



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

University of Wisconsin-Madison
Department of Agricultural Economics
Marketing and Policy Briefing Paper Series

Department of Agricultural Economics, College of Agricultural and
Life Sciences, University of Wisconsin-Madison Cooperative
Extension Service, University of Wisconsin-Extension

Paper No. 44 (Revised)
November 1993

Class III-A: What, How and Why

by

Edward V. Jesse and Robert A. Cropp

Copyright (c) 1993 by Edward V. Jesse and Robert A. Cropp. All
rights reserved. Readers may make verbatim copies of this
document for non-commercial purposes by any means, provided that
this copyright notice appears on all such copies.

Class III-A: What, How and Why

Ed Jesse and Bob Cropp¹

Introduction

On October 20, 1993, USDA issued a final decision to adopt a special Class and price for milk used to produce nonfat dry milk in plants regulated by federal milk marketing orders. This action came after more than two years of contentious administrative and legal proceedings. Class III-A pricing was initially approved for three federal orders in 1991. Implementation was delayed until late 1992 pending resolution of a lawsuit. A hearing to extend Class III-A pricing to all orders was held in October 1992, with the recommended decision issued in May 1993.

Class III-A pricing was advocated and supported by regulated handlers who operate butter/powder plants, which have been less profitable than cheese plants in recent years. These handlers argue that they provide a valuable market-wide service to all producers by balancing fluid milk requirements and producer milk supplies, processing "surplus" milk into butter and nonfat dry milk as required by bottling schedules. But, given prices for butter and powder relative to prices for cheese, the handlers maintain that they cannot afford to pay as much for milk as cheese plants.

Opponents of Class III-A pricing do not dispute that butter/powder plants experience lower net margins than cheese plants. But, they say, III-A pricing will inhibit the allocation of milk to its highest use, instead encouraging the expansion of butter/powder processing capacity when marketplace signals indicate that more milk should move to cheese plants. Moreover, over-order premiums for fluid milk sales should compensate for manufacturing losses experienced by butter/powder plants involved in balancing fluid milk needs.

¹ Professors, Department of Agricultural Economics, University of Wisconsin-Madison, and Dairy Marketing and Policy Specialists, Cooperative Extension, University of Wisconsin-Extension.

This paper examines the Class III-A pricing controversy. We first explain how the III-A price will be set, and how it will likely differ from the Minnesota-Wisconsin price, which will still be used as the minimum price for federal order milk used to make cheese and other hard manufactured products. We then address the issues surrounding the adoption of III-A pricing, summarizing proponent and opponent arguments and USDA's conclusions. Finally, we critique the final decision and identify some likely implications of adopting III-A pricing.

Calculation of III-A Prices

The Minnesota-Wisconsin Manufacturing Grade Milk Price Series (M-W price), which has been used for many years as the Class III price under most federal orders, is a ***competitive pay price***.² That means that it represents what Grade B plants in Minnesota and Wisconsin actually paid and/or expected to pay for milk used to produce manufactured products.³ The M-W price reflects competitive conditions for Grade B milk in the two reporting states.

In contrast, the Class III-A price is a ***formula price***. That means that it is based on the prices that butter/powder plants receive for nonfat dry milk and butter. It reflects what plants can afford to pay for milk given product prices and assumptions about product yields, byproduct values, and manufacturing costs.

The specific Class III-A price per hundredweight for federal orders east of the Rocky Mountains is:⁴

$$\begin{array}{rcl} & \text{Central States nonfat dry milk price per pound} & \\ - & 12.5 \text{ cents per pound} & \\ \text{X} & 9 - (0.4/\text{Central States nonfat dry milk price per pound}) & \\ + & \text{butterfat differential times } 35 & \end{array}$$

² A national hearing was held in June 1992 to hear proposals to replace the M-W price as the basic formula price. A replacement is necessary because the amount of Grade B milk in Minnesota and Wisconsin has decreased to the point that the reliability of the M-W price as an accurate indicator of manufacturing milk value is in question. To date, USDA has not issued a recommended decision from the hearing.

³ The M-W price is reported by the National Agricultural Statistics Service of USDA, which surveys plants to determine what they paid for milk in the first half of the month and what they expect to pay for milk in the second half. The estimated monthly price is reported on or about the fifth of the following month.

⁴ Western orders use the Western nonfat dry milk price in calculating the Class III-A price. The Western nonfat dry milk price runs 2-6 cents per pound under the Central States price. Accordingly, the Class III-A price in western orders will be lower than the Class III-A price elsewhere by \$.15-.50 per hundredweight.

The formula starts with the monthly average nonfat dry milk price reported by USDA's Market News Service for "Central States." This is an f.o.b. plant price for carlot or trucklot volumes of Grade A or Extra Grade nonfat dry milk in 50 or 100 pound bags. There is no central market for nonfat dry milk. Hence, the USDA reported price is based on private transactions among nonfat dry milk buyers and sellers surveyed by Market News Service.

A manufacturing allowance, or "make allowance," of 12.5 cents per pound is subtracted from the nonfat dry milk price to derive a net value for nonfat dry milk after accounting for processor costs and profits. This net value is multiplied by an assumed yield of nonfat dry milk per hundredweight of milk. The formula yield is nine pounds less an adjustment equal to .4 divided by the nonfat dry milk price. The variable yield adjustment factor ($.4/\text{Central States nonfat dry milk price}$) is designed to net a Class III-A price equal to the federal support price for 3.5 percent butterfat milk (\$10.00 per hundredweight) when prices for both butter and nonfat dry milk are their respective support levels (\$0.65 and \$1.034 per pound).

The last part of the formula adds the value of butterfat per hundredweight of milk to the value of nonfat dry milk per hundredweight. The formula price is for milk testing 3.5 percent butterfat, so the butterfat value is 35 "points" ($1/10$ of 1 percent) times the monthly butterfat differential reported by the federal order market administrator and used to price butterfat in all producer milk, regardless of use.

The formula generates a milk value that locks in the 12.5 cents per pound make allowance if the nonfat dry milk plant accounts to the market administrator at the Class III-A price and receives the Central States nonfat dry milk for its finished product. Plants that can manufacture nonfat dry milk for less than 12.5 cents per pound, obtain a higher yield than indicated in the formula, or receive a price higher than the Central States quote are guaranteed a larger return; those with costs greater than 12.5 cents, yields lower than the formula yield, or lower prices will experience lower returns.

Table 1 and Figure 1 show how the formula III-A price would have compared with the M-W price since 1986. From 1986 through 1988, the Class III-A price would have been higher than the M-W price in most months, averaging 8 cents per hundredweight more than the M-W. From 1989 through 1991, the Class III-A price would have averaged 30 cents per hundredweight less than the M-W. The largest difference was in January 1990, when a collapse in the nonfat dry milk market would have yielded a Class III-A price \$3.69 per hundredweight less than the M-W price. Two months earlier (November 1989), the Class III-A price was \$2.41 per hundredweight higher than the M-W price! Since January 1992, the Class III-A price has averaged 79 cents per hundredweight less than the M-W price. There have been only three months during which the Class III-A price would have exceeded the M-W price.

To the extent that the Class III-A price is less than the M-W Price, the market-wide blend price -- the minimum price to producers -- will be reduced from what it would be under current pricing. The amount of reduction will depend on how much milk in the market is used to make nonfat dry milk. For illustration, assume a market in which producer milk is evenly distributed

among fluid milk, cheese, and butter/powder plants, 1/3 going to each use. Let's further assume the following class prices apply:

Class I (Fluid):	\$15.00
Class III:	12.50
Class III-A:	12.00

The producer blend price is the weighted average value of milk. With current pricing, the blend price would be \$13.33 ($1/3 \times \$15.00 + 2/3 \times \12.50), since the Class III price applies to milk used for both cheese and nonfat dry milk. With Class III-A pricing, the blend price drops to \$13.17, since 1/3 of the milk in the market is priced 50 cents per hundredweight lower ($1/3 \times \$15.00 + 1/3 \times \$12.50 + 1/3 \times \$12.00 = \13.17).

With Class III-A pricing in effect, nonfat dry milk plants will still have to pay the competitive price for producer milk applicable in their local milkshed if they expect to procure any milk. But when nonfat dry milk prices are low relative to cheese prices, the powder plants will be able to compete with cheese plants, whose milk will continue to be priced according to the M-W price, because they will obtain a larger "pool draw" from the marketing order pool.

The pool draw refers to monies paid from the marketing order producer settlement fund to plants whose weighted average value of milk priced according to federal order minimum prices is less than the market-wide average value, or blend price.⁵ To illustrate how III-A pricing can benefit nonfat dry milk producers, let's look at the pool draw for two federal order-regulated plants, a cheese plant and a nonfat dry milk plant, under the following price assumptions:

Market-wide blend price:	\$13.17
M-W price:	12.50
Class III-A price:	12.00

In this case, a plant with all of its producer milk used for manufacturing cheese during the month would receive a payment from the producer settlement fund of \$.67 per hundredweight, the difference between the market-wide blend price and the M-W price. A plant using all of its milk receipts to make nonfat dry milk would receive \$1.17 per hundredweight from the producer settlement fund.

Rationale for Class III-A Pricing

⁵ For an expanded discussion of pool draws and how marketing order producer settlement funds work, see Jesse, Ed, and Bob Cropp, *What Determines Your Milk Check? Part II: Grade A Milk*, North Central Regional Extension Publication #217-17, August 1993.

The rationale for the final decision to implement Class III-A pricing centered on the issue of processor and producer equity. Nonfat dry milk production, it was argued, has been the use of last resort for reserve supplies of milk for a substantial period of time. The costs associated with handling these reserve supplies are born by the organizations that process nonfat dry milk. If that organization is a cooperative, costs and any losses are born by its producer-members because it affects the net income and members' equity in the cooperative. Yet, all producers receive the benefits of this market clearing activity with none of the associated costs. This situation is often referred to as the "free rider" problem.

In its final decision, USDA argued that with III-A pricing, the costs of handling reserve milk supplies will be shared equitably among all producers associated with a given federal order. The sharing of costs is through a lower producer blend price whenever the Class III-A price is less than the Minnesota-Wisconsin Price.

Opponents to Class III-A argued that it is normal for milk to have different values across uses from time to time. Values change as product prices change in response to supply and demand conditions for the various products. But, it is expected that milk will be directed to the production of those products that provide the greatest return. If cheese generates a higher net return than does butter/powder, then milk will eventually be channeled away from butter/powder and into cheese production. As this occurs, net returns between butter/powder and cheese plants will become more similar.

This shifting among uses has occurred for some Upper Midwest markets. For example, processors in Wisconsin have moved away from nonfat dry milk production to more profitable cheese production. In 1980, Wisconsin manufactured 119.3 million pounds of nonfat dry milk, about 10 percent of U.S. production.⁶ But in 1992, Wisconsin manufactured just 22.7 million pounds of nonfat dry milk, less than 3 percent of U.S. production. During this time period, Wisconsin increased cheese production from 1.5 billion pounds (68 percent of its milk supply) to 2.1 billion pounds (86 percent of its milk supply).

However, from the data presented in the record, USDA concluded that the marketplace has not been able to fully adjust to the greater value of milk in cheese relative to nonfat dry milk in most federal order markets. Consequently, the M-W price has been substantially in excess of the value of milk used to produce nonfat dry milk for most of the past three years. Hence, the M-W has not been an appropriate market-clearing price for the residual supplies of milk that must be utilized in nonfat dry milk production. As a result, organizations manufacturing these residual supplies into nonfat dry milk have suffered substantial losses.

Several suggestions were offered as to why the marketplace has failed to channel reserve supplies of milk from nonfat dry milk production to more profitable cheese production. For some markets, milk utilization data indicate that cheese plants are operating at capacity and are not able

⁶Wisconsin Department of Agriculture, Trade and Consumer Protection, and Wisconsin Agricultural Statistics Service, *Wisconsin Dairy Facts*, 1981 and 1993 issues.

to take on more milk. Some cheese plants had no need for additional supplies of milk because their market outlets for cheese were being adequately satisfied. For some primarily fluid milk markets (markets with relatively high class I utilization) there are no cheese plants located within a reasonable distance to process reserve supplies of milk. Due to the seasonality and limited quantity of reserve supplies, the construction of cheese plants is not feasible in these fluid milk markets. The operation of nonfat dry milk plants to handle reserve milk supplies is the most economical alternative.

Due to the seasonal variation in reserve milk supplies and the fact that nonfat dry milk is the use of last resort, the utilization of capacity of nonfat dry milk plants varies considerably throughout the year. Operating these nonfat dry milk plants, at times, far less than full capacity results in higher than normal processing costs. As a result, nonfat dry milk plants have faced a precarious financial situation since about 1988. Prior to then, butter, nonfat dry milk and cheese prices were all near support levels most of the time and net returns from processing reserve supplies of milk into these products were similar. But now, cheese prices, although highly variable, have stayed well above support prices as compared to prices for butter and nonfat dry milk, and net processing returns are no longer similar.

Based on this rationale, the final decision concluded that the implementation of Class III-A pricing will facilitate a more orderly disposition of the reserve supplies of milk. Further, the burden of the costs of disposition will be more equitably shared among the organization handling reserve milk supplies and the producers associated with federal milk marketing orders.

Major arguments in opposition to the implementation of Class III-A were rejected in the final decision as being invalid. For example, opponents argued that, because of a low assumed yield and a high make allowance, the Class III-A pricing formula results in a Class III-A price that is too low to represent the market value of such milk. This low milk value locks in a profit margin for nonfat dry milk plants not afforded to cheese plants. Further, if butter, nonfat dry milk and cheese prices were all at or near support, cheese plants would be at a disadvantage to nonfat dry milk plants. Therefore, Class III-A pricing does not coordinate well with the dairy price support program.

However, USDA's analysis showed that with Class III-A margins for cheese plants are not at a disadvantage to butter/nonfat dry milk plants and therefore rejected this argument.

Opponents furthered argued that because of variable cheese prices cheese plants have also suffered significant losses from time to time. USDA argued that even though cheesemakers have faced revenue shortfalls in certain months of the past few years, there can be no question that marketing conditions for such manufacturers have been much more favorable than for butter/powder plants.

Opponents argued that the record does not conclusively establish that cooperative associations are incurring losses under the existing pricing system. They argued that manufacturing losses are either made up, or could be made up, by increasing prices for milk in other uses.

Losses incurred as a result of balancing activities should be recovered from the marketplace. Losses may be all or partially recovered via of the premium structure operated by cooperatives. Finally, returns to all producers should not be reduced because some cooperatives continue to operate less profitable butter/powder plants rather than cheese plants.

USDA's response was that the cooperative premium structure was never intended to cover the costs of operating reserve supply manufacturing milk plants. But rather, these premiums relate to milk marketing services performed for fluid milk processors by supplying cooperatives, e.g., delivering standardized or supplemental milk.

Finally, opponents argued that Class III-A provides a "financial guarantee" that will encourage butter/powder processors to update their current plant and equipment and/or construct new facilities to handle additional quantities of milk for processing into such products. USDA concluded that plant cost data provided for the record does not support this conclusion. Because of the fluctuations in the volume of reserve milk supplies which must be processed at butter/powder plants to clear the markets, they are expected to operate at less than maximum efficiency. The change to Class III-A pricing is expected only to minimize processor losses associated with such processing, not to provide windfall profits.

Critique of the Class III-A Pricing Decision

As noted earlier, Class III-A pricing will usually reduce producer blend prices in accordance with the amount of milk used for making nonfat dry milk. This may seem reasonable if the arguments offered in USDA's final decision are believable: Nonfat dry milk plants serve a market-wide balancing function that provides benefits to all producers. These plants should be guaranteed a fixed manufacturing margin to compensate them for providing this market-wide service. Since all producers benefit, all producers should bear the cost in the form of lower blend prices.

While the decision to implement Class III-A pricing may appear reasonable on grounds of equity, it is not reasonable on other grounds. Perhaps most important, III-A pricing is inconsistent with economic logic. As noted earlier, to the extent that a raw product is homogeneous among uses, it would be expected to have the same value regardless of use. If this is not the case, then raw product would be reallocated among uses until finished product market prices adjusted to bring about an equilibrium.

For example, the demand for nonfat dry milk has declined relative to the demand for cheese. This has brought about a situation where Grade A milk is worth less if it is used to make powder than if it is used to make cheese. The market is calling for a reallocation of milk from powder to cheese. As that occurs, powder and cheese markets will adjust to equate the value of milk in both uses. More milk will be used for cheese; less for powder. This will increase the supply of cheese and reduce powder supply, raising powder prices and lowering cheese prices. It is this kind of adjustment that underlies the "law of one price."

The FMMO decision intercedes in this market adjustment process by using a formula-based pricing method that fixes manufacturing margins for powder. The law of one price is violated by arbitrarily setting the price for milk used to make powder at a level that will usually be lower than the price for milk used to make cheese. Natural incentives to reallocate milk from powder to cheese are stymied.

Of course, the whole notion of classified pricing, not just Class III-A pricing, violates the law of one price. Grade A milk used for fluid purposes is the same as Grade A milk used for cheese, but handlers are charged a higher Class I price for the milk used as fluid. So what is different about III-A?

Several things are different. Higher Class I prices are often justified as necessary to ensure adequate production of Grade A milk. Charging handlers a higher price for milk used for fluid purposes increases producer returns through price discrimination; i.e., exploiting the relatively inelastic demand for fluid milk by restricting volume. While the milk used for fluid and manufacturing purposes may have identical composition, the physical product must be viewed in combination with the bundle of services that go with it when considering relative prices. These services (e.g., added transportation, balancing) are different and more expensive for fluid milk.

Whether these are legitimate reasons for classified pricing is certainly subject to question. But the point here is that these reasons, even if they are legitimate, do not apply to charging different prices for milk used for cheese and nonfat dry milk.

Not surprisingly, the strongest supporters of Class III-A pricing were dairy cooperatives who had recently invested in expanded nonfat dry milk manufacturing capacity. Reallocation of milk from powder to cheese in response to market signals would obviously hurt these cooperatives. But III-A pricing rewards these bad investment decisions at the expense of all producers. This is questionable public policy.

By assuring fixed manufacturing margins, III-A pricing could encourage even more expansion of powder manufacturing capacity. This runs the risk of increasing sales of powder to the Commodity Credit Corporation (CCC) under the dairy price support program. If this happens, all dairy producers could be penalized through larger assessments.⁷

A second major problem with the Class III-A decision is that it inappropriately assigns Class I (fluid milk) costs to the Class III market. The Class III price serves two purposes in federal order pricing: It is the "surplus" price representing the value of milk not used for fluid purposes, and it is the basic formula price for setting Class I prices. The amount added to the basic formula price to derive the Class I price is the Class I differential. Class I differentials are supposed to cover the additional costs to supply fluid milk over and above the cost to supply

⁷ Current dairy policy assesses dairy farmers for the full cost of all CCC purchases in excess of 7 billion pounds, milk equivalent, total solids basis.

milk to manufacturing plants. Among these added costs are balancing costs, or the costs of adjusting milk supplies to meet varying seasonal and weekly bottling schedules.

If balancing costs in a market are not being covered by the Class I differential, then the solution is to increase the differential. In effect, the III-A decision does this, but in a peculiar way. It reduces the Class III price instead of increasing the Class I price and only for milk destined for butter/powder production. The decision says that the Class I differentials, which are distributed *equally* among producers regardless of whether their cooperative operates butter/powder or cheese plants, are not distributed *equitably*. Butter/powder plants do most of the balancing and are less profitable than cheese plants, at least partly because they operate at highly-variable volume. Therefore, while the Class I differential may be at an appropriate level, the Class III price should be lower for butter/powder plants than for cheese plants.

There are some flaws in this argument. The decision does not separate the two purposes of the Class III price. As noted above, if butter/powder plants are unprofitable because of low powder prices relative to cheese prices, then the problem is one of unwillingness or inability to shift Class III milk supplies to their highest and best use. Correction of this problem requires marketplace adjustments, not changes in regulations. To the extent that butter/powder plants are unprofitable because of large variations in volume, then the corrective action would be to either increase the Class I differential or amend the order to allow for market-wide service payments to those cooperatives that are providing the balancing function; *not* to reduce the Class III price.

The decision implies that butter/powder plants dominate balancing, but it does not provide evidence on the relative volumes of fluid milk reserves balanced in cheese and butter/powder facilities. Testimony is cited that, at least in some markets, powder is the usage of last resort; that Class III milk moves to powder plants only because there is no additional processing capacity in cheese plants. That is an anticipated market-driven phenomenon in markets characterized by limited cheese processing capacity, and should not be obstructed by regulatory action. But there are many markets with excess cheese capacity where cheese plants perform most or all of the balancing function. The universal application of III-A pricing ignores these market distinctions.

The decision fails to recognize the role of over-order premiums in dealing with the temporary problem of diminished butter/powder profitability. USDA's position on over-order premiums seems to be that, since they are outside the order system, they can be ignored. In fact, over-order premiums can make federal order pricing less restrictive and more competitive.

Consider a market where cooperatives operating butter/powder plants are responsible for providing the bulk of market-wide balancing services. That means that those cooperatives are supplying the bulk of bottlers' fluid milk needs. If these cooperatives are not able to recover the cost of providing balancing because of low powder prices, then they should be able to charge a higher fluid milk price to offset their losses. If bottlers resist the increased over-order charge, their option is to secure their needs from other cooperatives. But since the other cooperatives operate presumably more profitable cheese plants, they would presumably be unwilling to give up milk without an even higher over-order charge.

Finally, Class III-A pricing could place cooperatives that only operate cheese plants at a competitive disadvantage to cooperatives that operate both cheese and butter/powder plants. Guaranteed manufacturing margins for butter/powder could be used to subsidize investment in cheese facilities. Cooperatives manufacturing only cheese could find it to their advantage to become unregulated if their pool draws are significantly reduced. This would reduce the reserve supply of milk needed by Class I handlers.

In the way of a short summary, the Class III-A pricing decision substitutes federal order regulation for competition. Based on economic logic and past experience, that is not a good substitute.

Table 1. M-W and Class III-A prices at 3.5% butterfat

Year	Month	NFDM Price*	Butterfat Diff.#	M-W Price	Class III-A Price	M-W Minus III-A
		Cts/Lb	\$/Point	\$/Cwt	\$/Cwt	\$/Cwt
1986	1	80.38	0.15756	11.12	11.29	-0.17
	2	80.14	0.15816	11.04	11.29	-0.25
	3	79.87	0.15818	11.02	11.26	-0.24
	4	80.38	0.15843	10.98	11.32	-0.34
	5	80.38	0.15860	10.98	11.32	-0.34
	6	80.38	0.16031	11.00	11.38	-0.38
	7	80.38	0.16793	11.06	11.65	-0.59
	8	80.55	0.18014	11.33	12.09	-0.76
	9	80.62	0.17837	11.55	12.04	-0.49
	10	81.25	0.17573	11.69	12.00	-0.31
	11	82.00	0.17358	11.91	11.99	-0.08
	12	81.35	0.16026	11.88	11.47	0.41
1987	1	79.78	0.15329	11.70	11.08	0.62
	2	79.00	0.15463	11.27	11.06	0.21
	3	78.91	0.15786	11.03	11.17	-0.14
	4	79.05	0.15880	11.00	11.21	-0.21
	5	79.12	0.15868	11.00	11.21	-0.21
	6	79.16	0.17058	11.07	11.63	-0.56
	7	79.25	0.17308	11.17	11.73	-0.56
	8	79.60	0.17171	11.27	11.71	-0.44
	9	80.36	0.16461	11.42	11.53	-0.11
	10	80.02	0.15410	11.35	11.13	0.22
	11	77.64	0.15252	11.34	10.87	0.47
	12	77.03	0.14838	11.12	10.67	0.45
1988	1	73.19	0.14762	10.91	10.30	0.61
	2	73.00	0.14857	10.60	10.31	0.29
	3	73.00	0.14913	10.43	10.33	0.10
	4	73.09	0.14955	10.33	10.36	-0.03
	5	73.37	0.14975	10.34	10.39	-0.05
	6	74.25	0.15505	10.34	10.65	-0.31
	7	77.08	0.15731	10.52	10.98	-0.46
	8	80.58	0.15564	10.98	11.24	-0.26
	9	87.16	0.15067	11.48	11.65	-0.17
	10	88.78	0.14598	11.88	11.63	0.25
	11	90.06	0.14417	12.23	11.68	0.55
	12	92.70	0.14397	12.27	11.91	0.36
1989	1	93.57	0.14460	11.90	12.01	-0.11
	2	83.57	0.14656	11.26	11.19	0.07
	3	79.64	0.14737	10.98	10.86	0.12
	4	81.09	0.14712	11.09	10.98	0.11
	5	84.47	0.14726	11.12	11.29	-0.17
	6	88.51	0.14720	11.33	11.65	-0.32
	7	96.18	0.14665	11.76	12.32	-0.56
	8	110.67	0.14807	12.37	13.66	-1.29
	9	121.68	0.13297	13.10	14.12	-1.02
	10	139.93	0.12550	13.87	15.50	-1.63
	11	158.71	0.12304	14.69	17.10	-2.41
	12	128.04	0.11789	14.93	14.16	0.77

Table 1. M-W and Class III-A prices at 3.5% butterfat (Continued)

Year	Month	NFDM Price*	Butterfat Diff.#	M-W Price	Class III-A Price	M-W Minus III-A
		Cts/Lb	\$/Point	\$/Cwt	\$/Cwt	\$/Cwt
1990	1	88.24	0.10788	13.94	10.25	3.69
	2	82.30	0.11284	12.22	9.89	2.33
	3	86.59	0.11345	12.02	10.30	1.72
	4	104.26	0.10529	12.32	11.59	0.73
	5	125.42	0.09680	12.78	13.19	-0.41
	6	129.21	0.09865	13.28	13.60	-0.32
	7	125.17	0.09864	13.43	13.23	0.20
	8	112.05	0.09874	13.09	12.06	1.03
	9	92.02	0.10011	12.50	10.31	2.19
	10	88.65	0.10521	10.48	10.19	0.29
	11	86.83	0.10565	10.25	10.05	0.20
	12	86.22	0.10406	10.19	9.93	0.26
1991	1	85.21	0.10351	10.16	9.83	0.33
	2	85.12	0.10390	10.04	9.83	0.21
	3	85.12	0.10399	10.02	9.83	0.19
	4	85.36	0.10413	10.04	9.86	0.18
	5	86.12	0.10373	10.23	9.91	0.32
	6	88.88	0.10459	10.58	10.19	0.39
	7	92.15	0.10479	10.99	10.49	0.50
	8	92.19	0.10325	11.50	10.44	1.06
	9	93.89	0.10461	12.02	10.64	1.38
	10	114.80	0.10817	12.50	12.64	-0.14
	11	110.68	0.10545	12.48	12.17	0.31
	12	104.00	0.09961	12.10	11.37	0.73
1992	1	95.28	0.09191	11.71	10.32	1.39
	2	97.55	0.08556	11.21	10.30	0.91
	3	101.80	0.08629	10.98	10.71	0.27
	4	105.89	0.08494	11.46	11.03	0.43
	5	115.73	0.07788	12.06	11.66	0.40
	6	116.70	0.07120	12.46	11.51	0.95
	7	115.00	0.07011	12.59	11.32	1.27
	8	111.62	0.06995	12.54	11.01	1.53
	9	105.11	0.07825	12.28	10.72	1.56
	10	108.01	0.07757	12.05	10.96	1.09
	11	109.13	0.07635	11.84	11.01	0.83
	12	109.25	0.07425	11.34	10.95	0.39
1993	1	111.00	0.07127	10.89	11.00	-0.11
	2	113.83	0.07175	10.74	11.27	-0.53
	3	113.33	0.07099	11.02	11.20	-0.18
	4	113.85	0.06786	12.15	11.14	1.01
	5	115.25	0.06693	12.52	11.23	1.29
	6	112.86	0.06893	12.03	11.09	0.94
	7	109.56	0.06750	11.42	10.74	0.68
	8	109.34	0.06924	11.17	10.78	0.39
	9	109.22	0.06735	11.90	10.71	1.19
	10	110.80	0.06504	12.46	10.77	1.69
	11					
	12					

Table 1. M-W and Class III-A prices at 3.5% butterfat (Continued)

Year	Month	NFDM Price*	Butterfat Diff.#	M-W Price	Class III-A Price	M-W Minus III-A
		Cts/Lb	\$/Point	\$/Cwt	\$/Cwt	\$/Cwt
Avg:	1986-88			11.18	11.26	-0.08
	1989-91			11.88	11.57	0.30
	1992-Oct. '93			11.76	10.98	0.79

* Prices paid f.o.b. Central States production area, Extra Grade or Grade Trucklot quantities, 50 or 100-pound bags. Source: Dairy Market News a

Calculated using the following formula: $0.138 \text{ Times Chicago Merc. Exch.} - 0.0028 \text{ Times M-W Price @ Test.}$

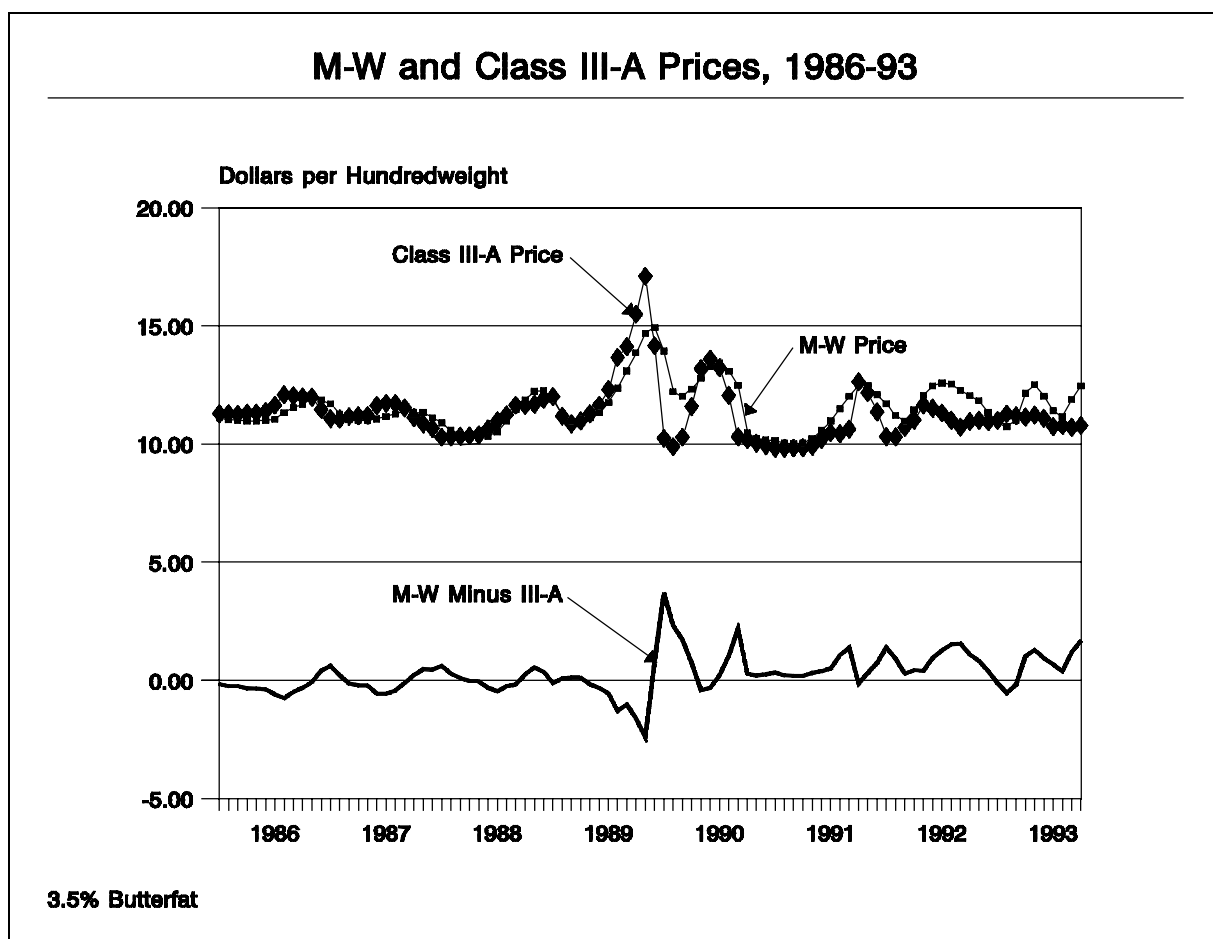


Figure 1