

# Dairy Policy Analysis Alliance



## Dairy Policy Briefs

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## Dairy Policy Briefs

To enhance understanding of dairy policy issues that will be considered as part of the 2007 Farm Bill debate, the Dairy Policy Analysis Alliance has prepared the attached set of one-page briefs. These briefs have a common format, first explaining a specific dairy program or concept then outlining some related public policy issues.

It is important to emphasize that these briefs provide basic, simplified explanations of complex programs, necessarily omitting many details. Readers interested in more comprehensive coverage are encouraged to access the reference papers noted below. These and other related papers and web sites can be electronically downloaded/accessed at either the FAPRI website (<http://www.fapri.missouri.edu/>) or at the University of Wisconsin Understanding Dairy Markets website (<http://www.aae.wisc.edu/future/>).

<b>Briefing Paper No. &amp; Title</b>	<b>Reference Paper</b>
1. Milk Price Support Program	Basic Milk Pricing Concepts for Dairy Farmers
2. MILC	USDA, Farm Service Agency Fact Sheet: Milk Income Loss Contract Program
3. Target Price/Deficiency Payments	Implications of a Target Price-Deficiency Payment Program for Supporting Milk Prices
4. Voluntary Supply management	National Milk Producers Federation CWT web site: <a href="http://www.cwt.coop/">http://www.cwt.coop/</a>
5. Marketing quotas	Use of Mandatory Supply Control in the U.S. Dairy Sector
6. Dairy Compacts	State Milk Marketing Order Regulation and Interstate Dairy Compacts
7. Milk Protein Concentrate Imports	Milk Protein Concentrates: What We Know and Don't Know
8a – 8d. Trade/WTO issues:	Potential Impacts on U.S. Agriculture of the U.S. October 2005 WTO Proposal; U.S. Dairy Trade Situation and Outlook
9a – 9d. Federal Milk Marketing Orders	Basic Milk Pricing Concepts for Dairy Farmers; Federal Milk Marketing Order Pooling, Depooling, and Distant Pooling: Issues and Impacts

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## Dairy Policy Brief #1: Milk Price Support Program

### *What is the Program?*

The Milk Price Support Program (MPSP) has been a fixture of U.S. dairy policy since 1949. It is a **market intervention** program, meaning that the government offers to purchase non-perishable dairy products (butter, cheese, and nonfat dry milk) from manufacturers at specified (intervention) prices. The program is dormant when market prices are above intervention prices. It is activated when the overall milk supply exceeds demand, causing excess milk to be diverted into production of nonperishable products and lowering their prices. The product intervention prices are linked to a price support level for manufacturing milk that is set by Congress. The milk support price is currently \$9.90 per hundredweight for milk of average butterfat content; \$9.80 for milk testing 3.5 percent butterfat.

### *What are the issues?*

- **Ineffective price floor.** The MPSP has not always been successful in keeping milk price above the support level. Because of non-standard product, packaging, and payment specifications, it costs more to sell products to the government than to commercial buyers. So market prices for the products purchased under the MPSP sometimes fall below intervention prices, causing milk prices to fall below support. This has led to a call by many dairy groups to raise the intervention prices. Others have proposed that the milk price safety net be made more solid by flooring the product prices used in federal milk marketing order pricing formulas at the intervention prices or replacing the MPSP with direct payments to farmers when market prices fall below a specified level.
- **Incompatibility with world trade liberalization.** The MPSP is a big contributor to the U.S. **aggregate measure of support** (AMS), which the World Trade Organization (WTO) uses to gauge trade-distorting domestic agricultural subsidies. The U.S. AMS is limited under our commitments to the WTO and the limit will very likely be reduced as part of ongoing negotiations. Major changes in the MPSP—or termination—may be necessary to conform to a new WTO agreement.
- **Market price distortions.** The MPSP has affected milk utilization by setting a price floor for some commodities but not for others. The best example of this market distortion relates to nonfat dry milk, which is a source of dairy protein in many food applications. There is a large U.S. market for other dairy-based proteins, notably milk protein concentrate (MPC) and casein. Nearly all MPC and casein used in the U.S. comes from imports. Because nonfat dry milk is purchased under the MPSP, it is more profitable and less risky to produce nonfat dry milk than other forms of dairy proteins.
- **Difficulty in adjusting butter and nonfat dry milk prices.** The MPSP has, at times, resulted in large government purchases of nonfat dry milk even though the market price for milk was well above the support price. In setting butter and nonfat dry milk purchase prices, USDA assumes that the two products are produced jointly. Therefore, the sum of the net (of assumed manufacturing costs) value of butter and nonfat dry milk contained in a hundredweight of milk must equal the support price for milk. The Secretary of Agriculture is authorized to adjust relative prices of butter and nonfat dry milk (called a **butter-powder tilt**) twice a year to minimize purchase costs and prevent a build-up of stocks of either product. But political pressures have limited the ability of the Secretary to make timely price adjustments.

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## Dairy Policy Brief #2: Milk Income Loss Contract Program

### ***What is the Program?***

The Milk Income Loss Contract (MILC) program was included in the Farm Security and Rural Investment Act of 2002 (2002 farm bill) and is a type of target price/deficiency payment program that makes a direct payment to dairy producers when milk prices fall below a specified trigger level. This program includes a payment limit feature that limits the amount of a producer's annual milk sales eligible for MILC payments. The 2002 farm bill authorized the MILC program through September 30, 2005. Subsequently, the MILC program has been reauthorized through August 31, 2007 under the Agricultural Reconciliation Act of 2005 (ARA2005). The USDA has labeled this extension as MILCX. The MILC program costs totaled \$2.026 billion and the March 2006 Congressional Budget Office baseline estimates the cost of MILCX at \$969 million.

### ***What are the issues?***

- **Soft price floor.** The MILC direct payment rate under the 2002 farm bill was calculated as 45 percent of the difference between \$16.94 per hundredweight and the Boston Class I Price. The extension included in ARA2005 lowered the payout to 34 percent. MILC does not create a floor on receipts, since when payments are made, the payment rate compensates only part of the actual decline in milk prices. Other dairy target price/deficiency payment approaches that have been discussed generally propose a more solid price floor at a level lower than what is set under the MILC program.
- **Production caps.** Participating producers in the MILC program are eligible to receive a direct payment on their first 2.4 million pounds of production in a fiscal year. The production cap feature of the MILC program has proven to be a very effective way to limit program payments. But targeting of benefits to small dairy producers has made this program unpopular with large dairy producers and in areas of the country dominated by large dairies. Using the 2005 average U.S. milk yield of 19,537 pounds per cow, only dairy farms with fewer than 123 dairy cows are eligible for MILC payments on all milk sold. As milk yields and dairy operation sizes grow, the percentage of annual U.S. milk production eligible for full MILC payments declines. Based on changes in the distribution of dairy operations by size, the amount of milk eligible for full MILC payments has fallen by nearly 10 percent since the program was initiated in December 2001.
- **Milk supply impact.** The MILC program tends to lengthen periods of low milk prices. That's because program payments supplement dairy income to keep some producers—especially small farmers—in business when they might otherwise have exited dairying. FAPRI estimated that, on an annual basis, the MILC program reduced Class III milk prices \$0.25 per hundredweight. Raising the production cap would further lengthen periods of low prices.
- **Future extensions.** Because the program is not authorized for the life of the 2002 farm bill, expenditures under the MILC program are not extended in current federal budget outlay estimates. This means that continuation of the MILC program in any form would likely require either more money to be budgeted for agricultural spending or for money to be taken from other agricultural commodity programs to fund MILC. One issue surrounding the MILC program arises as Congress discusses the idea of extending provisions of the 2002 farm bill until the current WTO round ends: an extension would not automatically extend the MILC program like other agricultural provisions contained in the 2002 farm bill.

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## Dairy Policy Brief #3: Target Price-deficiency Payments

### *What is the Program?*

Target price-deficiency payment programs involve the government making direct payments to dairy farmers whenever the market price (reference price) falls short of a pre-announced price level (target price). The current Milk Income Loss Contract (MILC) program is an example. For MILC, the reference price is the Class I price in Boston and the target price is \$16.94 per hundredweight. In any month the Boston Class I price is less than \$16.94, all eligible milk marketed receives a payment of 34 percent of the difference. A permanent dairy target price-deficiency payment program would likely replace the current Milk Price Support Program (MPSP). Consequently, wholesale dairy product prices would be allowed to seek market clearing levels. But if the farm milk price falls below the target price, dairy farmers would receive a direct payment to make up the difference.

### *What are the issues?*

- **Target price.** In theory, the target price could be set at any level, but the higher the target price the higher the probability that farm milk prices will consistently fall below the target. This would make the program income enhancing rather than counter-cyclical, perhaps resulting in burdensome government costs. A target price for manufacturing milk in the \$10.00 to \$10.50 per hundredweight range would not consistently enhance dairy farmer income. At the same time, it would provide dairy farmers a higher safety net than the \$9.90 support level under the current MPSP.
- **Payment limits.** Target price-deficiency payments can be targeted to smaller dairy farmers, if that is a policy objective. This can be achieved by limiting direct payments to a maximum quantity of milk marketed by an individual producer, as is done under MILC. Alternatively, dollar-based payment limitations can be applied, as is done in crop programs. Payment limits are objectionable to larger farmers, but they can control government costs.
- **Taxpayer and manufacturer burden.** Unlike the MPSP, which floors wholesale prices for butter, cheese, and nonfat dry milk, a pure target price-deficiency payment program would allow product prices to fall as far as necessary to clear markets during periods of milk surplus. This could result in product prices well below the MPSP floors. Consumers would benefit to the extent that lower wholesale prices are reflected in retail prices. But, taxpayers would bear the cost of deficiency payments. And even though farmers are protected by deficiency payments, their cooperatives and other processors could periodically face very low returns to manufacturing and greater product price instability.
- **WTO scoring.** The MPSP is an “amber box” domestic price support program under WTO rules, and contributes about 25 percent of the U.S.’s permitted aggregate measure of support (AMS). WTO’s AMS calculation uses the difference between the \$9.90 per hundredweight support price and a world \$7.25 reference price times the quantity of milk marketed. Only actual government expenditures would be counted under a target price-deficiency payment program.
- **Dairy product innovation.** Replacing the MPSP with direct payments would result in lower market prices for milk during periods of milk surpluses. This would challenge dairy manufacturers to be more innovative in product development and marketing.

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## Dairy Policy Brief #4: Voluntary Supply Management

### *What is the program?*

In the mid-1980s, Congress authorized two major voluntary dairy supply management programs, both funded in part through dairy farmer assessments. Under the 1984-85 Milk Diversion Program, dairy farmers who reduced their milk marketings 5 to 30 percent from a base level were paid \$10 per hundredweight on the reduced marketings. This was followed in 1987 by the Dairy Termination Program (Whole Herd Buyout), under which the government accepted bids from dairy farmers who were willing to slaughter all female dairy cattle and remain out of the dairy business for at least 5 years. The Milk Diversion Program cut milk production sharply in 1985, but had no long-term effect. The Whole herd buyout was more successful in moderating production trends, but the induced slaughter of dairy cows negatively affected beef markets, raising the ire of cattle producers.

The objective of these government-sponsored voluntary supply management programs was to enhance and stabilize farm-level milk prices by controlling the amount of milk marketed. Recently, an industry-sponsored voluntary milk supply management program was initiated to achieve the same objectives by using some of the same techniques. The program, labeled CWT for Cooperatives Working Together, was designed and is managed by the National Milk Producers Federation, a trade association of dairy cooperatives. Members of participating dairy cooperatives and, if they choose, independent dairy farmers fund the program through an assessment of ten cents per hundredweight of milk marketed. Currently, CWT has two methods of supply management: herd retirement and dairy export incentives. Under herd retirement, bids are accepted from dairy farmers who are willing to slaughter their milking herd. Export incentives provide participating cooperatives subsidies on exports of butter and cheese.

### *What are the issues?*

- **Adequate funding and participation.** Government supply management programs are funded from mandatory producer assessments and/or federal appropriations. But funding for industry-sponsored programs like CWT depends on voluntary assessments. At issue is whether participation and the associated funds raised are sufficient to enhance and stabilize farm level milk prices over the long run.
- **Free riders.** Voluntary supply management programs have a potential **free rider** problem—dairy farmers who don't participate in the program still receive any benefits that result from the participation of others. Moreover, to the extent voluntary supply management is successful, some dairy farmers are likely to respond to higher and more stable prices by expanding the size of their dairy herd. This makes it difficult for a voluntary program to be successful over the long run.
- **Buying air.** Voluntary supply management programs run the risk of buying air; for example, paying farmers to get out of the dairy business when they were already planning to retire. But there still may be benefits if the program requires milk cows to be slaughtered rather than sold to another dairy farmer.
- **Export market issues.** The export incentive element of CWT not only moves dairy products from the domestic market, it can also provide valuable export experience for dairy cooperatives. However, since export subsidies are only offered when dairy product prices are depressed, international customers may view participating dairy cooperatives as an unreliable source of dairy products. There is also a question regarding whether CWT export subsidies violate World Trade Organization rules. While they are not government subsidies, some believe they could trigger an objection if they become large enough.

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## Dairy Policy Brief #5: Marketing Quotas

### ***What is the Program?***

Marketing quotas specify the maximum amount of milk that individual dairy farmers can sell, usually applying stiff economic penalties to any sales in excess of the assigned farm quota. The policy intent is to achieve a price goal by closely matching total milk supply with the total amount of milk demanded at the price objective. If this goal is achieved, then the government does not need to purchase surplus milk to support prices because no surplus is produced. Likewise, there is no need for government payments to farmers to support income because farmers receive sufficient revenue from the marketplace.

Milk quotas have been used for many years in Canada and the European Union (EU). Quotas have never been used directly for dairy in the United States. But there were programs in the 1980s that operated like quotas in that dairy farmers who marketed more milk than during a specified base period were penalized through an assessment on current marketings.

### ***What are the issues?***

- ***Marketing quotas can enhance farm milk prices without large government costs.*** Quotas do not require large treasury outlays because there are no government purchases or direct payments to farmers. Relatively high milk price levels can be achieved, as evidenced by farm milk prices in Canada compared to those in the U.S. In the 2004-05 marketing year (August-July), the Canadian weighted average farm milk price was about \$24.30 per hundredweight (converted to U.S. dollars). The U.S. all-milk price for 2005 was \$15.15 per hundredweight. Price enhancement under the EU quota system has been substantially less because the EU quotas are less restrictive.
- ***The value of marketing quotas is capitalized and raises production costs.*** To the extent that quotas are successful in raising prices above what they would be without them, the difference is capitalized in the value of the quota (if it is transferable) or the farm to which the quota is attached. Under the Canadian system, quota is fully fungible and traded through formal provincial exchanges. In March 2006, quota sufficient to cover the production of one average cow for a year was trading for about \$25,000 (U.S. dollars) in Ontario and Quebec, the major Canadian dairy provinces. The cost of quota is a major capital cost to farmers who want to enter the industry or expand their dairy operation.
- ***Quotas interfere with efficient industry changes.*** Depending on how they are applied, quotas can impede or prevent structural change in the dairy industry. Quotas that cannot be easily transferred can lock in herd size structure within regions and prevent inter-regional shifts in milk production that would increase industry efficiency. Quotas that raise milk and dairy product prices significantly above those in other countries must be accompanied by high tariffs to keep out imports. This interferes with trade liberalization objectives.
- ***Quotas can encourage dairy substitutes.*** Marketing quotas used to raise prices above competitive levels can create consumer resistance. Milk and dairy product consumption is reduced and substitutes displace dairy consumption.
- ***Quotas are difficult and expensive to administer.*** Dairy farmers need to be dealt with individually in allocating quotas and there can be difficult issues of equity in the allocation process. Individual farm production levels must be monitored to assure compliance.

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## **Dairy Policy Brief #6: Dairy Compacts**

### ***Northeast Interstate Dairy Compact***

The Northeast Interstate Dairy Compact (NIDC) was authorized for the six New England states in Section 147 of the Federal Agriculture Improvement and Reform Act of 1996 (1996 farm bill). The legislation required the Secretary of Agriculture to find “compelling public interest” in the compact region before these states were given the authority to implement the compact. After some unsuccessful legal challenges (primarily to the compelling public interest finding), the compact began collecting over-order obligations in July 1997. The over-order obligation per hundredweight was calculated each month as (\$16.94 – Boston class I price). Processors paid this over-order obligation to dairy farm operators or their cooperatives. Higher milk costs were passed onto consumers in the form of higher retail prices. The 1996 farm bill required that the compact commission could only regulate Class I milk and thus excluded milk used for manufacturing purposes. The NIDC commission was required to pay \$1.8 million in 1998 to compensate the Commodity Credit Corporation (CCC) for the additional cost of the milk price support program that resulted when the regional rate of milk production grew faster than the U.S. rate. The authorizing legislation as amended specified an end date for the NIDC of September 30, 2001.

### ***Other Compact Legislation***

Other attempts have been made to enact dairy compacts in the U.S. As the NIDC was ending in 2001, there were attempts to broaden the compact areas by including a southern region. In fact, many southern states passed necessary state-level legislation to participate in a dairy compact. The National Dairy Equity Act (NDEA) of 2003 included provisions for five compact regions that covered the entire U.S. It also allowed regions with low Class I utilization (less than 45 percent) to receive government payments in an attempt to make the program more equitable across regions.

### ***What are the issues with compacts?***

- ***Effect on milk prices.*** The NIDC was unpopular outside of the compact area due to concerns about its indirect effects on manufactured milk prices. NIDC payments likely encouraged more milk production in the compact area than would have occurred without the program. To the extent that the over-order payments collected by the NIDC were passed forward in the form of higher consumer milk prices, the NIDC likely reduced fluid use in the compact area. Both of these factors would have driven more milk to the manufacturing sector and lowered manufactured milk prices across the country. Because of the limited geographical scope of the NIDC, these effects were likely quite small.
- ***Consumer versus taxpayer transfers to dairy producers.*** The NIDC was a unique dairy policy in that there was an explicit assessment on consumers to compensate dairy producers when prices dropped below target levels. As alternative dairy policies are considered, the dairy industry needs to debate whether programs like the NIDC that tax consumers are a better alternative than programs that use taxpayer funds.
- ***The NIDC counted in the U.S. domestic support notification to the WTO.*** The NIDC was included in the U.S. domestic support notification to the WTO at a level of \$103 million over the 1998 to 2001 period. This amount roughly equaled producer payments under the NIDC. New compact programs would likely also be included in our domestic support notifications.

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## Dairy Policy Brief #7: Milk Protein Concentrate Imports

### ***What is Milk Protein Concentrate?***

Milk Protein Concentrate (MPC) is a non-fat, high-protein milk powder that is made by ultrafiltration and drying of skim milk. It has similar uses to nonfat dry milk (NDM), which is typically produced by spray-drying skim milk, but has a higher protein content—40 to 90 percent compared to 34 to 36 percent for NDM. Because of its higher protein and correspondingly lower lactose relative to NDM, the use of MPC to “standardize” cheese milk (optimize the fat-to-casein ratio) enhances both the economics and the technical efficiency of cheesemaking. MPC can only be used in making cheeses and cheese foods that do not have a U.S. Food and Drug Administration (FDA) standard of identity. But MPC is also an ingredient in a wide array of other food products such as frozen deserts, bakery and confectionery products, sports and nutrition drinks and bars (energy bars), and nutrition supplements.

Until recently, there was no MPC produced in the United States, and there is only a token tariff (0.17 cents per pound) on imported MPC. Consequently, as the demand for MPC has increased because of its functionality and low price per unit of protein relative to NDM, U.S. imports have soared. The U.S. imported less than 10 million pounds of MPC in the early 1990’s. Imports in 2005 were 172 million pounds valued at \$223 million, comprising nearly 10 percent of the total value of U.S. dairy imports.

To the extent that they substitute for each other, imported MPC has caused displacement of domestically-produced NDM. This has provoked calls by dairy producer groups to limit MPC imports. Bills have been introduced in the last two Congressional sessions to impose tariff rate quotas on MPC and casein imports. The current Senate and House bills are S. 1417 and H.R. 521, both titled the *Milk Import Tariff Equity Act*.

### ***What are the Issues?***

- ***Why isn’t more MPC made in the United States?*** MPC imports are partly due to the lack of economic incentives to produce it domestically. Put simply, the MPSP sets an intervention price for NDM that makes it more profitable to manufacture NDM than MPC.
- ***How much NDM does MPC displace and how are producer prices affected?*** Displacement of NDM by MPC is hard to measure because of the lack of hard evidence on substitutability in many applications, especially newer products that have always used MPC. UW research estimated that the maximum displacement ranged from 80 to 430 million pounds of NDM annually between 1997 and 2002. Government purchases of NDM exceeded its estimated displacement by MPC in each of these years. In other words, the government would have purchased NDM under the MPSP even if there had been no MPC imports. Consequently, the producer price effect was minimal. Record U.S. exports of NDM in response to strong world market prices in 2004 and 2005 resulted in no government purchases, and expanded MPC imports were used to supplement NDM supplies.
- ***What are the consequences of imposing tariff rate quotas on MPC imports?*** Under WTO rules, the U.S. has limited flexibility in applying new tariffs and must compensate countries that would be penalized by expanding tariffs beyond what were agreed to under the Uruguay round. The nature of compensation is subject to negotiation. It could be a cash settlement for lost exports. More likely, it would involve raising tariff-rate quotas or lowering the over-quota tariff on other dairy products the country exported to the U.S. This would probably be cheese, which is a major export item for most countries that export MPC to the U.S.

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## Dairy Policy Brief #8a: The Doha Round of the WTO

### ***What is the process and where does the round currently stand?***

The current WTO round was formally initiated with a declaration in November 2001 during a ministerial meeting held in Doha, Qatar. The agricultural negotiations had started months earlier under the Agreement on Agriculture. Since the Doha declaration, ministerials have been held in Cancun in 2003, Geneva in 2004 and Hong Kong in 2005. There are currently 149 member countries in the WTO.

An April 30, 2006 deadline for deciding some key details in the agricultural negotiations was missed and a planned ministerial meeting postponed. A July 31, 2006 deadline is still in effect for draft schedules of the next WTO agreement to be submitted. This deadline will be difficult to meet given that many of the details for a successful agricultural agreement are not worked out. A factor heightening the need to complete an agreement quickly is that the Trade Promotion Authority (TPA, or “fast-track”), under which Congress granted the Bush administration unilateral authority to approve trade pacts, ends in mid-2007.

### ***The three “pillars” included in the WTO agricultural negotiations.***

- **Domestic support.** The existing Uruguay round WTO agreement and current Doha round negotiations include reductions in trade-distorting domestic support levels, classified by the WTO as “amber box” spending. Using the WTO accounting framework for counting domestic support called the Aggregate Measure of Support (AMS), the U.S. has a current cap of \$19.1 billion. Proposals under the Doha round negotiations have suggested significant cuts in current AMS levels for many countries. The U.S. Doha round proposal offered in October 2005 would have made a 60 percent cut in the U.S. AMS cap. For the U.S. dairy industry, the Milk Price Support Program (MPSP) currently counts over \$4.5 billion towards the overall AMS level and would likely require modification or even termination under these proposed AMS reductions.
- **Market Access.** All non-tariff barriers were eliminated or converted to tariffs under the Uruguay round agreement. In certain cases, Tariff-Rate Quotas (TRQs) were created to allow some level of minimum access. No trade would have occurred without these TRQs since many over-quota tariffs remained prohibitively high. The focus of the Doha round has been on how to reduce these high over-quota tariffs, the administration of TRQs and what special safeguard provisions might exist to protect certain domestic sectors. Some Doha proposals have focused on reducing the highest tariff levels the most to achieve a closer balance in tariffs around the world. Further increases in market access through larger TRQs are included in some Doha proposals. Many developing countries are focused on what special treatment they may obtain in order to protect their agricultural sectors so they can develop and be able to compete in a global economy.
- **Export Subsidies.** The Uruguay round WTO agreement set out reductions in the quantity and expenditure levels of subsidized agricultural exports. The Hong Kong declaration includes references to complete elimination of export subsidies by 2013. For the U.S. dairy industry, the Dairy Export Incentive Program (DEIP) would need to be adjusted to be in compliance with export subsidy reductions made in a Doha round agreement. Current levels of dairy products that can be exported under the DEIP are: butter and butteroil, 21,097 metric tons; skim milk powder, 68,201 metric tons; and cheese, 3,030 metric tons. Other issues included in the area of export subsidies are food aid, export credit guarantees, and state trading enterprises.

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## Dairy Policy Brief #8b: WTO Market Access Issues

### ***Market Access Provisions of the Uruguay Round***

Prior to the Uruguay Round Agricultural Agreement (URAA) many agricultural product imports were restricted by quotas or other types of non-tariff instruments. The Uruguay round converted all non-tariff barriers into tariff equivalents in a process called "tariffication." This process attempted to create a tariff that would leave the ratio of the internal price to world price unchanged from what existed under the non-tariff instrument. Besides the conversion of non-tariff barriers, the URAA ensured that access to markets did not decline under tariffication by the introduction of tariff-rate quotas (TRQs) that had a lower in-quota tariff rate. The tariffs established under the URAA were then cut on average by 36 percent (at least 15 percent for each product) over five years (1995-2000) for developed countries and by 24 percent (at least 10 percent for each product) over ten years (1995-2004) for developing countries. Least developed countries were not required to make tariff cuts under the URAA. There were special safeguard provisions in the URAA that allowed governments to take action in cases of rapidly declining prices or for surges in imports. The URAA set the stage for future trade rounds to deal more easily with market access issues since market access became increasingly transparent with non-tariff barriers removed.

### ***Market Access Proposals in the Doha Round***

Although agricultural products are now only protected by tariffs, many tariffs remain at levels that are high enough to prevent meaningful market access. The numerous proposals on market access reform under the Doha round have called for further reductions in tariffs in an effort to achieve greater progress in expanding agricultural trade. Early in the Doha round, some countries proposed that cuts in tariffs should not be from the URAA bound rates but from applied tariff rates. In many cases, the applied rates are well below their respective bound rates, so there is no additional market access opportunity until the bound rate is reduced to below the applied rate. There are many other issues related to tariff reductions that range from domestic food security to tariff escalation that occurs in an attempt to protect processing industries. There have been many different proposals offered to cut tariffs. They all differ in the degree in which they attempt to equalize tariffs over time. The Swiss formula, for example, provides for a narrow range of final tariffs and a maximum final tariff rate. The latest Doha proposals have looked at bands that cut the largest tariffs by the largest percentage and smaller tariffs by a smaller percentage in an attempt to harmonize rates. Further market access issues identified in the Doha round include tariff quotas, tariff quota administration, special safeguards and state trading enterprises.

### ***What are important market access issues for the U.S. dairy industry?***

- ***Additional dairy products will enter the U.S.*** Under most Doha proposals, additional U.S. market access for most dairy products will occur. This will tend to lower U.S. prices. Perhaps more important will be reductions in U.S. tariffs that will allow products like butter to flow more easily into the U.S. when domestic prices are high. This will tend to cut the extreme peaks that have characterized butter markets over the past few years.
- ***Additional market access will raise world dairy prices.*** There is considerable evidence that additional global market access achieved by a successful Doha round agreement would increase world dairy prices to levels closer to current U.S. prices. This would minimize the negative effects of expanded market access on the U.S. dairy sector and could even cause U.S. milk prices to increase because of expanded export opportunities.

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## **Dairy Policy Brief #8c: WTO Export Subsidy Issues**

### ***Export Subsidy Provisions of the Uruguay Round***

The Uruguay Round Agricultural Agreement (URAA) prohibits export subsidies on agricultural products unless they are specified in a country's commitment list. Products included on a country's commitment list were required to be cut from base period (1986-1990) levels in both volume and value terms. Developed countries were required to cut the value by 36 percent and the volume by 24 percent in equal increments over the 1995 to 2000 period. Developing countries were required to cut the value by 24 percent and the volume by 14 percent in equal increments over the 1995 to 2004 period. Least developed countries were not required to make any cuts. There are 25 WTO members who are able to use export subsidies, but even these countries can only use subsidies for products listed in their URAA commitments.

### ***Export Subsidy Elimination in the Doha Round***

The Hong Kong agreement calls for the elimination of all export subsidies, including export credit programs, by 2013. Some proposals have sought a large cut in export subsidies early in the agreement period, followed by an adjustment period before elimination of all subsidies. Other proposals allow greater flexibility in the use of export subsidies for developing countries. Smaller developing countries who import much of their food are seeking less aggressive cuts to subsidies, fearing that large reductions could affect food costs for their consumers. Although there is general agreement to continue to promote food aid for humanitarian purposes, there are concerns about how to properly discipline food aid so that it is not used by countries to primarily rid themselves of burdensome surpluses. The role of state trading enterprises and differences that exist relative to private companies is also a point of contention under the export subsidy debate.

### ***What are important export subsidy issues for the U.S. dairy industry?***

- ***The Dairy Export Incentive Program (DEIP) will be less important to the U.S. dairy industry under a Doha round agreement.*** The URAA required cuts in the levels of dairy products that could be exported under the DEIP. Current levels of dairy products that can be exported under the DEIP are: butter and butteroil, 21,097 metric tons; skim milk powder, 68,201 metric tons; and cheese, 3,030 metric tons. Annual DEIP commitments begin on a July 1 year. With further cuts in allowable DEIP exports, the Commodity Credit Corporation (CCC) will see a larger increase in stocks during periods of surplus production.
- ***The Doha round reduction of dairy export subsidies by the European Union is critical.*** The larger issue under the export subsidy pillar for the U.S. dairy industry is not the reduction in the DEIP, but the likely effect on dairy product prices of fewer subsidized exports from other countries. World dairy prices should rise as a result of cutting export subsidies. Analysis conducted by FAPRI examining the U.S. proposal of October 2005 suggested that the cut in EU subsidized exports would be large enough to increase world dairy prices to U.S. levels. This would limit the downside negative effects of changes in U.S. domestic support and market access for dairy products. Without export subsidy reductions, the U.S. proposal would be negative for the U.S. dairy industry.

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## Dairy Policy Brief #8d: WTO Domestic Support Issues

### ***Domestic Support Provisions of the Uruguay Round***

The main issue surrounding domestic support programs is their tendency to stimulate domestic production, thus squeezing out imports. Domestic supports may also provide motivation for a country to use export subsidies to move excess product, lowering world prices. In the Uruguay Round Agricultural Agreement (URAA) a distinction was made between domestic support policies that stimulate production and distort trade and programs that have only minimal effects on trade. This categorization resulted in the creation of colored “boxes” to represent the different types of domestic support. Using a traffic light analogy, the *green box* is used for domestic support that has minimal trade effects and can be used freely. Examples of programs that fall into this category are: research, infrastructure and payments to farmers that do not stimulate production. Domestic support that has a direct effect on production and trade was put into an *amber box* and was to be cut under the URAA. Payments made to farmers that required limiting production to be eligible were defined in the URAA to fall within the *blue box* and did not require reductions. The URAA constructed a set of rules that countries must use to calculate a value of the total domestic support each country provides producers. This calculation became a country's *aggregate measure of support (AMS)*. Each country had to calculate its base period (1986-1998) AMS and agree to make cuts from that base period level. Developed countries had to cut their AMS by 20 percent over the 1995-2000 period while developing countries had to cut their AMS by 13 percent over the 1995-2004 period. For the U.S., the base period AMS was \$23.879 billion and the required 20 percent URAA reduction resulted in an AMS ceiling in 2000 of \$19.103 billion. There are 34 WTO members who have commitments to reduce amber box spending in the URAA. The remaining WTO members must keep domestic support within 5 percent of the value of production (10 percent for developing countries).

### ***Domestic Support Proposals in the Doha Round***

There have been several proposals in the Doha round for reforms to domestic support. In nearly all cases, the proposals have focused on further reductions or outright elimination of amber box spending. The U.S. proposal called for a 60 percent cut in domestic support which results in a U.S. AMS ceiling below \$8 billion. Other issues continue to be debated regarding matters like *de minimis* rules and further refinement of both the green and blue box definitions. Some countries worry about box shifting as countries reduce amber box spending but offset that decline with green box or blue box spending.

### ***What are important domestic support issues for the U.S. dairy industry?***

- ***A Doha round agreement will likely cause Milk Price Support Program (MPSP) reform.*** The current AMS calculation for the MPSP exceeds \$4.5 billion. It is difficult to see how the dairy industry could use up over one-half of the total U.S. AMS level resulting from the proposed U.S. AMS reductions. The agreed-to AMS calculation for the MPSP (similar to all price support programs) is: Milk Production times (Milk Support Price minus Reference Period World Milk Price [\$7.25]).
- ***Other dairy programs will count in the amber box.*** The Northeast Interstate Dairy Compact was included in the U.S. domestic support notifications and suggests that new compact-like programs will also fall into the amber box. Although the U.S. has not provided any domestic support notifications since 2001, once notifications have been made for the period during which the Milk Income Loss Contract (MILC) program operated, it will also fall into the AMS calculation.

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## **Dairy Policy Brief #9a: Federal Milk Marketing Orders**

### ***What are federal milk marketing orders?***

Federal milk marketing orders (FMMOs) require regulated milk processors, called handlers, to pay minimum prices for milk and adhere to other specified rules. FMMOs are authorized under the Agricultural Marketing Agreement Act of 1937, as amended. Since the legislation is enabling, producers must request initiation or amendment of an order and grant approval of proposals through a referendum. This is often done through dairy cooperatives representing their membership. Upon producer approval (dairy cooperatives may bloc vote for their members), the Secretary issues the order, which is then binding on handlers within the affected marketing area; that is, handlers—not dairy producers—are regulated. The marketing area is a specified geographical region within which processors compete with each other for sales of fluid (beverage) milk to various retail and institutional outlets; not necessarily where producers shipping to these processors are located.

There are 10 federal milk marketing orders, affecting about 60 percent of all milk marketed in the U.S. California's state order, which operates much like federal orders, accounts for another 20 percent. The rest is priced under other state orders or is not subject to FMMO regulation (primarily Grade B milk).

According to the USDA, the three major objectives of FMMOs are to: (1) assure consumers of an adequate supply of wholesome milk at a reasonable price; (2) promote greater producer price stability and orderly marketing; and (3) provide adequate producer prices to ensure an adequate current and future Grade A milk supply.

### ***What are the issues?***

The objectives of FMMOs are achieved through classified pricing, pooling, and setting minimum producer pay prices. There are a number of controversial issues related to how these methods are employed. These are discussed in Dairy Policy Briefs 9b – 9d. Briefly:

***Classified Pricing.*** Classified pricing establishes monthly minimum pay prices for milk and milk components according to what dairy products they are used to produce. Minimum prices for some classes of milk are derived through product price formulas that tie milk prices to market prices for products within the class. Order prices for other classes of milk are not related directly to markets for the products included in the class.

***Pooling.*** Pooling is accomplished under federal orders by obligating each regulated handler in the marketing area to account for milk receipts according to usage by class. Handlers pay into or draw from a *producer settlement fund* depending on the order-determined value of their milk receipts priced at order minimum prices relative to the market-wide average value (uniform price).

***Minimum Prices.*** Federal orders guarantee producers a minimum price for their milk that is an average of the minimum class prices weighted by the proportion of milk used in each class. Within marketing orders, the producer price is the same (for milk of equal quality) regardless of the class of products that are made from the producer's milk. In seven of the ten FMMOs, producers are paid for pounds of milk components (butterfat, protein and other solids), not for pounds of milk. In the other three orders, producers are paid for their deliveries of skim milk and butterfat.

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## **Dairy Policy Brief #9b: Federal Milk Marketing Orders—Classification**

### ***What is the Program?***

Federal milk marketing orders define classes of milk according to end use and set minimum processor prices for each class. Each of the 10 orders uniformly defines four use classes: Class I consists of all forms of beverage milk; Class II is perishable manufactured products like cottage cheese, yogurt, and ice cream; Class III is hard cheeses; and Class IV is butter and nonfat dry milk. Class prices are announced monthly and apply to milk deliveries for the entire month.

In general, Class I prices are considerably higher than prices for the other three classes. That's because the Class I price is set by adding a differential to manufacturing class prices. This Class I Differential is the same each month, but ranges both within and among FMMO markets from \$1.60 per hundredweight (Upper Midwest order, Grafton, ND) to \$4.30 (Florida order, Miami). Producer prices, which depend on class prices and usage within classes, are positively related to Class I prices and Class I utilization. Class I utilization varies substantially across orders, from less than 20 percent in the Upper Midwest to more than 80 percent in Florida, and also seasonally within orders.

Classified pricing is an application of price discrimination. The price elasticity of demand for dairy products differs among classes. Consequently, producer revenue can be enhanced by shifting milk away from products with a relatively inelastic demand (e.g., fluid milk) into products with a relatively elastic demand (e.g., butter).

### ***What are the issues?***

- ***Determining the right class.*** USDA has a comprehensive system for determining how dairy products are assigned to milk classes. For most dairy products, the classification is straightforward. But classification is not always clear for dairy products that are a complex combination of milk components, sometimes in combination with non-dairy ingredients. For example, some new dairy-based beverages have been configured in a way that put them in Class II instead of Class I, which covers other fluid milk products. Producers argued that this caused them to lose the higher Class I value to the extent these beverage products compete with other fluid milk. Producers of these new beverages argued that they were expanding total dairy sales to the benefit of producers and that pricing their dairy ingredients at Class I would make the products non-competitive. USDA recently issued a proposed rule that uses protein content of fluid milk products to help determine classification.
- ***How many classes?*** Are four classes too many? Not enough? Some have argued that there should be more classes to accommodate new products and to promote export sales. Others have argued that “fine tuning” classification in response to new products is a lost cause, and that the system should be simplified by having only two classes—fluid milk products and all manufactured dairy products.
- ***Changing elasticities.*** Enhancing producer revenue through price discrimination/classified pricing requires knowledge of relative elasticities. Past research has consistently shown that the price elasticity of demand at retail for fluid milk is smaller in absolute value (more inelastic) than demand for manufactured products. This supports a relatively high price for milk used in fluid products. But the rapid growth in cheese consumption, especially in food ingredient and flavoring uses has made cheese demand more inelastic. At the same time, fluid milk faces more substitutes and there are more and more varied fluid products, making demand more elastic. This raises the question of whether class prices are properly aligned.

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## Dairy Policy Brief #9c: Federal Milk Marketing Orders—Pricing

### *What is the Program?*

Federal orders set minimum class prices using a set of formulas. For Class III and Class IV prices, formulas link milk component values directly to wholesale prices for the major dairy products within the classes. For example, the Class III (and Class IV) butterfat formula derives a butterfat price by subtracting a make allowance (assumed manufacturing margin) from the wholesale price of butter and multiplying the difference by the assumed yield of butter per pound of butterfat. Protein, nonfat solids, and other solids prices are derived in a similar manner, with the values of these components linked to wholesale prices for cheese/butter, nonfat dry milk, and dry whey, respectively. The Class III and Class IV prices per hundredweight are calculated by multiplying component prices by the pounds of component assumed to be contained in a “standard” hundredweight of milk.

Class I and Class II federal order milk prices are not tied to the wholesale prices of Class I and Class II dairy products. Rather, these prices are set by adding a differential to advanced Class III and Class IV prices. Consequently, prices for all classes of milk are related directly to wholesale prices for butter, cheese, dry whey, and nonfat dry milk.

### *What are the issues?*

- **Product price formulas.** The product price formulas for Class III and Class IV contain values for manufacturing costs and yields that are based on historical industry experience. Costs and yields vary among plants, raising the question of where to draw the line—should the values assure profitability for all plants? Only the most efficient plants? The formula values can become outdated over time, leading to abnormally high or low plant operating revenue. This is a particularly serious problem for make allowances. For example, rapidly rising fuel and energy prices in 2005 and 2006 elevated manufacturing costs increasingly above the formula make allowances. But raising product prices in an attempt to offset higher costs translates directly into higher milk costs through the Class III and Class IV formulas, leaving manufacturers no better off. And altering make allowances requires a lengthy administrative process during which conditions could change radically. Product price formulas rely on wholesale prices for dairy products that are collected and reported by USDA’s National Agricultural Statistics Service (NASS). While reporting is mandatory, NASS only requires reporting of prices for “spot market” sales, which represent less than 20 percent of butter production and less than 40 percent of cheese production. Moreover, because prices for most butter and cheese transactions are pegged to the thinly-traded Chicago Mercantile Exchange markets, even spot market sales prices may not consistently reflect broad supply and demand conditions.
- **Class I prices.** Minimum Class II, III and IV prices are the same across all orders. But while the base is the same, minimum Class I prices differ because Class I differentials vary across markets. The spread in Class I differentials (measured at principal consumption sites) is from \$1.80 to \$4.30 per hundredweight. Class I differentials are positively correlated with Class I utilization and, for markets east of the Rocky Mountains, distance from the Upper Midwest. The logic for these differences was to encourage local self-sufficiency in fluid milk to avoid costly shipments of inferior milk to meet deficit needs. But with rapid transportation and modern packaging technologies, packaged milk can economically move long distances with little or no deterioration in quality. Therefore, the need for widely-varying Class I prices is questionable and may be contributing to the inefficient location of milk production.

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## Dairy Policy Brief #9d: Federal Milk Marketing Orders—Pooling

### ***What is the Program?***

Under federal milk marketing orders, producer milk value is determined through *pooling*. Simplifying what is a complex process, total pool value is calculated by applying minimum class prices to the volume of milk used in each of the four classes, I through IV. Producers affiliated with handlers regulated under the order are paid a common price for milk that is equivalent to total pool value divided by total pool volume, regardless of how their milk is used.

The terms, pool and pooled, are also used in federal order language to refer to plants that either must or may be part of the overall pooling process and to producers eligible to share in the pool distribution. Class I handlers within an order marketing area are called *pool distributing plants*. These plants are required to be pooled, that is, they are obligated to pay minimum Class I prices for the milk they receive. For manufacturing plants, called *pool supply plants*, pooling is optional. But there is usually an economic incentive for doing so because they receive producer settlement fund payments to pay producers.

Producers may ship their milk to any handler and share in the marketing order pool under which the receiving handler is regulated. Dairy cooperatives sometimes “pool” some of their affiliated producers on distant markets to take advantage of higher producer prices.

### ***What are the issues?***

- ***Distant pooling.*** In most federal order markets, producers receive Class III milk component prices for their butterfat, protein and other solids plus a producer price differential (PPD) per hundredweight of milk. The PPD represents the market-wide combined marginal value of other classes of milk relative to Class III, and varies positively across markets with Class I prices and utilization. When cooperatives pool producers’ milk outside the producers’ marketing area, all of the pooled milk receives the PPD for the receiving market. But not all the milk that is pooled has to be shipped to receive the PPD—the shipper need only demonstrate the capability of providing the pooled milk as defined by the receiving market’s order qualification standards. Consequently, there has been a strong incentive to pool milk on markets with a relatively high PPD, which increases the volume of pooled milk and decreases the average pool value in the receiving order. Several orders have recently been amended to tighten qualification standards in order to reduce economic incentives for distant pooling.
- ***Depooling.*** Because Class I prices are announced six weeks before Class III prices, the monthly Class III price infrequently ends up higher than the Class I price. This “*price inversion*” means that the PPD becomes negative. It also means that pooled Class III handlers, who normally draw money from an order’s producer settlement fund, would have to pay into the fund. To avoid this payment, Class III handlers often depool—disassociate from the order—when there is a price inversion. The effect of depooling is to remove higher-priced milk from the pool, further reducing the PPD. Some orders have been and are being amended to make it more difficult for plants to depool.
- ***Producer-handlers.*** Dairy farmers who package and sell fluid milk exclusively from their own herds are exempt from federal order regulations. There are only a few producer-handlers and most have small herds and limited fluid milk sales. But some exempt producer-handlers have grown large enough to materially reduce Class I sales of regulated handlers. This reduces marketing order pool dollars and average milk value to producers. Recent federal legislation (the Milk Regulatory Equity Act) regulates large producer-handlers selling fluid milk in the Arizona-Las Vegas marketing area.