than offset the increased disappearance of cheese. Our analysis suggests that if the FAPRI DMSP scenario prices had been achieved in 2009, U.S. milk equivalent exports would have declined by 2 billion pounds which would have more than offset the less than 0.76-0.97 billion pound increase in disappearance generated by withholdings under the DMSP program.

III. Over-base Milk Deliveries

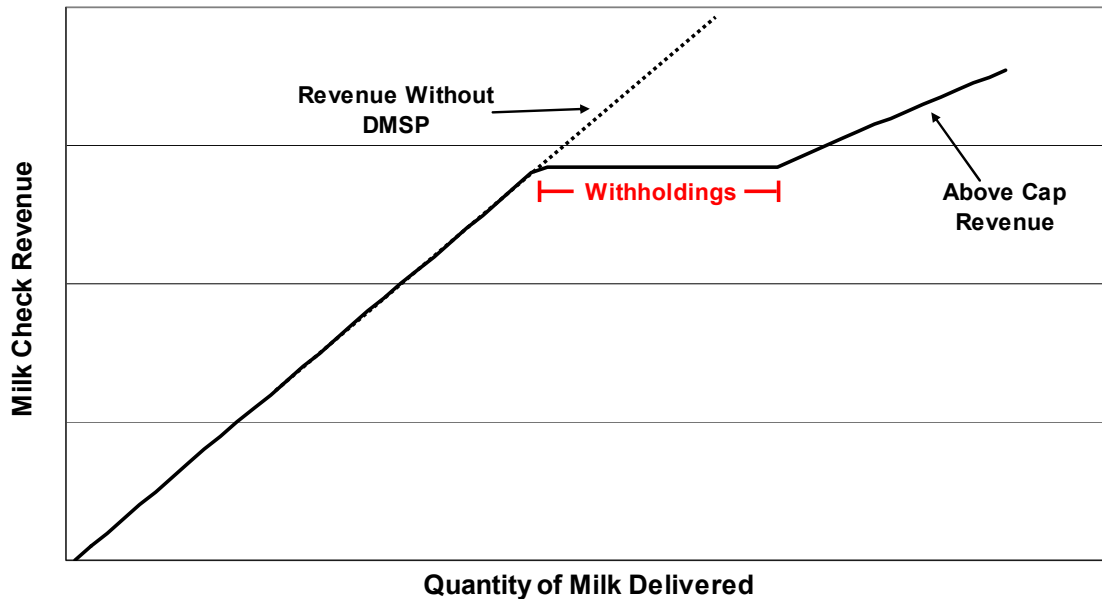
One of the assumptions made in all three studies examining the potential impact the DMSP would have had if it were in place during 2009 is the percentage of milk produced above base that would be delivered. Dairy farmers would not be paid for a certain percentage of the milk delivered above base, which creates a disincentive to producing and delivering milk above base, but we lay out three reasons why a farmer might chose to do so; the withholdings are already maxed out, the farmer expects the program to be activated for only a short period of time, and the program typically triggers after margins have already bottomed out and the farmer may maintain production in anticipation of, or in response to, stronger margins.

Withholdings Already Maxed Out

As proposed, the DMSP would have a cap on the total that can be withheld from dairy farmers, at 6%, 7%, or 8%, depending on how low the national benchmark margin is. Once a farmer reaches the maximum withholdings level, he will again receive payment for milk delivered in excess of his base minus the maximum withholdings.

[‡] FAPRI's analysis ended in December of 2009, but under their assumptions, purchases of cheese would have continued into February. Exports also would have been negatively affected during the first quarter as well, so any residual impact into early 2010 would have likely been offset as well.

**Exhibit 6: Milk Check Revenue and Quantity of Milk Delivered
when DMSP is Active**



When the DMSP is activated, revenue (milk price times quantity delivered) increases until the quantity of delivered milk reaches within 2%, 3%, or 4% of a farmer's base level, depending on how low the national benchmark margin is. At that point, farmers will not be paid for additional milk delivered until they reach the withholdings cap. Revenue will start increasing again after the cap is reached, but it will increase slightly slower because 6-8% of it will be withheld.

The DMSP encourages farmers to cut back production by paying a \$0 price for the milk delivered above base, until the withholding cap is hit. Then farmers are paid the market price minus the maximum withholding percentage in effect at the time. After the cap is hit, farmers are paid a positive marginal milk price again, which significantly reduces the incentive to cut back production.

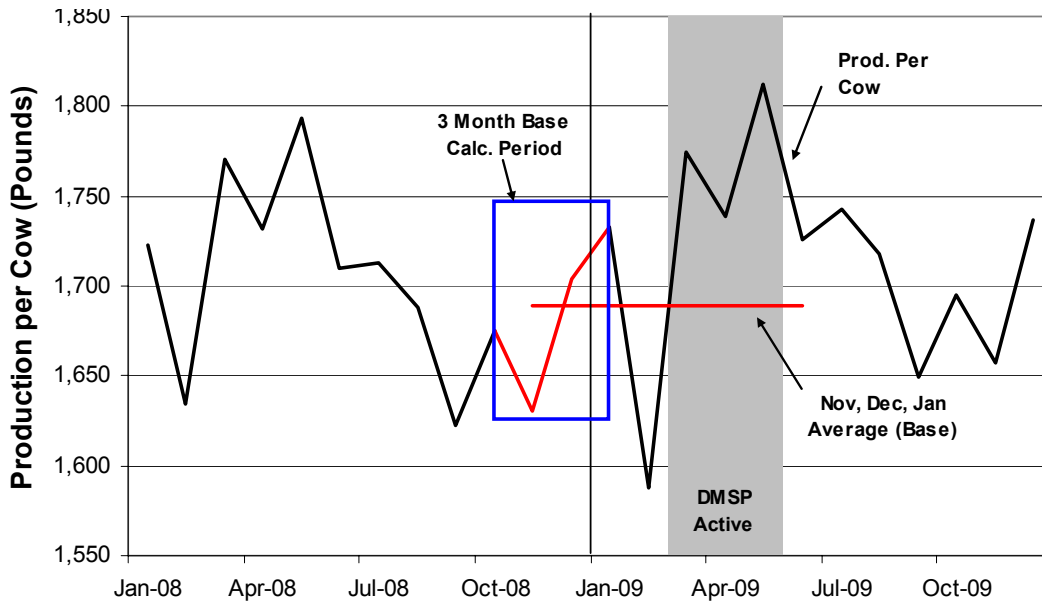
There are a couple of reasons a farmer would be producing well above his base level. The first, and most obvious, would be if he just completed a large expansion, or started a new farm. In this case, he would be extremely unlikely to cut production back below his base and would continue to produce despite the DMSP withholdings.

A farmer may have chosen the “wrong” way to calculate his base. As proposed, the DMSP would allow farmers to pick between two different ways of calculating their base, but they could only switch their calculation method annually. The first method is simply to set base equal to milk deliveries in the same month during the preceding year, which effectively adjusts the base level for the significant seasonality in milk production. The second method of calculating base is to use the three month average of production in the three months preceding the announcement that the DMSP is being activated.

Obviously the farmer would like to choose the calculation method that maximizes his base over the upcoming year, but he doesn't know when or if DMSP will be activated, or how long it would remain active. If he chooses the three month rolling average method, and the DMSP is activated early in the year, the farmer will likely be well above base while the program is in operation.

For example, if the average farmer had chosen to use the three month rolling average method for 2009, his production would have been 3% to 7% above base during March, April and May without any expansion in his herd. Since he would have only been paid for 96% of his base, he would have hit the 8% cap during two of the months.

Exhibit 7: U.S. Milk Production per Cow



In our original analysis of the DMSP we allowed farmers to have perfect foresight, and chose the calculation method that maximized their base for the upcoming year. Even under those circumstances, we found that between 4,900 and 30,400 farms would have hit the maximum withholdings level in any particular month. Not surprisingly, the largest number of farms hit the maximum withholdings in May, at the peak of seasonal production, while only 4,900 hit the maximum in September, the lowest month for seasonal production.

Even if the farmer picks the “right” calculation method, the one that maximizes his base for the upcoming year, there may still be months when he exceeds his base by 6-8% or more. Depending on which month the DMSP is activated, and how long it stays activated, using the three month rolling average method might maximize his base over the entire period despite exceeding the base by a significant amount for a month or two.

Farmers Expect Short Duration of Program

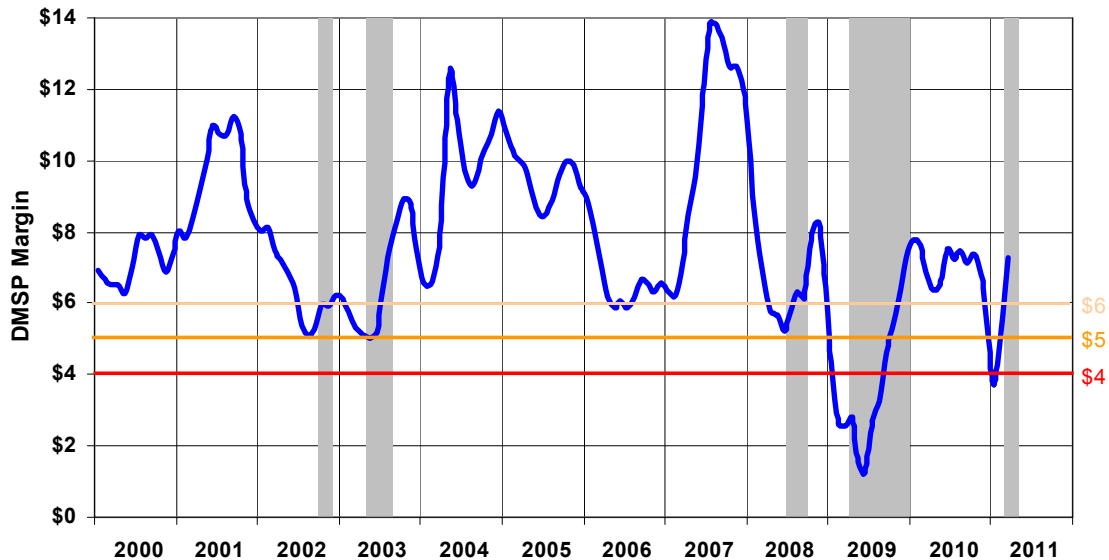
Dairy farmers think on a long time horizon, investing millions in their cows, barns, and equipment. Any short-term reduction in their milk production to avoid having money withheld from their checks will be weighed against the long-term consequences of the short-term reductions. Sending an extra 2% of the herd to slaughter in the first month the program is activated would mean some variable cost savings during the months the program is active, but it would reduce potential revenue after the program deactivates and raise average fixed costs while the program is active.

If the farmer believes the program will only be activated for a short period, he may decide that the long-term benefits outweigh the short-term costs of delivering milk above base.

DMSP Typically Triggers After Margins Bottom Out

By the time the DMSP would have been activated in 2002, 2003, 2008, and 2011, margins had already turned around, and the margin was three months from bottoming out when the program would have been activated in 2009. For a farmer who is paying close attention to the current milk and feed prices, the market is starting to send the signal to boost production just as the DMSP would be activated. If the farmer believes the program will only be active for a short period, he may produce above his base in anticipation of better margins and a quick end to the activation period.

Exhibit 8: DMSP Margin and Periods of Activation

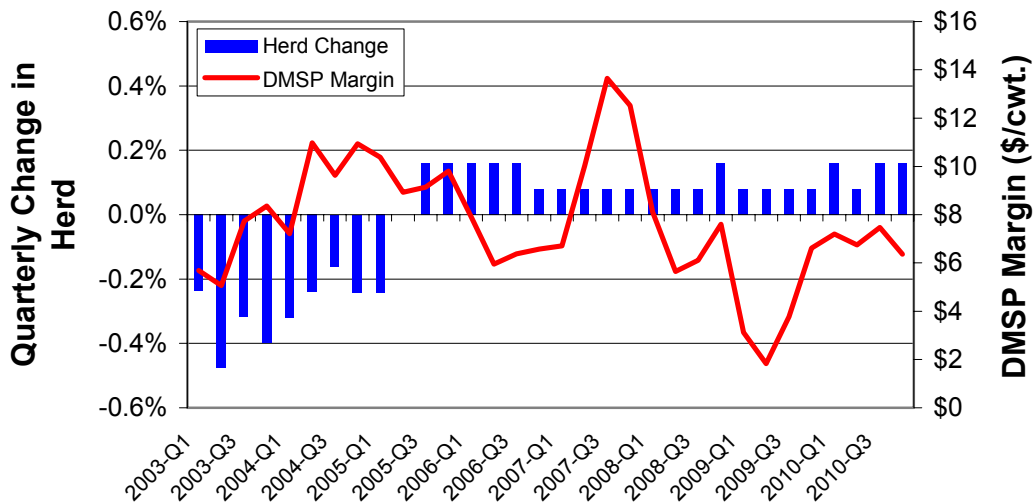


IV. Regional Differences

One of the conclusions from Informa's study was that farmers in the Upper Midwest (Wisconsin, Minnesota), and the Northeast (New York, Pennsylvania), would potentially face higher withholdings compared to Western states (California, Idaho). The conclusion was based on the fact that a larger proportion of farmers in Western states buy most or all of their feed, which makes them more sensitive to changes in feed costs compared to dairy farmers in the UMW who grow a larger share of their own feed. The DMSP margin, which is the milk prices minus the cost of feed, will more closely represent the margins that dairy farmers in the West are concurrently experiencing, and they will begin to slow their production growth faster than farmers in the UMW or Northeast who are relatively insulated from month to month changes in feed costs.

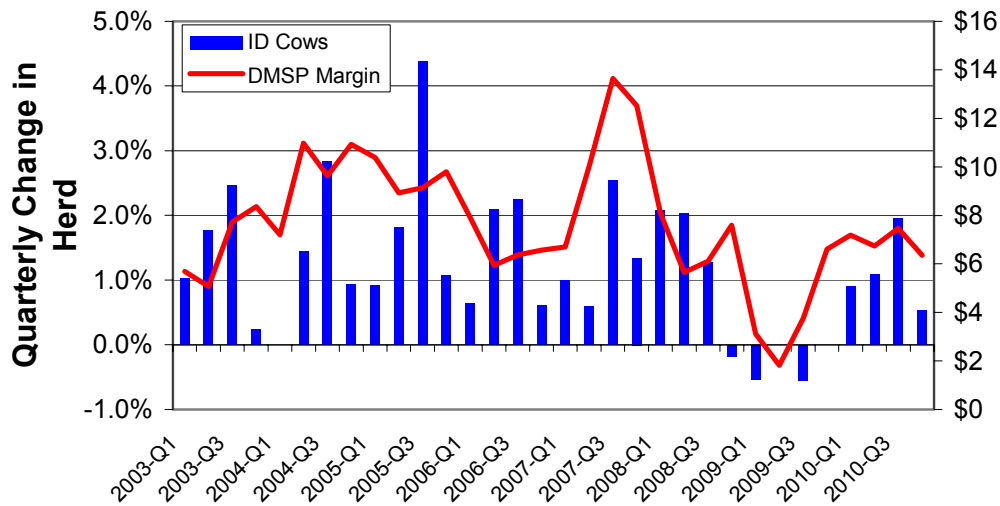
The following two exhibits show the quarterly change in the number of dairy cows in Wisconsin and Idaho, along with the DMSP margin.

Exhibit 9: Quarterly Change in Wisconsin Dairy Herd and DMSP Margin



The dairy herd has been expanding by about 0.1% (about 1,000 head) each quarter since 2006 in Wisconsin, even when margins were at historic lows in 2009. While dairy farmers in the state were under financial stress, there was very little adjustment to production, either leading up to the margin collapse, or during it.

Exhibit 10: Quarterly Change in Idaho Dairy Herd and DMSP Margin



In comparison to Wisconsin, dairy farmers in Idaho are more sensitive to changes in the DMSP margin. They started to reduce the size of the herd during the fourth quarter of 2008 in response to high feed costs, and they continued to reduce the number of cows in the state, or at least hold them steady, through the rest of 2009.

To isolate the impact of feed costs on changes in the dairy herds across states we estimated a distributed lag regression model for each state. Included in the model was the U.S. All Milk price, the DMSP feed cost benchmark, and the difference between the value of a dairy cow sent to slaughter, and the replacement cost of a dairy cow. The value of a cow sent to slaughter included the Cooperatives Working Together slaughter subsidy per cow during quarters when there was an active buyout. Independent variables were included with all lags between 0 and 3, and 1 through 3 lags of the dependent variable were included to control for autocorrelation. The models were estimated over the time period between the first quarter of 2003 and the fourth quarter of 2010.

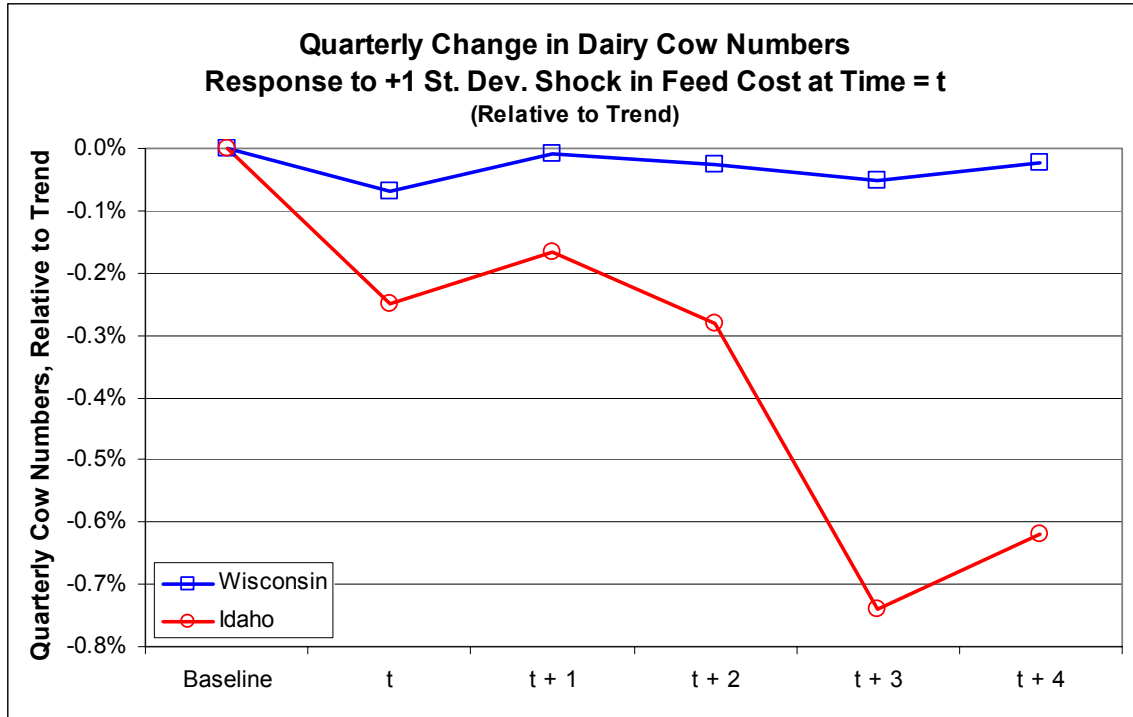
The model for each state took the following form:

$$StateHerd_Chg_t = \beta_0 + \sum_{i=0}^3 \delta_i Milk\ Price_{t-i} + \sum_{j=0}^3 \chi_j FeedCost_{t-j} + \sum_{k=0}^3 \gamma_k (Slaughter_{t-k} - Replacement_{t-k}) + \sum_{m=1}^3 \lambda_m StateHerd_Chg_{t-m} + \varepsilon_t$$

The models allow us to “shock” the price of feed, and see how quickly, and by what magnitude each state adjusts the size of its dairy herd. First we ran a baseline projection over a 5 quarter period with all variables set equal to their average value over the sample time period. Then we ran the models a second time with a one standard deviation increase in feed costs during the first period (t), while holding all other variables steady at their sample means. We then subtracted the shock response from the

baseline trend to examine what impact the increased feed costs had on the growth of the dairy herds in Wisconsin and Idaho.

Exhibit 11: Quarterly Change in Dairy Cow Numbers in Response to +1 St. Dev. Shock in Feed Costs at Time = t (Relative to Trend)



The feed cost shock lowered herd growth compared to the baseline trend in both Wisconsin and Idaho, but the impact was much larger in Idaho. The simple graphical comparison of margins and quarterly growth (Exhibit 9: Quarterly Change in Wisconsin Dairy Herd and DMSP Margin and Exhibit 10: Quarterly Change in Idaho Dairy Herd and DMSP Margin), along with the results from the distributed lag regression models both support the conclusion that milk production by dairy farmers who purchase a majority of their feed is more sensitive to changes in feed costs than dairy farmers who grow a large share of their feed.

V. Conclusion

The criticisms of Informa Economics estimated withholdings under the Dairy Market Stabilization Program revolved around three points; the impact of cheese purchases on demand for dairy products, adjustments in milk deliveries made by farmers, and an assertion that the program is regionally equitable.

We have shown that an increase in U.S. prices relative to the world market would significantly reduce exports, more than offsetting cheese purchases under the DMSP. The

net result is a reduction in total demand for U.S. dairy products if the program had been in place.

How quickly and by what magnitude farmers adjust their milk deliveries once the program is activated is debatable. A similar program has not been implemented in the U.S. before. Since no data exists on how farmers have reacted in the past, all studies examining the issue have had to make outright assumptions about how quickly and by what magnitude farmers would adjust their milk deliveries. NMPF did not state their assumption in their study, FAPRI assumed that 50% of the over-base milk produced would be withheld from the market, and we assumed all of the milk produced would be delivered, but reduced the time period the program was active by 30%.

In our study we concluded that dairy farmers in the Upper Midwest and the Northeast could potentially face larger withholdings, on a percentage basis, than those in the West or Southwest U.S. The conclusion was based on the fact that the benchmark margin used to trigger the DMSP includes the market value of feed for the cows. A greater proportion of dairy farmers in the UMW and Northeast grow their own feed and are insulated from the month to month fluctuations in the cost of feed. In simple graphical examples and more robust regression models, we've shown that dairy farmers in Idaho have historically reacted to the DMSP benchmark margin faster than dairy farmers in Wisconsin.

We stand by our estimates and conclusions in the original report, subject to the assumptions and limitations that we clearly presented in the study.

References

1. Informa Economics. "Regional and Farm Level Impacts of the Foundation for the Future's Dairy Market Stabilization Program." International Dairy Foods Association, Jan 2011. Web. 5 Apr 2011. <http://www.idfa.org/files/State_and_Regional_Impacts_of_DMSP_012511.pdf>.
2. Brown, Scott. "The Economic Impact of the Dairy Market Stabilization Program on 2009 Dairy Markets." Food and Agricultural Policy Research Institute - University of Missouri, Mar 2011. Web. 4 Apr 2011. <http://www.fapri.missouri.edu/outreach/publications/2011/FAPRI_MU_Report_04_11.pdf>.
3. Vitaliano, Peter. "Economic Impact of the Dairy Market Stabilization Program - Foundation for the Future." National Milk Producers Federation, Mar 2011. Web. 4 Apr 2011. <<http://www.nmpf.org/files/file/Economic-Impact-of-the-Dairy-Market-Stabilization-Program-Report-March-2011.pdf>>.
4. U.S. Dairy Export Council. "U.S. dairy exports grow on robust world demand." February 16, 2011. Web. April 04, 2011. <<http://www.usdec.org/files/PressReleases/2010numbersrelease.pdf>>.
5. Brown, Scott. "The Economic Impact of the Dairy Market Stabilization Program on 2009 Dairy Markets. - Appendix" Food and Agricultural Policy Research Institute - University of Missouri, Mar 2011. Web. 4 Apr 2011. <http://www.fapri.missouri.edu/outreach/publications/2011/FAPRI_MU_Report_04_11_Appendix.pdf>.
6. Brown, Scott. "The Effect Of NASDA'S 'Meat The Need Proposal' On Livestock And Dairy Markets." Food and Agricultural Policy Research Institute - University of Missouri, September 2009. Web. 25 Apr 2011. <http://www.fapri.missouri.edu/outreach/publications/2009/FAPRI_MU_Report_08_09.pdf>.