

**AFBF FEDERAL MILK MARKETING ORDER WORKING GROUP**  
**BACKGROUND ON NATIONAL DAIRY PRODUCT SALES REPORT**  
**JUNE 2019**

**Issue:**

*Per dairy mandatory price reporting regulations, USDA collects and releases sales information only for products used in Federal Milk Marketing Order milk pricing formulas. The products include cheddar cheese, butter, dry whey and nonfat dry milk meeting certain product specifications. Given that these commodity sales reports are the starting point for determining regulated milk prices, this background paper reviews the percentage of U.S. milk and dairy product production captured in USDA's mandatory price reporting survey.*

**Background:**

**What is Surveyed**

Each week USDA surveys dairy product manufacturers selling 1 million pounds or more of cheddar cheese, butter, dry whey and nonfat dry milk to determine the sales price and volume of dairy products sold ([Dairy Mandatory Market Reporting](#)). The specific products and specifications are below:

- Salted butter (80% butterfat), fresh or storage, in 25-kilogram and 68-pound boxes meeting USDA Grade AA standards.
- Cheddar cheese in 40-pound blocks, colored between 6 and 8 on the National Cheese Institute color chart, meeting Wisconsin State Brand, USDA Grade A or better standards. Sales of cheddar cheese 4 to 30 days of age.
- Cheddar cheese in 500-pound barrels, white, meeting Wisconsin State Brand, USDA Grade A or better standards. Sales of cheddar cheese 4 to 30 days of age.
- Edible non-hygroscopic dry whey in 25-kilogram bags, 50-pound bags, totes and tankers meeting USDA Extra Grade standards. Dry whey must be less than 180 days old and must not be certified organic.
- Non-fortified, nonfat dry milk in 25-kilogram bags, 50-pound bags, totes and tankers meeting USDA Extra Grade or USPH Grade A standards. Nonfat dry milk must be less than 180 days old.

In addition to these product specifications on packaging and color, USDA also requests that manufacturers exclude product sold under the terms of a forward contract negotiated 30 or more days prior to the transaction, as well as any product sold for export and receiving export assistance payments, e.g., Cooperatives Working Together. Other value-added attributes such as faith-based production or certified organic are also not captured.

Mandatory price reporting does not authorize USDA to survey prices and sales volumes for any other dairy products such as whey protein concentrates, whole milk powder, caseins, buttermilk powder or lactose. Other dairy products are not authorized because

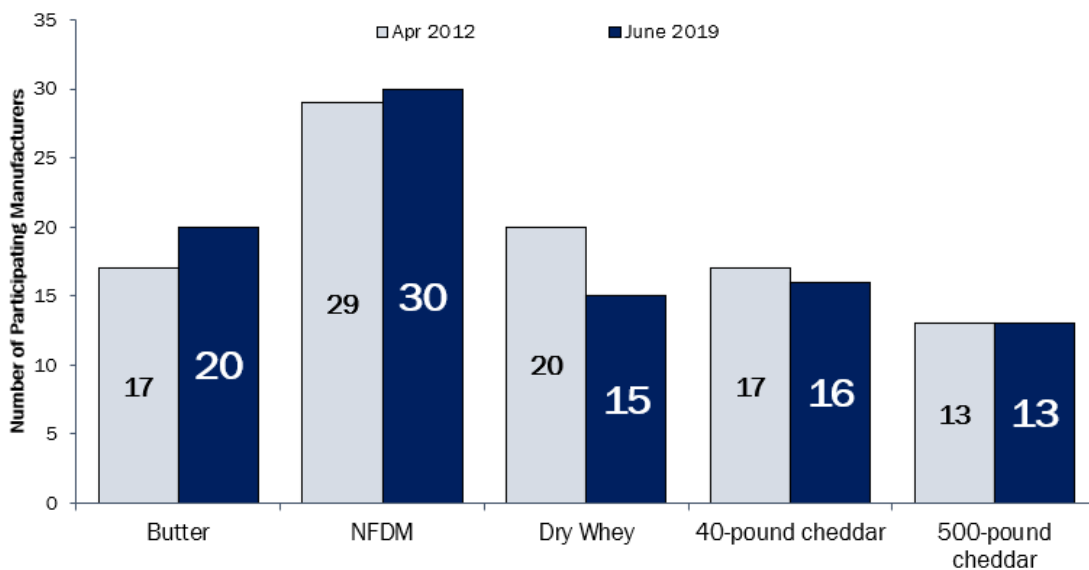
they do not directly contribute to USDA FMMO end-product pricing formulas ([Background on how milk is priced](#)).

### Number of Manufacturers in Survey

Based on the June 19 National Dairy Product Sales Report (NDPSR) there were 94 reporting entities selling 1 million pounds or more of dairy products. The first NDPSR, released in April 2012, indicates there were 96 reporting entities (prior to the Agricultural Marketing Service collecting and reporting the information it was released by USDA's National Agricultural Statistics Service).

## Number of Participating Manufacturers

June 2019 and April 2012

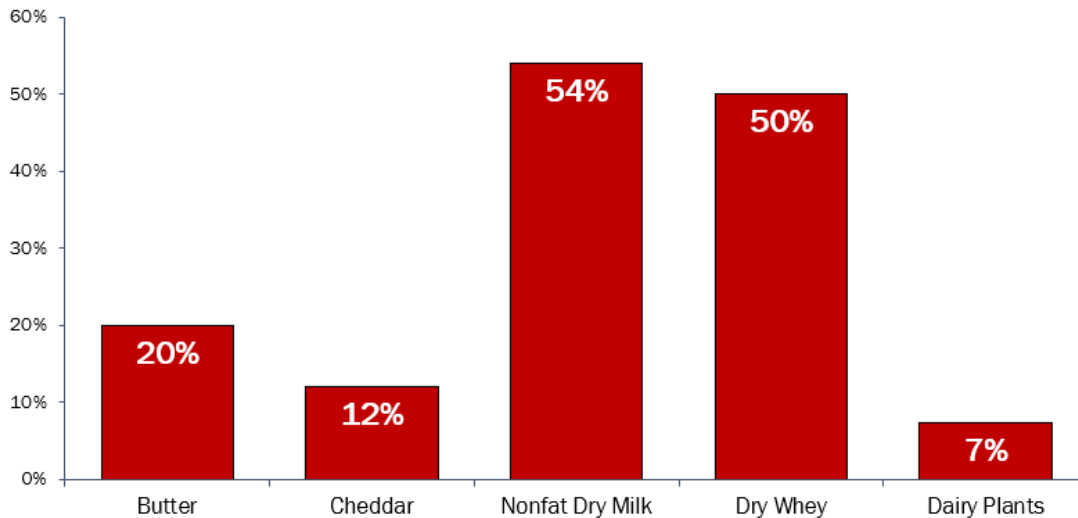


Source: USDA AMS, Farm Bureau Calculations

According to USDA's annual [Dairy Products](#) report, in 2018 there were 1,273 manufacturers that produced one or more dairy product and hundreds of dairy processing plants across the U.S. making butter, cheeses and dry milk powders. Specifically, in 2018 there were 98 butter plants, 56 nonfat dry milk plants, 30 dry whey plants, 553 cheese processing plants and 244 cheddar processing plants.

A comparison of the NDPSR survey to the NASS survey reveals that approximately 20% of butter processing plants, 54% of nonfat dry milk plants, 50% of dry whey plants and 12% of cheddar cheese plants are captured by the NDPSR survey. In total, less than 7% of all manufacturers that produced one or more dairy products are captured in USDA's mandatory price reporting. This implies that more than 93% of dairy processing plants are not required to report the prices for the dairy products they manufacture and sell.

## Percentage of Dairy Processing Plants Captured in USDA's Dairy Mandatory Market Reporting



Source: USDA AMS, Farm Bureau Calculations

### Milk and Dairy Products Captured in the Survey

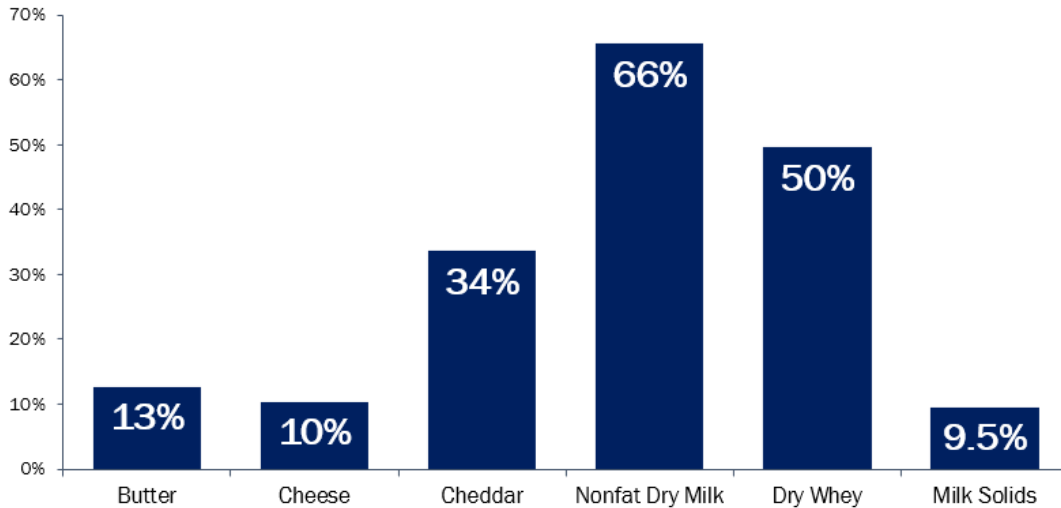
To determine the volume of milk and dairy products captured by USDA's mandatory price reporting survey, NDPSR sales volumes were compared to USDA estimates of dairy product production. Since end-product pricing was introduced in 2000, 3.8 billion pounds of butter have been captured by USDA's survey. During this same time, USDA data showed that more than 30.3 billion pounds of butter were produced – indicating that 87% of all butter produced is not captured by USDA's mandatory pricing survey.

Of the 60.4 billion pounds of cheddar produced since end-product pricing was implemented, 20.1 billion was captured in USDA's price survey, indicating that 34% of the cheddar cheese produced in the U.S. was captured by the survey. Expanding to all cheese production in the U.S., of the 195 billion pounds produced, the amount of cheddar cheese captured in USDA's survey represents approximately 10%. This suggests that nearly two-thirds of all cheddar cheese and more than 90% of all cheese are not captured in the USDA survey. A similar analysis reveals that since 2000 USDA's price survey has captured 66% of nonfat dry milk production and 50% of dry whey production.

To evaluate the milk solids captured in USDA's pricing survey, USDA's reported butterfat content in milk produced was used to provide a basis for inferring the total solids produced in milk. Then, using standard conversion factors, dairy products captured in USDA's survey were converted to a milk solids equivalent. Since end-product pricing was introduced, U.S. dairy farmers have produced 3.6 trillion pounds of milk with a milk solids content representing more than 453 billion pounds. The total

solids captured in USDA's survey was 43 billion pounds – indicating that less than 10% of U.S. milk solids production was captured in FMMO pricing surveys.

### Percentage of Dairy Product Production Captured in USDA's Dairy Mandatory Market Reporting



Source: USDA AMS, Farm Bureau Calculations

Data from USDA reveals that a small percentage of the dairy plants in the U.S., and a small percentage of the milk solids and dairy products produced, are captured by USDA's mandatory pricing survey that is used to determine the regulated value of milk and milk components. With only a portion of dairy products captured in the survey, it's reasonable to question the degree of price discovery that exists in the U.S. dairy industry.

The thinly-traded Chicago Mercantile Exchange spot market is another challenge in price discovery as less than 2% of butter and cheddar and less than 1% of nonfat dry milk and dry whey are traded in CME spot markets. On a milk solids basis, 0.3% of U.S. milk solids production is represented by spot market trading on the CME.

The small share of products captured in USDA's survey and in CME spot markets not only has implications for the policy debate surrounding make allowances and yield factors, but also supports the contention by some that processors can't pass higher processing costs along the supply chain to consumers. One could reasonably argue from the data that there are a variety of dairy products not captured in USDA's survey that could partially contribute to or fully offset the higher costs of conversion associated with making commodity-style butter, cheddar and dry milk powders.

#### **Current Farm Bureau Policy:**

We support improving price discovery through mandatory daily electronic reporting of more common dairy products including reporting and auditing of prices and inventories. The number of plants being surveyed should be increased as should the penalties for inaccurate dairy reporting.