What’s Behind the Grade A Dairyman’s Milk Check?

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WHEN DAIRYMEN, CONSUMERS, ECONOMISTS, government officials or others discuss milk prices one thing becomes clear—milk prices are difficult to understand. They are of such great importance, however, that major efforts on the part of many groups to understand them are justified.

This bulletin attempts to clarify the mechanisms and procedures resonsible for the prices paid to producers in *federal order markets*. The role of *processors*, *cooperatives* and *market administrators* will appear in the discussion only to the extent as their roles are relevant to farm-level prices. This bulletin will not cover many of the fine points of milk price determination in depth, but should present the "big picture" with sufficient detail and clarity to provide an understanding of milk pricing and encourage those wishing to make a more detailed examination.

Farm-level milk price determination is best understood when divided into four interrelated parts. The first provides a brief look at the purpose and operation of federal milk marketing orders. The second part discusses the dairyman's daily base. The third deals with the determination of *Class prices*, I, II, III (where applicable) and the payments into the *market-wide pool*. The determination of various producer milk prices is studied last. Illustrative examples will be used throughout the bulletin.

FEDERAL MILK MARKETING ORDERS

Before we begin a close look at milk pricing, let's briefly outline the operation of a Federal Milk Marketing Order. Approximately 78 percent of all fluid grade milk sold in the U.S. in 1972 was sold under the provisions of a federal order. At the present time, 61 Federal milk marketing orders are operating. The entire pricing discussion in the later sections of this report is couched in Federal order provisions.

Throughout this bulletin the authors have italicized key words or phrases they feel need definition or explanation. These words are highlighted the first time they appear in the text and can be found with their definitions in the glossary.

The Agricultural Marketing Agreement Act of 1937 (as amended) provides the enabling legislation for Federal milk orders, with their declared purpose to ". . . establish and maintain such orderly marketing conditions . . . as will establish . . . (prices which) are reasonable" in light of production costs and which will ". . . insure a sufficient quantity of pure and wholesome milk and be in the public interest."

A marketing order may be proposed by the Secretary of Agriculture or by any other person. However, producer organizations usually make such requests. Written applications are filed, requesting a hearing on the proposal. If a USDA investigation finds that the proposed order will tend to further the declared policy of the Act, a notice of public hearing is issued. A formal notice giving the time and place of the hearing must be placed in the *Federal Register*[2] at least 15 days prior to the date selected.[3]

The public hearing is held to receive evidence with respect to all marketing conditions for milk in the proposed area. Any interested party having information to give which is pertinent to the issue at hand is invited to testify. Participation as a witness is strictly voluntary. All testimony is taken under oath or by affirmation. Questioning of witnesses is permitted, but they need not answer. At the close of the hearing, the examiner sets a time for written briefs to be filed. He certifies the accuracy of the hearing record and briefs and turns them over to Dairy Division-USDA for its study and recommendations.

The recommended decision is mailed to everyone known to be interested and is also published in the *Federal Register*. Written exceptions may be filed,

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[2]*The Federal Register is published by the Office of the Federal Register, National Archives and Records Service, Washington, D.C. and distributed by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. The Federal Register provides a uniform system for making available to the public regulations and legal notices issued by Federal agencies.*

[3]*In the case of a hearing called for purposes of amending an existing order, only three days' notice is required in most instances.*

based only on information contained in the hearing record. A final decision is made and submitted to producers in the area for their approval.

Producer approval is usually secured by a referendum requiring two-thirds approval of *voting producers* or the approval of producers who supplied two-thirds of the milk sold in the defined order area in a specified time period (in the case of market-wide pool arrangements).[4]

If the order is approved, the Secretary issues the order and directs the *handlers* it regulates to market milk in conformity with the order. Federal milk marketing orders require the setting of minimum producer prices as part of a classified pricing plan. *Base plans, equalization funds* and *location differentials* are designed to provide uniform prices to all producers and handlers.

An order approved in the manner described remains in effect until an amendment (or amended order) has been developed through the same procedures, except in emergency situations when the Secretary can suspend a provision(s) of an order when he deems such action is imperative. The Secretary terminates an order (or one or more of its provisions) if he finds that it no longer accomplishes the purposes of the Act. An order must be terminated at the request of a majority of producers who produce more than half of the milk supply for a market.

The administrative functions related to Federal milk marketing orders are carried out by the Dairy Division of the USDA. It is responsible for program development and the supervision of local administrations. The specific duties and responsibilities of the Dairy Division are delegated to the Director by the Administrator of the Consumer and Marketing Service (CMS)-USDA. The Director of the Dairy Division has final authority to take all action necessary or appropriate in the administration of marketing orders approved by the Secretary in accordance with the provisions of the enabling Act.

Each milk order is administered locally by an agency headed by a market administrator, who is appointed by the Secretary of Agriculture. The powers and duties of the market administrator are prescribed in each order. Many of these duties will be indicated in other sections of this bulletin. A staff assists the administrator in his duties. The administrative and marketing services are funded through assessments on affected handlers and producers, respectively.

For those desiring further information or clarification regarding milk marketing orders, two USDA publications—USDA-CMS #27 and USDA-AMS #559— are cited in the bibliography. For information about a particular milk marketing order, a copy of the actual order of interest is recommended.

[4]*If the order establishes an individual handler pool, the approval requirements increase to three-fourths for both methods.*

The Daily Base

A dairy farmer operating a farm and selling *Grade A milk* in the Southern Michigan Federal milk market (order number 40)[5] most likely has a daily base that he has established under provisions of the marketing order. If a producer delivers Grade A milk for at least 122 days during the period August 1-December 31, his daily base (pounds of milk) is computed as the simple average of his daily milk deliveries during this period. The farmer receives the *base price* for all milk sold under his daily base; this price is the highest paid to producers for milk. Much more will be said about this and other prices later in this bulletin. This daily base takes effect on February 1 of the following year and remains in effect for one full year. Thus, each year a farmer re-establishes a new daily base. This is known as the *open base* system.

A producer who has no base is paid until February 1 following the August-December period within which he established a base at a price not less than the *adjusted uniform price*, except under two special situations. These are:

1. All producers and cooperative associations shall be paid not less than the *uniform price* for all milk delivered whenever total receipts of producer milk by all handlers during the month are less than 112.5 percent of total Class I utilization of all milk by handlers.
2. When a plant first becomes a *pool plant*, any producer deliving to such plant may elect one of two options:
   (i) establish a base on certified deliveries of milk to such plant for the preceding August-December period, or
   (ii) elect payment at not less than the uniform price until the second February 1, after such plant first became a pool plant.

When a producer delivers milk for less than 122 days during the base period, he establishes a daily base equal to his *total deliveries* during this period (regardless of the number of days below 122) divided by 122.

The producer's daily base will not decrease from last year's base even though his daily deliveries during this year's August 1 to December 31 period may have been less than he established during last year's base building period, if this decrease in daily deliveries was less than 10 percent. Two examples might serve to clarify this situation (see chart, p. 3).

Other important rules apply to the producer's milk delivery responsibilities under the Federal order base plan. As mentioned earlier, a producer has his base reduced from one year to the next if, during the

[5]*This particular marketing order provides the basis for this discussion. Most Federal orders are similar to order number 40.*

	Case A	Case B
1973 daily base (Feb. 1, 1973-Jan. 31, 1974)	1,500 lb.	1,500 lb.
1974 average daily deliveries during Aug. 1-Dec. 31, 1973	1,400 lb.	1,200 lb.
The decrease in daily deliveries was	100 ÷ 1500 = 6.67%	300 ÷ 1500 = 20%
His daily base for 1974 would be (Feb. 1, 1974-Jan. 31, 1975)	1,500 lb.	1,200 lb.

new base building period, his daily shipments are more than 10 percent below last year's deliveries. Furthermore, if a producer fails to deliver milk to any handler for 45 consecutive days, all the production base is forfeited. Federal order provisions recognize that circumstances outside the control of the producer may make fulfillment of the base responsibilities noted above impossible or unnecessarily difficult. Therefore, they have noted three exceptions to the obligations above under which a base holder may retain his established base without loss for a 12-month period beginning the following February 1:

1. Loss by fire or windstorm of a farm building used in the production of milk on the baseholder's farm.

2. Brucellosis, bovine tuberculosis or infectious diseases in the milking herd of the baseholder (as certified by a licensed veterinarian).

3. The baseholder is quarantined from shipping milk to a plant by a Federal or State authority. This exception was designed to include the situation facing many Michigan dairy farmers in 1974-1975 when their milk was contaminated and subsequently quarantined after a fire retardant (PBB) was accidently mixed with dairy feed.

After the expiration of the 12-month period, the producer is given the option of having a base computed on milk delivered during the base building period in which the old base was retained, or take the position of an adjusted uniform shipper and wait to establish a new base. If the disaster does not keep the producer off the market during the base-building period, and the new earned base is higher than the old base, the new base would prevail beginning February 1 of the new base year.

Several specific rules contained in Federal orders govern the "ownership" of a production base. A base applies to deliveries of milk by the producer for whose account milk was delivered during the base period. Upon the death of the producer, the base may be transferred to a member(s) of the deceased producer's immediate family. For purposes of Federal order regulations, the immediate family is defined to include any of the following: husband (wife), son (daughter-in-law), daughter (son-in-law), brother (sister-in-law), sister (brother-in-law) and grandchildren. Any of these relatives need not live on the farm from which the base is being transferred. Any other relative not listed above may have the base transferred to him (her) only if he (she) lives on the farm and is classified as part of the household.

Upon a producer's retirement or entry into military service, the entire base may be transferred to a member(s) of his immediate family. Bases will be considered to be held jointly if transferred to more than one member of the family living in the same place.

Two or more producers with bases may combine those bases upon the formation of a *bona fide* partnership, which must define all financial and management rights and responsibilities. Copies of partnership agreements must be submitted to the market administrator when a request for base consolidation is filed.

Partnership agreements are required by the Federal order from all joint baseholders except husband-wife since they are considered to be natural partners. Any producer(s) wishing to do business under an assumed name (this includes a farm or firm names; examples: Riverview Jersey Farm and Jones Brothers Farm) must comply with the Assumed Name Act of Michigan, and a copy of the required registration form must be supplied to the market adminstrator.

Bases may be earned and held jointly through the formation of a *bona fide* partnership if the partnership is established as discussed above. If such partnership is terminated, the base may be divided among the partners as specified in writing to the market administrator. Bases are not considered to be held jointly (except in the case of retirement or entry into military service) until all parties in the agreement have gone through one August-December base-building period. This also applies to members of the immediate family, except in the case mentioned above.

Base policy with respect to corporations is still taking shape in many marketing order areas. In the Southern Michigan order (No. 40) three specific rules apply to corporations holding production bases: (1) the market administrator requires that articles of incorporation be provided to his office, (2) the corporation's board of directors must submit a statement to the market administrator stating that the base is held by the corporation and not by any individuals, and (3) if the corporation is dissolved or ceases its milk production activities, the production base they hold is *not* transferable.

Class Prices and the Market-Wide Pool

We now want to discuss the computation of Class I, II and III prices under the Federal order. Discussion of the *Minnesota-Wisconsin (M-W) series price*

for *manufacturing grade milk (Grade B)* must precede this, however. It should be noted that Grade B milk is produced under less stringent sanitation regulations and can be used in processed dairy products only. Also, the price determination in Grade B milk markets is relatively free and open. The only governmental influence on the free determination of a market clearing price is the price support program which essentially sets a floor under the *Grade B price.*

Minnesota-Wisconsin Series and Class Prices

The Minnesota-Wisconsin series is an estimate of the average manufacturing grade milk price (per cwt; 3.50 percent butterfat) paid to producers in the two-state area. The estimate is computed monthly by Statistical Reporting Service-USDA. The M-W Series price is referred to as the *basic formula price* in the language of federal order provisions. The estimate is made through a base month adjustment plan utilizing direct reports from a sample of 340 milk-receiving plants in these two states. Minnesota and Wisconsin are particularly good barometers of the Grade B milk market, since they historically produce more than half of total United States manufacturing grade milk. A thorough discussion of the operation of the M-W Series can be found in the short SRS-USDA publication, "Prices Received by Farmers: Manufacturing Grade Milk in Minnesota and Wisconsin, 1971 through 1973," CRB, SRS, July 1974.

The discussion of Class I, II and III Grade A milk prices in federal order markets can now proceed. Actual procedures and figures cited are for the Southern Michigan Order but the discussion is relevant to any Federal order milk market.

The Class I price established under provisions of the Federal order establishes a minimum price per cwt. to be paid by each handler, f.o.b. his plant, for milk of 3.5 percent butterfat content that is used in *Class I products.* Class I products include all *skim milk* or butterfat sold in fluid form. This Class I price for a particular month will be the basic formula price of the second preceding month plus $1.60/cwt. Thus, for September 1974, the minimum Class I price was the M-W Series price from July 1974 ($6.29/cwt) plus $1.60 or $7.89/cwt. The $1.60 price differential was designed to reflect both the increased costs of producing Grade A milk and the additional value inherent in milk used in this category. This fixed differential is specified in the order and varies among Federal orders. This variance is based on locational considerations.

Many cooperative milk marketing associations in the U.S. have succeeded in negotiating a premium above the minimum Federal Class I price (called a *super-pool premium*) to be paid by their customers for all milk used in Class I products. Such a Class I price premium results in increased handler payments and therefore generates higher prices for all affected producers. Such higher prices are called *super-pool prices.* Neither super-pool prices nor super-pool premiums are part of the provisions of a Federal order, but are a result of successful cooperative bargaining.

Next, the Class III price will be considered. This price again specifies a minimum payment per hundredweight of 3.5 percent butterfat milk for which handlers are obligated for all Grade A milk used to produce *Class III products.* Class III products are all skim milk and/or butterfat processed into cheese (other than cottage cheese), butter, milk in dry form and various other processed dairy products. The Class III price is the Minnesota-Wisconsin series price (basic formula price) for the current month. For example, for September 1974, the M-W price was $6.69/cwt and this became the minimum Class III price.

Minimum Class II price for 3.5 percent butterfat Grade A milk used in *Class II products* is simply the Class III price for the current month plus $0.15 per cwt. For September 1974, it was $6.84 per cwt. ($6.69 + $0.15). This 15-cent class differential is intended to reflect the additional value of Class II products relative to Class III products. Class II products are fluid cream, eggnog, yogurt (or any product containing 6 percent or more non-milk fat that resembles any of these products) and cottage cheeses.

When considering any dairy industry policy, it is important to recognize the strong interdependence between the Grade A and manufacturing milk markets. Any change in dairy product import policy, the price support program or other market conditions affecting the manufacturing milk market will, within months, affect Grade A prices through the Minnesota-Wisconsin price. Furthermore, policies that act to increase Grade A milk supplies available for Class II and III products will affect prices in the manufacturing milk market.

Butterfat Differential

This discussion has dealt only with milk of 3.5 percent butterfat content. Milk delivered by dairy farmers is seldom, if ever, of this precise composition. Therefore, federal orders specify a *butterfat differential* which is an addition (subtraction) to each of the Class prices when the butterfat test of delivered milk is greater (less) than the standard of 3.5 percent. Currently in the Southern Michigan Order, the butterfat differentials are identical for butterfat used in all three classes. For each one-tenth of one percent that the butterfat test of milk differs from 3.5 percent, an amount equal to the Chicago 92 score butter price for the month in question multiplied by 0.113 (then rounded to the nearest one-tenth of a cent) should be either added to or subtracted from the 3.5 percent price. The use of butterfat percentage as a factor in milk pricing requires careful handling and analysis of milk samples as well as detailed plant records.

In the preceding section, the prices for which handlers are obligated for Grade A milk received from producers were determined. These Class I, II and III milk prices represent what the handler must pay, but not the prices that the farmer receives. The reason for this dichotomy and the mechanism by which it operates are the next subjects of this bulletin.

Pooling

The reason that each farmer is simply not paid Class I, II and III prices for the proportion of his milk used for each class of products is one of equity. A frequent complaint of farmers for many years was that one producer who sold his milk to a certain handler had 90 percent of his milk used in Class I products and thereby received the highest possible price for 90 percent of his milk, while another farmer who sold his milk to either the same handler or a different handler might have had only 50 percent of his Grade A milk used in Class I products. Farmers often had contracts with handlers specifying what percentage of their milk was to receive the highest priced usage. Under pressure, primarily from dairy farmers, most Federal marketing orders were revised to include the establishment of market-wide milk pools or handler pools. The most common type in Federal orders today is the market-wide pool.

A market-wide pool groups together all the handlers in a marketing area. The central idea behind a pool is to distribute equitably the market-wide receipts from milk sales among all Grade A producers covered by the marketing order. Thus, all producers share equally (on a per-unit basis) in the sales of higher-priced milk products (e.g., fluid milk, which is a Class I product) and not just those producers whose actual milk ends up in these high-return Class I products.

Producer Prices and Producer Payment

Under the market-wide pool, all handlers in a Federal order market report their monthly receipts of Grade A milk to the market administrator. They also report the total pounds of every product made in all three classes, as well as the pounds of butterfat used in each product. From these data, the market administrator can determine the pounds of skim milk and butterfat used in Classes I, II and III, as well as the total product pounds in each class. The milk received by handlers is valued at Class I, II and III prices, depending on the class of dairy products into which it is made. This is the pool of money which is now paid to the milk producers. With these data, the market administrator calculates four producer prices devised to divide up the total market-wide value of Grade A milk deliveries fairly. The market administrator reports these four prices to the handlers and, based on these prices, the handlers pay the producers for their milk.

Accomplishing a uniform distribution of milk receipts requires the establishment of the producer's daily base, (discussed earlier) and an equalization fund within the market-wide pool administered by the market administrator. The market administrator coordinates an equalization fund to redistribute moneys among all the handlers in an order area to allow the payment of a uniform price. An extremely oversimplified example may clarify this difficult procedure. Let's assume that there are only two handlers in a particular Federal order market, Handlers A and B. Let's also assume that they both receive the same amount of milk from their producers during a given month (1,000 cwt). If the Class I price is determined to be $9/cwt. and the Class III price is $7/cwt. and Handler A sells all 1,000 cwt of his milk as Class I products, but Handler B is only able to sell his 1,000 cwt. as Class III, how would the equalization fund operate?

The value of producer milk received by Handler A in this example would be 1,000 cwt. × $9 = $9,000. The value of producer milk received by Handler B would be 1,000 cwt × $7 = $7,000. The market administrator in this case would establish a uniform price as ($9,000 + $7,000) ÷ 2,000 cwt. = $8.00/cwt. Handler A would have to pay out $8,000 to his producers while Handler B would have to pay the same amount. The market administrator through the equalization fund would transfer $1,000 of A's funds to B for use in paying producers. Producers selling their milk to either handler receive the same price per hundredweight.

A greatly simplified example of how a uniform milk price might be determined within the provisions of a Federal order has been considered. The computation of the four producer prices commonly found in a federal order will now be elaborated.

After compiling all the receipt and utilization reports from all handlers in the marketing order area for a particular month, the market administrator calculates total pounds of milk used in Class I, II and III products by all handlers for the month in question. To get the total value of producer's milk, he multiplies the total hundredweight of milk used in class by the hundredweight price for that class (as determined earlier). Some adjustments and modifications to the determination of total value of producers' milk have a minor impact and therefore have been omitted here. The market administrator now has a total value for all producer milk in the marketing order area for a given month as determined by applying Class I, II and III prices to the pounds of milk used in each class. Let's assume that at this point he has the figures in the table at the top of page 6.

The *uniform price* (3.5 percent butterfat) is the total value of all producer milk ($23,838,000) divided by the total hundredweights of all producer milk (3,200,000 cwt). In our example it is $23,838,000 ÷ 3,200,000 cwt. which equals $7.45 per cwt. This uniform price is paid under two circumstances only

	Total cwt. of 3.5% Milk	Class Prices/cwt.	Total Value of 3.5% Butterfat Milk
Class I	2,000,000	$ 7.89	$15,780,000
Class II	200,000	$ 6.84	$ 1,368,000
Class III	1,000,000	$ 6.69	$ 6,690,000
Total All Classes	3,200,000 cwt.	—	$23,838,000

Hundredweights of Milk

Base Milk	2,848,800
Excess Milk	220,000
Uniform Priced Milk	1,200
Adjusted Uniform Priced Milk	130,000
Total	3,200,000 cwt.

(see p. 2 of this report, parts 1 and 2ii).

The *excess price* is the Class III price as computed earlier ($6.69/cwt.). This price is paid by handlers to producers and cooperatives who have a production base for all Garde A milk shipped in excess of the daily base allotment.

In general, the adjusted uniform price is paid to all Grade A producers who do not have a production base in a particular month. This could occur for a variety of reasons, many of which were discussed in the first part of this bulletin. The adjusted uniform price is less than the uniform price by an amount equal to 25 percent of the difference between the uniform price and the excess price. In our example,

$7.39/cwt. - $6.69/cwt. = $ .70/cwt. × 25% = $ .175/cwt.

Uniform price ($7.39) - $ .175/cwt. = Adjusted Uniform Price ($7.215/cwt)

The only price that remains to be computed is the base price, the price that the vast majority of Grade A milk receives. This price is paid to producers for all the base milk shipped during a month. Essentially, the base price per hundredweight is the value of total producer milk after all uniform, adjusted uniform and excess milk have been paid for, divided by the total hundredweights of base milk. Consider an example.

Total Value All Producer Milk	$23,838,000.00
Less: Value of Producer Milk at Uniform price (1200 cwt. at $7.39)	$ 8,868.00
Less: Value of Producer Milk at Adjusted Uniform Price (130,000 cwt. at $7.215)	$ 937,950.00
Less: Value of Producer Milk at Excess Price (220,000 cwt. at $6.69)	$ 1,471,800.00
Value of all Base Milk (3.5%)	$21,419,382.00
Value per cwt. of Base Milk ($21,419,382 ÷ 2,848,000 cwt.)	$ 7.52
Base Price (3.5 percent)	$ 7.52

After these prices are reported to the handlers they pay their producers and cooperatives accordingly. The market administrator determines the necessary funds to be transferred between handlers through the equalization fund in order to provide for equitable payments.

The marketing order further specifies a price adjustment called a *location differential* (or zone differential). At present under Order No. 40 there are three provisions of these differentials that deserve discussion. First, handlers are allowed a price adjustment of from zero to 15 cents per cwt. on the Class I price for all milk received at their plants. The amount of the adjustment depends on the location of the plant that first receives the milk from the farm. Zones within the order area and accompanying differentials are specified in the order.

The intention of this procedure is to provide the incentives needed for milk to move efficiently from areas of surplus to areas of need. The mechanism provides a geographical price distribution whereby all handlers pay the same net price (price - transportation costs) regardless of where their supplies originate. Second, at the time of handler payment to producers or cooperatives, the base, uniform and adjusted uniform prices are amended by the appropriate differential determined, as above, by the location of the plant of first receipt. Third, handlers pay four or eight cents per cwt. above zero zone price on base, uniform and adjusted uniform prices for milk received from producers or cooperatives located in two special geographical areas requiring extra price incentives to obtain their needs. As before, handlers pay this on Class I receipts and distribute it to producers or cooperatives in the base, uniform and adjusted uniform prices.

Marketing information and services are provided to producers who are not members of a cooperative by the market administrators. These services are paid for through an authorized per hundredweight assessment against the non-members. At the present time this is 5 cents per hundredweight in Order 40. An assessment of 2 cents per hundredweight is paid by the handlers to cover the administration expenses of the order on milk shipped. In addition to this deduction, producers are required to pay for hauling their milk to the plant of first receipt (a per-cwt. charge based on length of haul and volume hauled). Producers who are members of cooperatives pay dues and their cooperative provides the marketing services.

When a farmer receives his monthly milk check, he is most often interested in his blend price. This is simply the total net dollars he was paid by the handler divided by the total hundredweights he shipped. Thus, this price most commonly "blends" the base and excess receipts (and super-pool premiums where negotiated) into one weighted price. It should be clear that the greater the percentage of high-valued Class I sales that occur in a month, the pro-

portionally larger will be the pool and thus the larger the uniform, adjusted uniform and base prices.

Federal milk marketing orders contain provisions other than those included in this bulletin. An understanding of these, however, can be helpful in understanding "What's Behind the Dairyman's Milk Check."

GLOSSARY

Adjusted uniform price — price paid to a Grade A milk producer who has no daily base in any given month. Two exceptions exist (see page 2). This price is less than the uniform price by an amount equal to 25 percent of the difference between the uniform price and the excess price.

Base price — the price paid to Grade A producers for all milk shipped in a given month up to a volume equal to their daily base times the number of days in the month. Clearly, only producers with a daily base allotment receive the base price for any part of their monthly volume.

Basic formula price (BFP) — the Minnesota-Wisconsin Series price for the second preceding month becomes the basic formula price in the current month. The BFP is used in computing Class I and II prices in federal order markets.

Blend price — net price per hundredweight received by the producer for a given month determined by dividing his total monthly milk payments (usually less shipping charges, assessments, dues and retained funds) by the total volume (cwt.) shipped in a given month. The blend price for the entire market is the total amount of money paid into the pool divided by the amount of milk shipped to the market.

Butterfat differential — value accorded to the butterfat content of milk for the purpose of adjusting class prices based on a 3.5 percent butterfat content. In the southern Michigan order all per cwt. class prices are increased (decreased) by 0.113 times the 92 score Chicago butter price for that month for each 1/10 percent that the the butterfat content is above (below) 3.5 percent.

Class I products — all skim milk and butterfat sold in fluid form (e.g., regular homogenized milk, 2% milk, half and half, buttermilk, low-fat milk, etc.).

Class II products (in orders w/3 classes) — all skim milk and butterfat sold as fluid cream, eggnog, yogurt (or any product containing 6 percent or more non-milk fat which resembles these products) and cottage cheeses.

Class III products — all skim milk and butterfat sold as cheese (except cottage cheese), butter, dry milk and various other processed dairy products.

Class prices — refers to the system under Federal orders of valuing and pricing Grade A milk based on its ultimate end use. Some orders have two classes (I, II) while others, such as the Southern Michigan order, have three classes (I, II and III). Class I price is the price paid by handlers for milk used in Class I products; Class II price is the price paid by handlers for milk used in Class II products; Class III price is the price paid by handlers for milk used in Class III products.

Cooperative — an association of dairy farmers organized for the purpose of marketing and/or processing their milk under the provisions of the Capper-Volstead Act. The cooperative is owned and operated by the members through a Board of Directors and hired manager. The scope of activities carried on by dairy cooperatives is varied; their sphere of bargaining influence is often extensive. In many markets, cooperative associations are handlers when they market milk for their member producers.

Daily base — the volume of daily Grade A milk shipments for which a producer receives the base price. A base is usually earned each year by producing and selling Grade A milk for the period of August 1-December 31. The daily base is calculated by dividing total shipments in this period by 122 days.

Equalization fund — a fund administered by market order authorities for the purpose of receiving handler milk payments and redistributing them to handlers in amounts calculated to allow each handler in a market-wide pool to pay a uniform set of prices to all producers in the marketing order area, regardless of their individual percentages of Class I, II and III usage.

Excess price — the price producers receive for all Grade A milk shipped in a month in excess of their base allotments. The price is established at the Class III price which is the basic formula price.

Federal order market — a regulation issued by the Secretary of Agriculture which places certain requirements on the handling of milk in the area it covers. These requirements include the payment by handlers of established minimum prices for milk under a classified pricing plan and the pooling of milk payments for the purpose of paying all producers on the basis of a set of uniform or average prices.

Grade A milk — milk produced on farms certified by the appropriate inspection authority to meet minimum structural and biological standards to insure that all milk produced on these farms is of necessary purity for fluid consumption (i.e., a minimum of processing). Only milk of Grade A quality is included under a Federal order.

Grade B price — the price which dairymen who produce Grade B (or manufacturing grade) milk receive. This is an unregulated price determined essentially in an open market environment receptive to supply and demand signals for milk of processing quality. The Federal price support program does, however, act to keep this Grade B price above a certain parity-related level.

Handler — a milk processor-milk distributor who is subject to a Federal order because he distributes milk in a regulated marketing area or because he processes milk which may be sold in a regulated area.

Handler Pool (individual handler pool) — a device for paying producers a uniform or average price for the milk they deliver to a milk handler. This price is calculated on the basis of *each handler's* use and receipts of milk and is paid to all producers served by that handler.

Location differential — an adjustment (no change or a reduction) of the price that handlers must pay into the pool for Class I milk received at their plant. The adjustment is based on the location of the plant and is designed to encourage handlers to buy and move milk efficiently in the process of meeting market needs. The differentials are designed so that all handlers can obtain their Class I milk needs at the same net price (price minus transportation costs) regardless of where the supplies originated. At the present time in Order No. 40, the differentials range from zero to a -15 cents per cwt., with

provisions for pricing milk beyond the 15-cent zone. At the time of handler payment to producers or cooperatives, the base, uniform and adjusted uniform prices are amended by the appropriate differential determined by the location of the plant at which the milk in question was first received, In addition, at the present time handlers pay the zero zone price plus four cents or eight cents per cwt. on base, uniform and adjusted uniform prices for milk received from producers or cooperatives in two special areas requiring extra price incentive to obtain their needs.

Manufacturing grade milk (Grade B milk) — milk produced under less controlled physical and biological conditions such that it is deemed suitable only for processing into dairy products (e.g., butter, powder or cheese). Processing ensures that any physical or biological contamination is removed or rendered safe.

Market administrator — the official designated by the Secretary of Agriculture to administer a particular Federal milk marketing order at the local level. The administrator and his staff carry out the provisions of the order.

Market-wide pool — a device for computing and paying an average price to all producers selling to all handlers in a market order area. Total market-wide utilization and receipts are combined to achieve this purpose. See also: handler pool.

Minnesota-Wisconsin Series price — an estimate of the average price per hundredweight (3.5 percent butterfat) paid for manufacturing grade milk f.o.b. plants in Minnesota and Wisconsin in any given month, as reported by U.S.D.A. through a monthly sampling of plants in those states. This is often called the M-W price or simply M-W.

Open base system — a plan under some Federal orders (e.g., Southern Michigan Order No.40) whereby Grade A producers acquire a daily base of milk determined by the producers' shipments during certain months of the year. If the base is reestablished each year and if new producers are free to establish such a base allotment, the base system is called open; if acquisition is restricted (e.g., through the requirement of payment or waiting until increased usage or the removal of a producer with an existing base) the system is called closed. Two Federal orders in the U.S. now use a closed base plan—called a Class I Base Plan.

Pool plant — a distributing plant, other than a producer-handler plant, which distributes on routes at least 50 percent of its producer milk receipts plus purchased fluid milk products as fluid milk products. Specific regulations defining pool plants are complex but in general, the above definition is useful. A non-pool plant is a distributing plant which does not qualify as a pool plant.

Processor — as used in federal milk marketing orders, a handler.

Producer — for purposes of a discussion of pricing under federal order, a producer is a dairy farmer (other than a producer-handler) who is entitled to the protection and benefits of a milk order because he sells Grade A milk to handlers in a regulated market. See also: producer-handler.

Producer-handler — a person who operates a dairy farm and a milk plant from which fluid milk products are distributed in the marketing area and who received fluid milk products only from his own production or by transfer from a pool plant.

Shipper — as used in Federal milk marketing orders, a producer.

Skim milk — whole milk after all the butterfat has been removed but still containing all solids-not-fat.

Super-pool premium (for Class I) — the difference between the Federal order Class I price and the cooperative-negotiated higher Class I price. At times this has been over $1/cwt. The total super-pool premium distributed among all cooperative members in the order is the per cwt. premium times the Class I milk volume. This is not a part of a Federal order.

Super-pool prices — the base, uniform and adjusted uniform prices paid to cooperative members which are greater than their counterpart, Federal order prices, because the total super-pool premium is allocated to these prices. The super-pool prices are computed by an escrow agent retained by the cooperatives participating in the super-pool and are, thus, not a part of a Federal order.

Uniform Price — the net value of all milk produced and sold in the market at class prices, divided by the total hundredweights of milk delivered. This is often referred to as the average price, market blend price or weighted average price. This paper discusses two conditions under which producers receive the uniform price for their Grade A milk (see pages of this report).

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