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Large Herd Operator Opinions about Participation in the Proposed Farm Bill Dairy Programs

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Executive Summary

The purpose of the proposed Dairy Market Stabilization Program (DMSP) is to shorten the duration of low-margin periods and reduce government outlays on dairy margin insurance. However, DMSP can only achieve those goals if producer participation in the proposed dairy safety net is sufficiently high. In 2012, farms with over 1,000 cows accounted for only 2.9% of operations but produced 50.6% of the milk. Therefore, it is of particular interest to understand views of large herd operators regarding participation in proposed dairy programs. To that end, a survey was conducted of dairy farm manager participants at the Dairy Today magazine's 2013 Elite Producer Business Conference held on November 11-13 in Las Vegas. Eighty-six surveys were completed. The respondents averaged a herd size of 3,351 cows and 2,449 acres of operating farmland.

To examine the influence of program implementation rules on participation rate, participation likelihood was measured under two scenarios: 1) sign up by January 15 for the calendar year that just began and 2) sign-up by March 15 for the forthcoming fiscal year (Oct 1 – Sep 30). Both implementation rules provide the same inherent risk protection effectiveness, but the former rule allows producers to utilize more information about how much risk they will likely face. A sign-up rule that essentially coincides with the start date allows producers to use easily, and more reliably forecasted margins to strategically adjust margin coverage levels. Thus, they can choose less insurance when risks seem small, and buy high coverage levels when low margins are imminent.

For a January 15 signup date for a calendar year program, the share of survey respondents either neutral or leaning towards participating in the Senate and the House versions of the dairy title was 66% and 78%, respectively. Assuming March 15 as the signup date for a fiscal year program, the share of producers neutral or leaning towards participation was 55% and is equal for both the House and the Senate versions of the bill. One way to interpret this is that up to 20% of large producers did not perceive the new safety net as necessary for viability of their business, but would be willing to engage in opportunistic participation in some programs if there are gains to be made.

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Large Herd Operator Opinions about Participation in the Proposed Farm Bill Dairy Programs

At this writing, the agriculture committees of the Senate and the House of Representatives are attempting to reconcile their differences in a Conference Committee. Participants are eager to complete a new omnibus farm bill by the end of 2013, but there are many and difficult differences to reconcile. Disagreement on dairy policy reforms remain one of the issues yet to be reconciled. At the center of this debate is the Dairy Market Stabilization Program, which is included in the Senate but not the House version of the dairy subtitle to the Farm Bill.

The Dairy Market Stabilization Program is a component of the Dairy Security Act, which in turn is the dairy subtitle of the U.S. Senate's proposed farm bill – S. 954, the Federal Farm, Food and Jobs Act. Both the Senate and House versions of the dairy subtitle contain a variation of another program called the Dairy Producer Margin Protection Program. The House bill – HR 2642, The Federal Agriculture Reform and Risk Management Act – contains a version of the DPMPP that is structured very similarly to the original proposal contained in the Senate bill but it has some non-trivial differences in operating parameters. For more information about these bills, see Schnepf (2012), Novakovic (2013), and Newton et al. (2013).

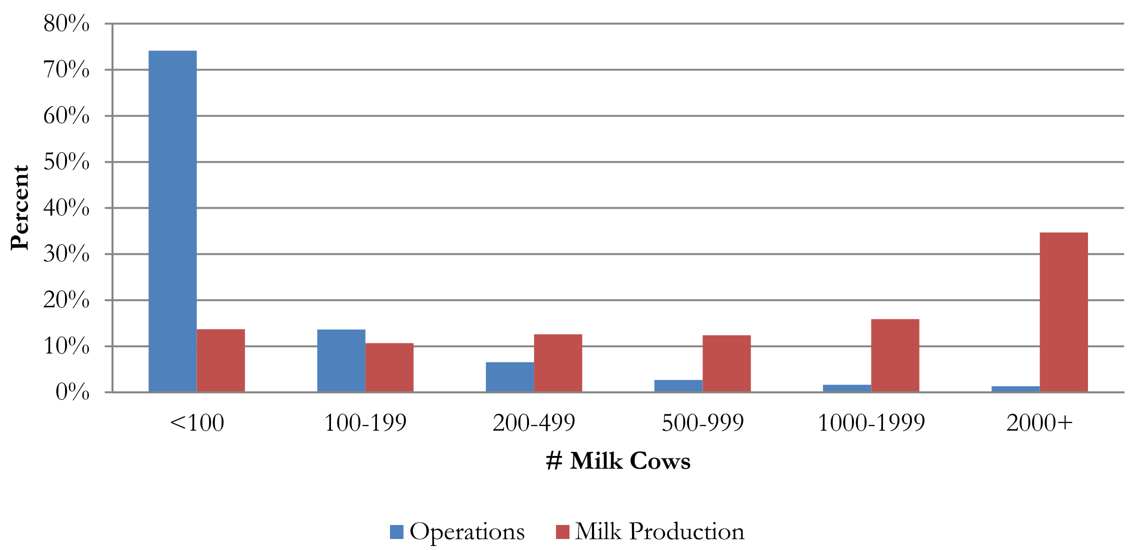
The Dairy Market Stabilization Program (DMSP) is a policy instrument designed to accelerate recovery of milk Income over Feed Cost (IOFC) margins when national average prices of milk, corn, soybean meal and alfalfa hay indicate poor dairy farm returns. This is to be achieved through incentives to dairy producers to temporarily reduce milk marketed between 2% and 8% relative to their quantity of milk marketed prior to the onset of the low-margin period. If the program works as intended, it may reduce expected dairy policy cost up to 30% and reduce the likelihood of catastrophic-margin scenarios by up to six times relative to standalone margin insurance (Brown and Madison, 2013; Bozic, Newton and Thraen, 2013). The program is not intended to curb long-run growth of milk production, either as an industry or for an individual farm business. As such, if DMSP is very effective in reducing price volatility, long-run average milk prices may decline due to supply response induced by increased stability of net farm income (Stephenson and Nicholson, 2011). Additional concerns have been raised regarding the DMSP impact on dairy processors and welfare of low-income consumers of dairy foods (Slominski, 2013). Research on earlier mandatory dairy supply management proposals suggest such programs would have transferred income from consumers to producers (Kaiser, Streeter and Liu, 1988; Balagtas and Sumner, 2012). However, the voluntary nature of DMSP renders the overall impact of this program on consumers somewhat ambiguous as short-term milk price increases have to be measured against potential declines of long-run average milk prices.

Whether DMSP will indeed be effective in accelerating IOFC margin recovery depends on dairy producer participation and their behavior once DMSP is triggered, and the elasticity of demand for dairy products. Newton, Thraen and Bozic (2013) find that under the assumption of 75% participation (in terms of milk produced) and elasticity of demand for dairy products of -0.2, DMSP could reduce policy costs up to 30% relative to an insurance program (DPMPP) without the DMSP. With only a 25% participation rate and elasticity of demand of -0.4, DMSP savings are only 5%.

In light of these findings, policymakers can make better choices if they have improved understanding of likely producer participation. This information might also be useful to the Congressional Budget Office, which has the responsibility to make projections of federal expenditures under different policy scenarios.

Although farms with 1,000 or more milk cows account for only 2.9% of operations, they produce 50.6% of the milk (Figure 1). It follows that achieving high levels of milk production participation under which DMSP is expected to yield significant policy changes will require at least some buy-in from large herd operators. Herein, we report results of a Farm Bill participation survey conducted by Dairy Today magazine at the 2013 Elite Producer Business Conference. The survey procedure was not designed to achieve representative nation-wide sampling, but to provide a preliminary estimate of farm bill participation likelihood among large herd operators. Information collected included herd size, percent of feed purchased and likelihood of participation in the new Farm bill. No personal information that could be used to identify the survey respondents was collected. Bozic and Wolf advised on survey questionnaire design. Blimling and Associates, Inc. assisted in tabulating the data.

Figure 1. US Operations with Milk Cows and Milk Production Distributions, 2012



Source: USDA, National Agricultural Statistics Service

Dairy Today distributed the survey immediately following a presentation "*Farm Bill Margin Insurance – Is it Worth It?*" delivered by Bozic. In this educational talk, Bozic presented material covering the Farm bill dairy margin insurance and stabilization program design and expected returns to participation. Out of 300 distributed surveys, 105 were returned. 86 surveys were usable for this analysis.

The questions regarding the farm size and business model were:

- *In 2013, how many acres were farmed by this operation? ____________acres*
- *How many head of livestock were on hand on November 1, 2013?*
  Milk cows (including dry and first calf heifers)........................ _______
  Dairy heifer calves and replacement heifers .... _______

- *What percent of feed needs were raised on-farm in 2013?*

  ☐ *0 to 25%* ☐ *26 to 50%*
  ☐ *51 to 75%* ☐ *76 to 100%*

Among survey respondents, the average herd size was 3,351 cows and average land operated was 2,449 acres. 35 respondents grew up to 50% of feed requirements, and 51 respondents grew more than 50% of feed requirements.

Crop insurance programs stipulate actuarially fair premiums and subsidies specified as a fixed percentage of premiums that may vary from one year to the next. In contrast, both the Senate and House proposed dairy margin insurance programs envision fixed dollar premiums varying with margin coverage levels and amount of milk produced, but not dependent on market conditions at enrollment time. This creates "adverse selection" issues. In other words, the access to near-term and quite reliable market information under the January 15/calendar year scenario inherently gives the buyers of DPMPP insurance (dairy farmers) a significant and meaningful advantage in deciding when to buy margin coverage and at what level. This is explored in depth in Newton, Thraen and Bozic (2013). As a consequence of this design choice, the program implementation rules may be very influential in determining the effective margin insurance subsidies, that is, how much the government will spend versus the contribution farmers make in the form of their premiums.

To examine the influence of program implementation rules on participation rate, the participation likelihood was elicited under two scenarios: 1) sign up on January 15 for a program that covers the calendar year that just began, and 2) sign-up on March 15 for the forthcoming fiscal year (October 1 to September 30). Note that the two scenarios differ by when in the year an annual program is implemented, but also, and more importantly, by the delay between the sign-up deadline and the effective start date of the program. While both implementation rules provide the same risk protection effectiveness, the first scenario allows producers to use more easily forecasted margins to strategically adjust margin coverage levels, underinsuring when risks seem small, and buying high coverage levels when low margins are imminent.

The survey questions reflecting these choices are:

Consider the current policy proposals for the dairy subtitle of the Farm Bill. If the final version of the Farm Bill dairy programs is that proposed by the Senate (margin insurance coupled with the dairy market stabilization program).

How likely are you to participate if
a. annual signup date is January 15 and insurance period is a calendar year?

☐ *Definitely not* ☐ *Not likely* ☐ *50:50 chance* ☐ *Likely* ☐ *I will definitely participate*

b. annual signup date is March 15 and insurance period is a fiscal year?

☐ *Definitely not* ☐ *Not likely* ☐ *50:50 chance* ☐ *Likely* ☐ *I will definitely participate*

Recall that the current version of the dairy policy programs is different in the current House of Representatives version. If the final version of the Farm Bill dairy programs is that proposed by the House (margin insurance only with no stabilization program).

How likely are you to participate if

a. annual signup date is January 15 and insurance period is a calendar year?

☐ *Definitely not* ☐ *Not likely* ☐ *50:50 chance* ☐ *Likely* ☐ *I will definitely participate*

b. annual signup date is March 15 and insurance period is a fiscal year?

☐ *Definitely not* ☐ *Not likely* ☐ *50:50 chance* ☐ *Likely* ☐ *I will definitely participate*

Table 1 presents the survey results across all respondents. There are several observations to be made. First, most producers do not have a strongly held position regarding participation. Depending on the implementation rule, between 30.1% and 43.4% of producers characterize their chances of participation as a "50:50 split." Regardless of the program design and implementation rule, more than 80% of producers have not yet definitely made up their mind regarding participation. This suggests that educational programming may play an important role in increasing the utilization of the new dairy safety net. It also indicates that implementation details and the market situation at sign-up may have significant effects.

Table 1. Stated Likelihood of Participation in Farm Bill Dairy Programs

	Enrollment Date/ Coverage Period	Likelihood of Participation: Definitely Not	Likely Not	50:50	Likely	Definitely
		(% Respondents)				
Senate	January 15 / Calendar Year	10.5	23.3	39.5	22.1	4.7
	March 15 / Fiscal Year	14.0	31.4	38.4	15.1	1.2
House	January 15 / Calendar Year	3.6	18.1	43.4	27.7	7.2
	March 15 / Fiscal Year	8.4	36.1	30.1	22.9	2.4

With a January 15 signup date, the share of survey respondents who are either neutral or leaning towards participating in the Senate and the House versions of the dairy title is 66.3% and 78.3%, respectively. With March 15 as the signup date, the share of producers neutral or leaning towards participation was is just over 55% and is essentially equal for both the House and the Senate versions of the bill. One way to interpret this is that up to 20% of large producers do not perceive the new safety net as necessary for the viability of their business, but would be willing to engage in opportunistic participation in some programs if there are gains to be made.

Table 2. Homegrown Feed and Stated Likelihood of Participation in Farm Bill Dairy Programs

	Enrollment Date/ Coverage Period	Likelihood of Participation: Definitely Not	Likely Not	50:50	Likely	Definitely
Producers that grow 50% or less of feed requirements						
		(% Respondents)				
Senate	January 15 / Calendar Year	14.3	8.6	42.9	25.7	8.6
	March 15 / Fiscal Year	17.1	22.9	37.1	20.0	2.9
House	January 15 / Calendar Year	5.7	5.7	45.7	31.4	11.4
	March 15 / Fiscal Year	11.8	32.4	26.5	26.5	2.9
Producers that grow more than 50% of feed requirements						
		(% Respondents)				
Senate	January 15 / Calendar Year	7.8	33.3	37.3	19.6	2.0
	March 15 / Fiscal Year	11.8	37.3	39.2	11.8	0.0
House	January 15 / Calendar Year	2.1	27.1	41.7	25.0	4.2
	March 15 / Fiscal Year	6.1	38.8	32.7	20.4	2.0

Given the impact of high feed prices in recent years, it seems likely that feed purchase levels could have an influence on the stated desire to participate in margin protection programs. Table 2 disaggregates the participation likelihood by percentage of feed grown on the farm. With a January 15 signup date, 77.2% of survey respondents who grow less than 50% of their feed requirements are either neutral or leaning towards participation in the Senate bill. Among producers who grow more than 50% of feed, 58.9% indicated they are either neutral or leaning positive on participation in the Senate version of dairy programs with a January 15 signup date. The neutral/positive gap is 18.3 percentage points. Although willingness to participate in the standalone margin insurance with January 15 signup date is higher for both groups, the gap in neutral/positive between the two groups is still close to 18 percentage points.

Forecasts of Total Participation Rate

This survey provides only limited evidence on stated attitudes of large herd operators; nevertheless, it is possible to make at least partially informed or conjectural projections of a U.S. participation rate. If we assume that all producers leaning positive will participate in the Farm bill dairy programs, and that half of undecided producers will also sign up, between 35% and 47% of large herd operators would sign up for the Senate version of the dairy programs, but the House version would see enrollment between 40% and 57%. Because both programs offer higher margin insurance subsidies for the first four million pounds of milk, it is reasonable to assume that participation rate among producers with smaller herds will be higher. If 85% of producers with herds under 200 cows sign up, and if assume participation rate of producers with herds between 200 and 1,000 cows is 1.5 times the surveyed participation rate of large herd operators, then we can estimate that the total participation in the Senate proposed dairy programs will be 50% of U.S. milk production, if the program is implemented with a March 15 sign up date for a fiscal year coverage period. For the alternative scenario of a January 15 sign up date and a calendar year insurance period, the speculative estimate is that slightly over 60% of U.S. milk would sign up.

Bear in mind that market conditions at signup, the extent to which respondents really do as they stated in the survey, implementation details, and any program changes that might occur in conference committee will likely have significant effects on participation rates. Perhaps the best way to view these results is as a prior or preliminary estimate that will be updated as new information arrives.

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