National Ice Cream Mix Association

Market Situation and Outlook for Ice Cream Mix Ingredients

Peter Vitaliano
NICMA Chief Economist
2019 NICMA Annual Meeting
January 23, 2019
Consumption Trends

U.S. Per Capita Consumption of Frozen Dairy Products, 1970-2018

Source: USDA ERS. 2018 estimated from January-October
Consumption Trends

U.S. Per Capita Consumption of Fluid Milk, 1970-2018

Source: USDA ERS. 2018 estimated from January-October
**Consumption Trends**

**U.S. Per Capita Consumption of Butter, 1970-2018**

Source: USDA ERS. 2018 estimated from January-October
Consumption Trends

U.S. Per Capita Consumption of Yogurt, 1970-2018

Source: USDA ERS. 2018 estimated from January-October
Consumption Trends

U.S. Per Capita Consumption of Milk (Equivalent), 1995-2017

Source: USDA ERS.
Consumption Trends

U.S. Per Capita Consumption of Cheese, 1970-2018

Source: USDA ERS. 2018 estimated from January-October
Consumption Trends

U.S. Per Capita Consumption of Cheese, 1970-2018

- **Total Natural Cheese**
- **Consumed As Natural Cheese**
- **Consumed As Processed Cheese**

Source: USDA ERS. 2018 estimated from January-October

Elevated consumption trends highlight an increasing preference for cheese consumption in the United States during the provided decades.
Consumption Trends

U.S. Dairy Exports, 1995-2018

Source: US Census Bureau, NMPF. 2018 January-October

U.S. Dairy Exports, 1995-2018

Source: US Census Bureau, NMPF. 2018 January-October
Consumption Trends

U.S. DAIRY EXPORTS, 1995-2017

STAGE 1: 1995-2003
19% OF U.S. MILK SOLIDS PRODUCTION GROWTH WAS EXPORTED

STAGE 2: 2003-2013
65% OF U.S. MILK SOLIDS PRODUCTION GROWTH WAS EXPORTED

STAGE 3: 2013-2017
4.3% OF U.S. MILK SOLIDS PRODUCTION GROWTH WAS EXPORTED
Consumption Trends

Shares of Total Consumption of U.S. Milk
Domestic Product Consumption and Exports, Milk Equivalent

- CHEESE
- FLUID MILK
- EXPORTS, ALL PRODUCTS
- DRY SKIM INGREDIENTS
- BUTTER
- FROZEN DAIRY PRODUCTS
- YOGURT

Graph showing the percentage share of total consumption of U.S. milk from 2000 to 2018 for various milk products.
Milk Production Trends

Milkfat Composition of U.S. Raw Milk

Milk Production Trends

Total Milk Solids Composition of U.S. Raw Milk

Milk Production Trends

ANNUAL GROWTH IN U.S. MILK PRODUCTION

Year-Over-Year Change, %

-0.5% 0.0% 0.5% 1.0% 1.5% 2.0% 2.5% 3.0% 3.5%


Milk Solids

Liquid Milk
Milk Production Trends

Annual Growth in U.S. Dairy Cow Numbers, 1995-2018

Source: USDA. 2018 January-November
Milk Prices

U.S. Annual Average Farm Milk Price, 1995-2019(f)

Dollars Per 100 Pounds

Source: USDA, NMPF
Milk Margins

U.S. Annual Average Price-Feed Cost Margin, 2000-2019(f)

Source: USDA, NMPF
Milk Prices

Dairy Futures Market Reaction to Mexico and China Tariff Retaliation Announcements - May 31 and Current Settlements

- 31-May
- 22-Jan

U.S. Average All-Milk Price - Dollars per Cwt.

Jan-18  Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  Oct  Nov  Dec

$16.10  $15.30  $15.60  $15.80  $16.20  $16.30  $15.40  $15.90  $16.70  $16.90  $16.30
Outlook for Cheese

Cheddar Cheese Prices

- U.S. - Actual (AMS)
- U.S. - Forecast (CME)

January 22 futures settlement prices

Dollars per Pound

$2.00
$1.75
$1.50
$1.25

2017 2018 2019
Milk Prices

CONTRIBUTION OF MILKFAT TO U.S. AVERAGE ALL-MILK PRICE

Average = 57%

Average = 38%
Federal Order Pricing

USDA-commissioned study of plant costs by the University of Wisconsin, for possible updates to the federal order pricing formula make allowances and yield factors

Change in the federal order Class I skim milk price mover
Federal Order Pricing

Starting this May, the federal order Class I skim milk price mover will no longer be:

the higher of the advanced Class III and Class IV skim milk pricing factors,

but will become:

the average of the advanced Class III and Class IV skim milk pricing factors plus $0.74 per cwt.
Federal Order Pricing

Change in Federal Order Class I Mover

Higher of
Average of + $0.74

Dollars per Hundredweight

2017 2018 2019
MPP → DMC

MPP/DMC Margin, 2015 - 2019

Based on CME settlement prices on January 22
Outlook for Milkfat

Butter Prices

- U.S. - Actual (AMS)
- U.S. - Forecast (CME)
- Oceania - Actual (GDT, AMS)
- Oceania - Forecast (NZX)

January 22 futures settlement prices

Dollars per Pound, @ 80% fat

January 22 futures settlement prices

2017 2018 2019
# Outlook for Milkfat

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$/lb.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter - AMS</td>
<td>$2.26</td>
<td>$2.28</td>
<td>$0.02</td>
</tr>
<tr>
<td><strong>$/lb. fat</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class II Butterfat</td>
<td>$2.53</td>
<td>$2.56</td>
<td>$0.03</td>
</tr>
<tr>
<td><strong>$/lb. Cream</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class II Cream</td>
<td>$2.85</td>
<td>$2.82</td>
<td>-$0.04</td>
</tr>
</tbody>
</table>
Outlook for Nonfat Solids

NFDM/SMP Prices

- U.S. - Actual (AMS)
- U.S. - Forecast (CME)
- Oceania - Actual (GDT, AMS)
- Oceania - Forecast (NZX)

January 22 futures settlement prices

Dollars per Pound

2017 2018 2019
Outlook for Nonfat Solids

U.S. Nonfat Solids Prices

- FO Class II Nonfat Solids - Actual
- FO Class II Nonfat Solids - Forecast
- Class II Condensed Skim - Actual
- Class II Condensed Skim - Forecast

AMS January 22 CME futures settlement prices

Dollars per Pound of Nonfat Solids

2017 2018 2019
# Outlook for Nonfat Solids

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<thead>
<tr>
<th></th>
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<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$/lb.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. NFDM</td>
<td>$0.79</td>
<td>$1.05</td>
<td>$0.25</td>
</tr>
<tr>
<td><strong>$/lb. skim solids</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class II Nonfat Solids</td>
<td>$0.68</td>
<td>$0.93</td>
<td>$0.25</td>
</tr>
<tr>
<td>Class II Condensed</td>
<td>$0.76</td>
<td>$0.98</td>
<td>$0.22</td>
</tr>
</tbody>
</table>
Outlook for Whey

Dry Whey Prices

January 22 futures settlement prices

U.S. - Actual (AMS)
U.S. - Forecast (CME)
Europe - Actual (AMS)
## Outlook for Whey

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Dry Whey</td>
<td>$0.34</td>
<td>$0.43</td>
<td>$0.08</td>
</tr>
</tbody>
</table>

$/lb.
## U.S. Production and Exports

<table>
<thead>
<tr>
<th>U.S. Exports, % of U.S. Production</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td>2.5%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Nonfat Dry Milk/Skim Milk Powder</td>
<td>56%</td>
<td>71%</td>
</tr>
<tr>
<td>Dry Whey</td>
<td>45%</td>
<td>49%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CWT Exports, % of CWT - Eligible</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td>27%</td>
<td>44%</td>
</tr>
</tbody>
</table>
Outlook for Sweeteners

U.S. Sugar Prices

Source: USDA/ERS, January 22 ICE futures

- U.S. Refined - Actual
- U.S. Refined - Forecast
- Raw - ICE #16 - Actual
- Raw - ICE #16 - Forecast

Dollars per Pound

Source: USDA/ERS, January 22 ICE futures
Outlook for Sweeteners

U.S. Corn Sweetener Prices

- **HFCS 42%**
- **Corn Syrup**
- **Corn Starch**

Source: USDA/ERS. Corn-Midwest. HFCS-Wholesale Spot

<table>
<thead>
<tr>
<th>Year</th>
<th>HFCS 42%</th>
<th>Corn Syrup</th>
<th>Corn Starch</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$0.10</td>
<td>$0.15</td>
<td>$0.20</td>
</tr>
<tr>
<td>2017</td>
<td>$0.15</td>
<td>$0.16</td>
<td>$0.21</td>
</tr>
<tr>
<td>2018</td>
<td>$0.16</td>
<td>$0.17</td>
<td>$0.22</td>
</tr>
<tr>
<td>2019</td>
<td>$0.17</td>
<td>$0.18</td>
<td>$0.23</td>
</tr>
</tbody>
</table>

Dollars per Pound Dry Weight

2016  2017  2018  2019
## Outlook for Sweeteners

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$/lb.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICE #16 Raw Sugar</td>
<td>$0.23</td>
<td>$0.26</td>
<td>$0.03</td>
</tr>
<tr>
<td>U.S. Refined Sugar</td>
<td>$0.33</td>
<td>$0.36</td>
<td>$0.04</td>
</tr>
<tr>
<td><strong>$/lb. dry weight</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn Starch</td>
<td>$0.14</td>
<td>$0.15</td>
<td>$0.01</td>
</tr>
<tr>
<td>Corn Syrup</td>
<td>$0.35</td>
<td>$0.36</td>
<td>$0.01</td>
</tr>
<tr>
<td>HFCS 42%</td>
<td>$0.35</td>
<td>$0.36</td>
<td>$0.01</td>
</tr>
</tbody>
</table>
Outlook for Flavorings

Cocoa Prices

Source: ICCO, January 22 ICE futures
Outlook for Flavorings

Vanilla Bean Prices

Dollars per Pound

## Outlook for Flavorings

<table>
<thead>
<tr>
<th>Product</th>
<th>2018</th>
<th>2019</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocoa</td>
<td>$1.04</td>
<td>$1.09</td>
<td>$0.05</td>
</tr>
<tr>
<td>Cocoa Butter</td>
<td>$2.10</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Cocoa Powder</td>
<td>$0.90</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Vanilla Beans</td>
<td>$164</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
National Ice Cream Mix Association

2019 NICMA Annual Meeting
75th Anniversary
January 19-22, 2020
Lago Mar Resort & Club