The Changing Landscape of Dairy Farming, Milk Marketing, and Milk Processing

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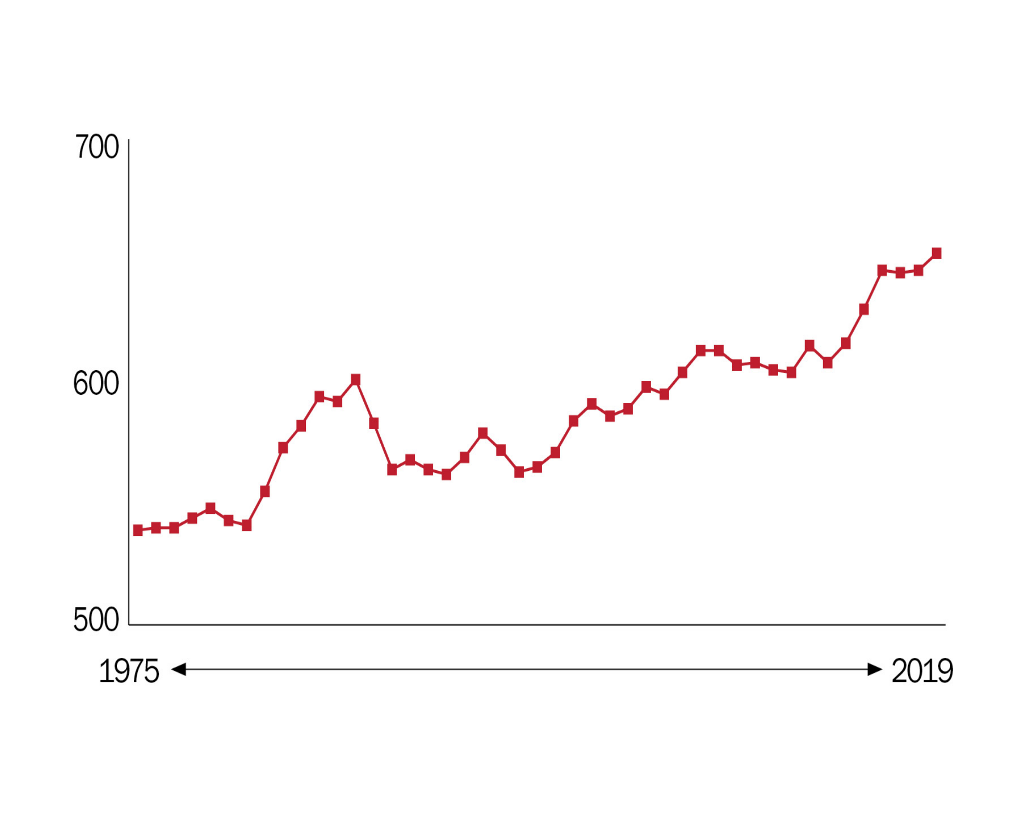
Why Talk About Milk Markets?

- In the past 10 years, the U.S. milk supply climbed 16% or 30 billion pounds
- In the past 20 years, the U.S. milk climbed 33% or nearly 55 billion pounds
- Milk produced for every U.S. citizen climbed from 596 to 679 pounds

Why Talk About Milk Markets?

U.S. per capita consumption 1975 to 2019



- Dairy is alive and well
- American per capita consumption
  - *In 1980: 543 pounds per person*
  - *In 1990: 568 pounds*
  - *In 2000: 591 pounds*
  - *In 2010: 605 pounds*
  - *In 2019: 653 pounds*

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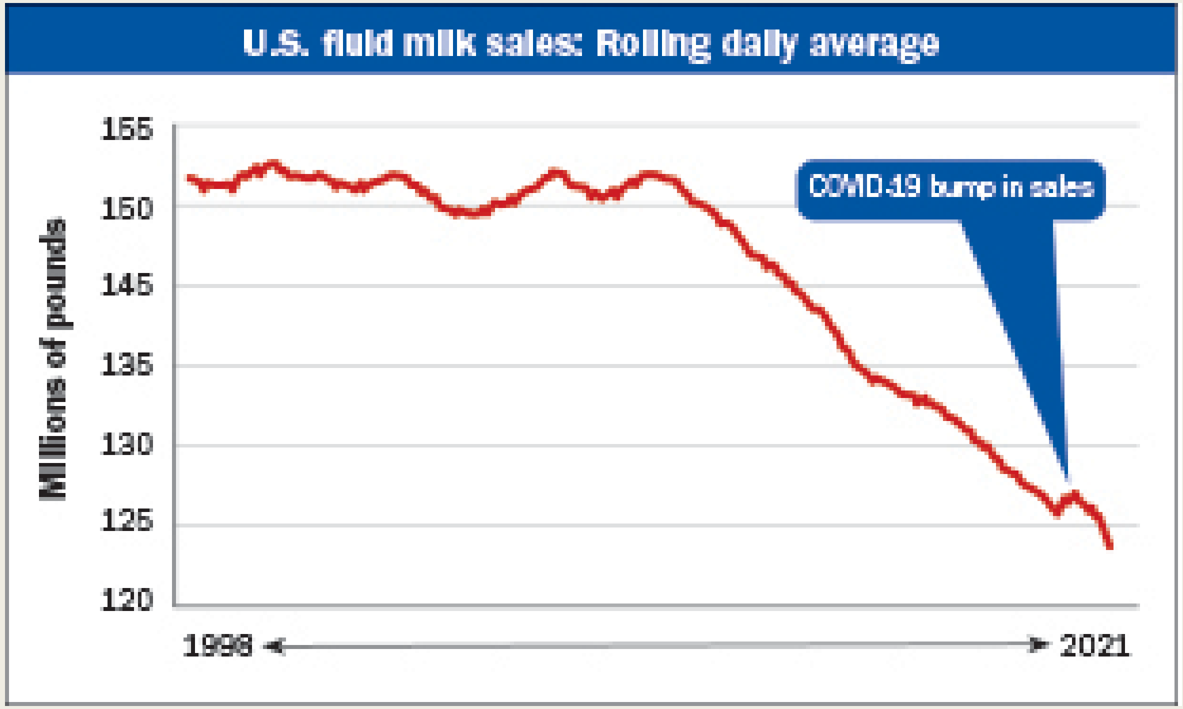
A 30,000-Foot View of U.S. Dairy

- The way Americans are consuming dairy has evolved
- Consumers are eating dairy products . . . not drinking them
- 22% growth in domestic dairy consumption since 1975
- Nonfluid dairy product consumption is up 71% since 1975
- Fluid milk consumption is down 41% since 1975

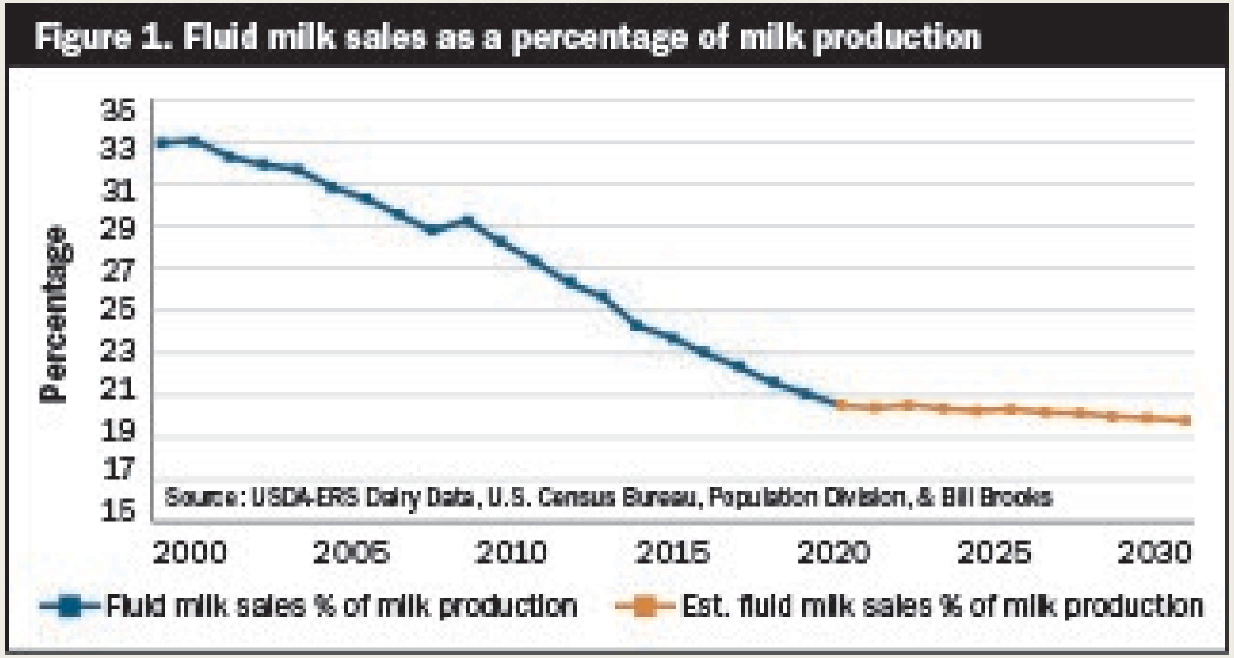
A 30,000-Foot View of U.S. Dairy



- Fluid milk's 62-year slide
- Milk and cereal go together
  - *1/3 of milk is poured on cereal*
- Cold and hot cereal consumption is down 17% since 2009*

*BISWorld

A 30,000-Foot View of U.S. Dairy



- Fluid was 33% of U.S. milk production in 2000
- Fluid milk's share of U.S. milk production is now below 20%

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A 30,000-Foot View of U.S. Dairy

Top 10 cheese states	
2020	1990
Wisconsin	Wisconsin
California	California
Idaho	Minnesota
New Mexico	New York
New York	Iowa
Minnesota	Pennsylvania
South Dakota	Missouri
Pennsylvania	Idaho
Iowa	South Dakota
Ohio	Nebraska

- "We're riding the cheese horse." - Mark Stevenson
- Cheese: a constant growth mode since 1991
- U.S. cheese consumption grew from 28 to 38 pounds per person in 20 years
  - *France, Germany, and Greece are pushing 50 pounds*

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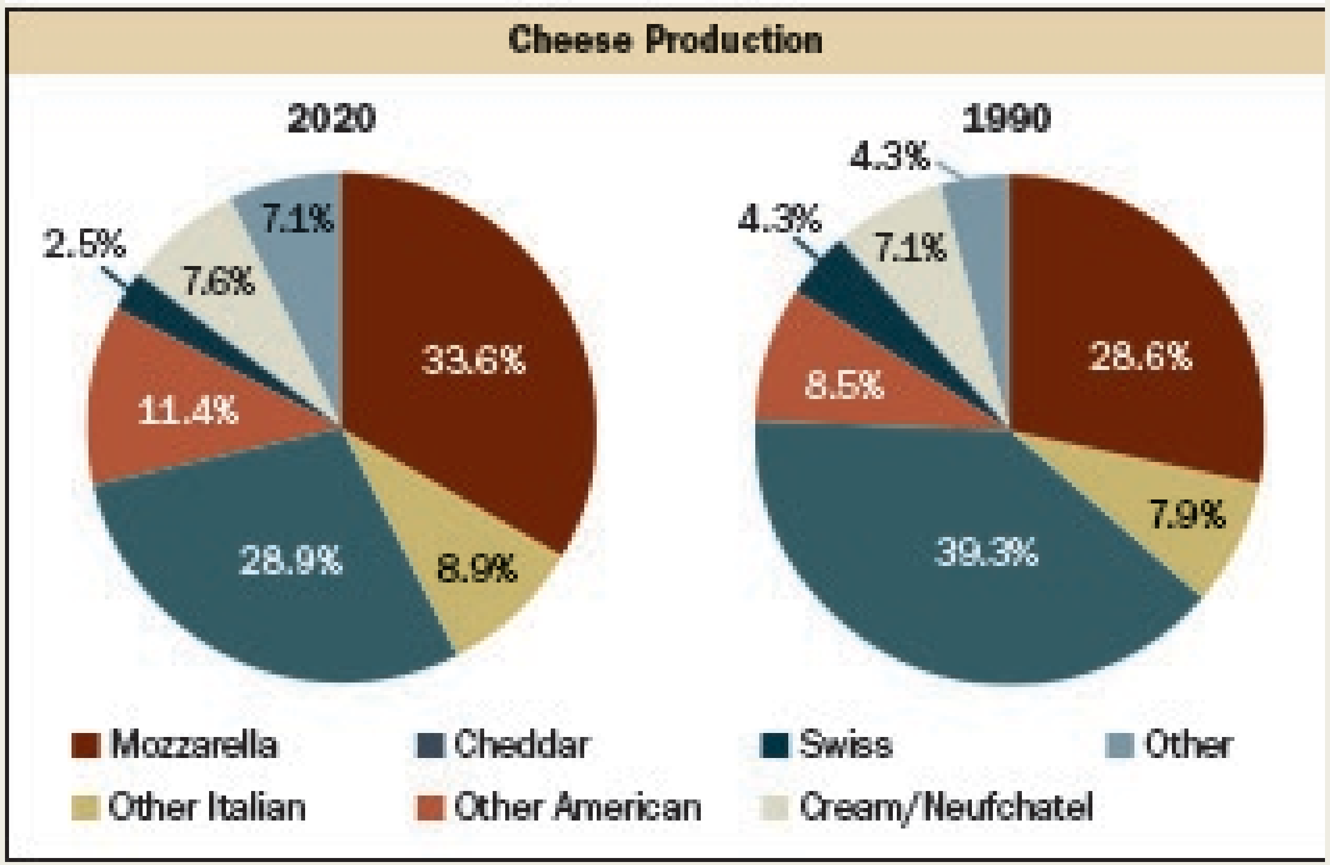

- Mozzarella marries pizza
- Mozzarella consumption:
  - *2.5 pounds in 1977*
  - *8 pounds in 1997*
  - *12.5 pounds in 2019*
- Butter: at 6.5 pounds, highest consumption since 1965
- Whey sales are way up

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A 30,000-Foot View of U.S. Dairy

- Exports: 13% 10 years ago
  - *Today: 18% - 19%*
  - *6 days/month, cows fill export orders*
- Milk supply grew 16% in 10 years
- 2020 sales: $6.5 billion
- 2021 projected sales: $7.3 billion

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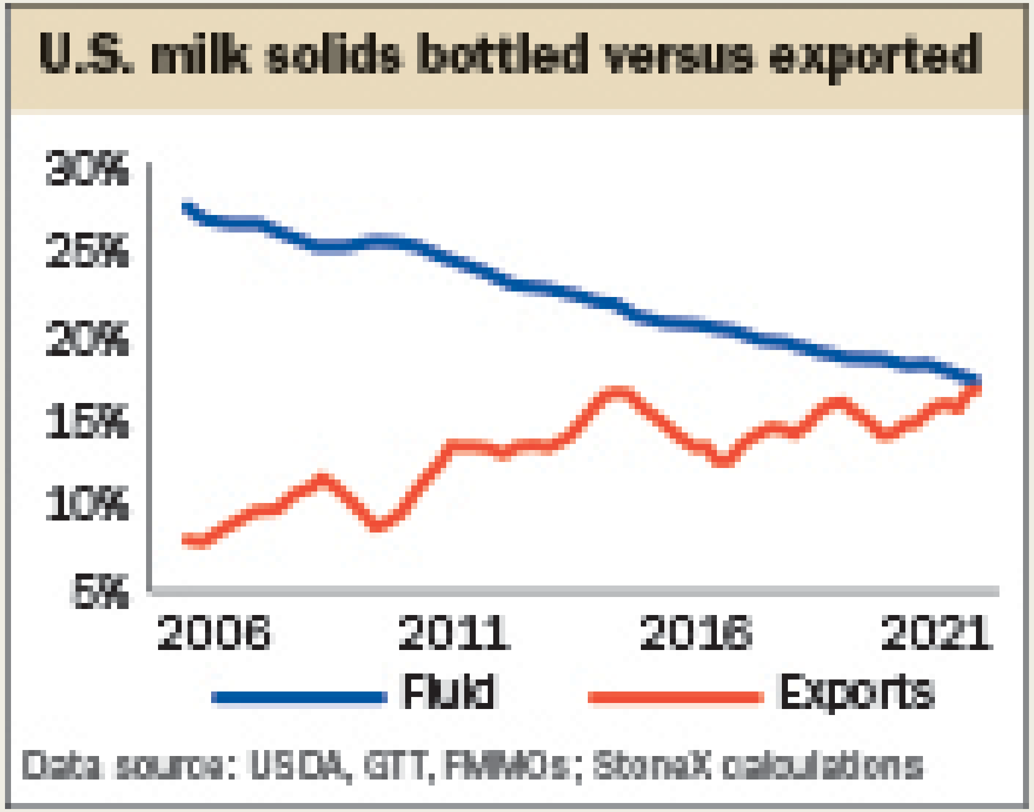

- USDEC founded in 1994
- Exports neck and neck with fluid milk
- Let's talk milk equivalent . . .
  - *Bottling more fat than we are exporting*
  - *Bottling and exporting about the same amount of protein*
  - *Exporting more solids than bottling*

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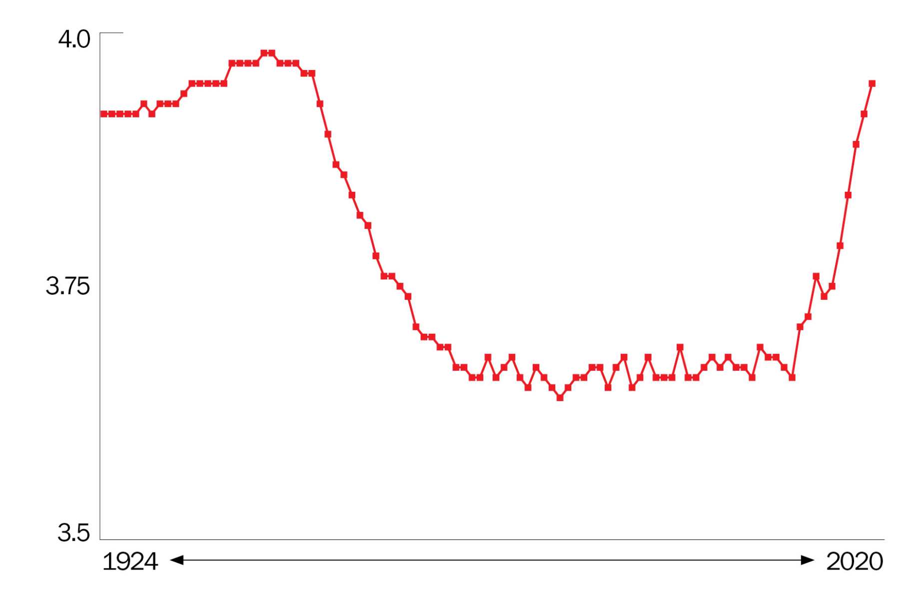
A 30,000-Foot View of U.S. Dairy

Butterfat % 1924 to 2020



- Milk's composition is evolving, meeting market demand
- Butterfat in 2020: 3.95% is near record 3.98% from 1945
- Protein: 3.2% in the Central FMMO
  - *Climbed in 8 of the last 10 years*
- Milk quality high - somatic cell counts dropped to 178,000
  - *DHIA: 319,000 in 2003*
  - *203,000 in 2016*

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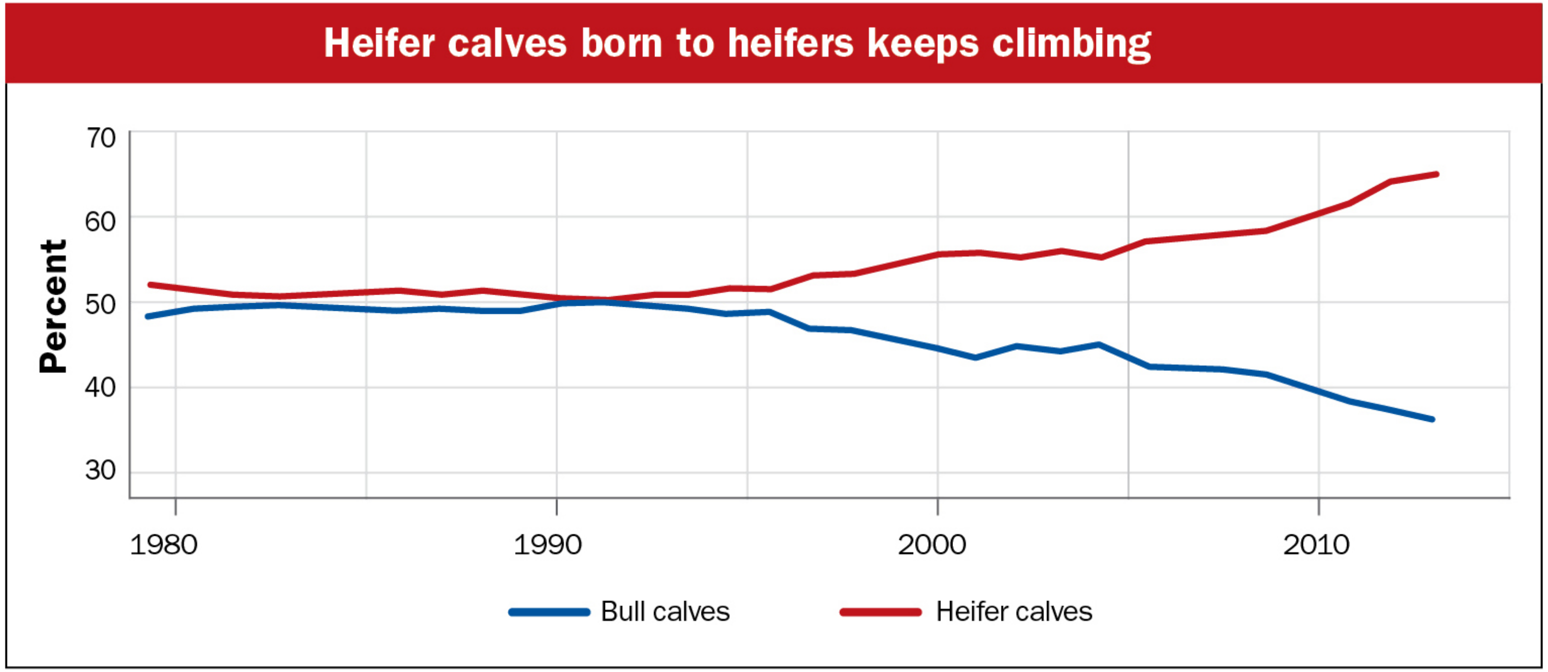
The Triple Play on U.S. Dairy Farms



- 27 million births from 1981 to 2014

• Sexed Semen • Genomics • Beef on Dairy

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Source: Council on Dairy Cattle Breeding, Stefano Biffani

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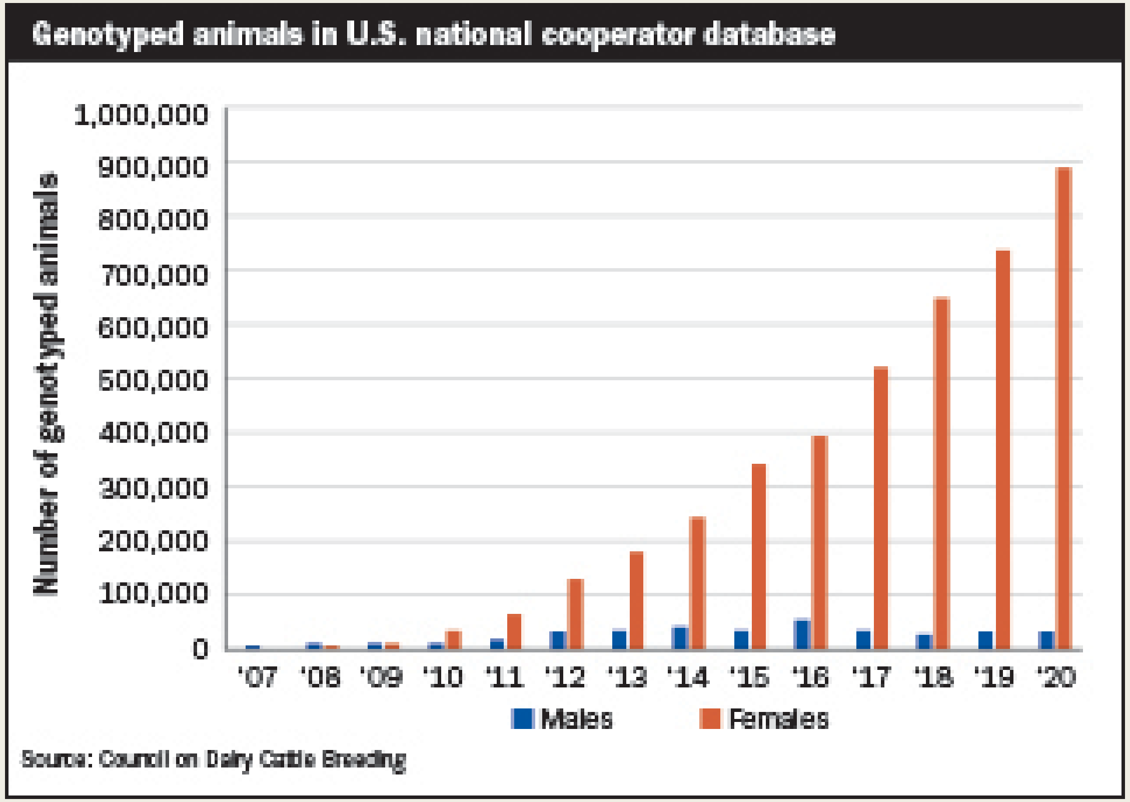

- As of March 2021, over 5 million genomic tests have been run
  - *2010: 35,568 tests*
  - *2015: 316,939 tests*
  - *2020: 1,000,000 tests*

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Source: Council on Dairy Cattle Breeding

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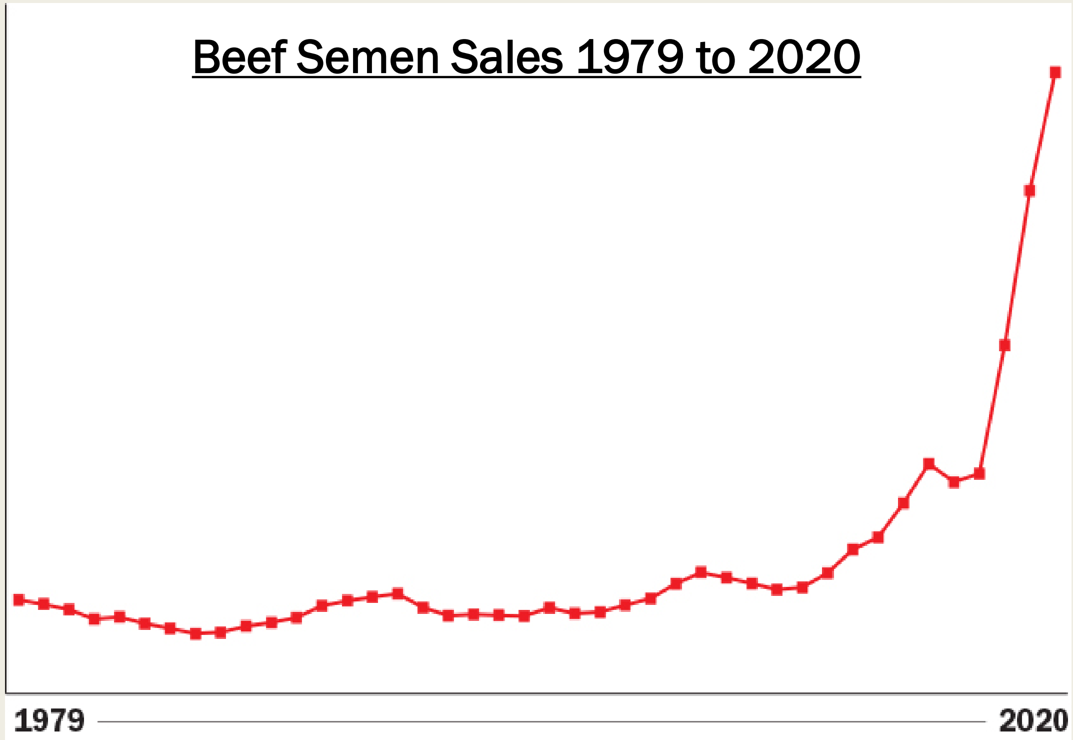

- These beef semen sales are to dairy farmers, not beef ranchers
  - *2017: 2.5 million units*
  - *2018: 4.0 million units*
  - *2019: 5.8 million units*
  - *2020: 7.2 million units*

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Source: National Association of Animal Breeders

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Where to Expand Processing?

Ask an international dairy company or co-op CEO

Where *Not* to Expand Processing?

- New Zealand, world's largest dairy exporter
  - *Fonterra runs the show with 90+% market share*
- European Union, world's 2nd largest collective dairy exporter
  - *Land constraints*
  - *Significant regulatory burden even after quota has been lifted*
- Canada
  - *Ditto on Europe's dairy regulations*
  - *Supply management*

Where to Expand Processing?

- United States
  - *In past 10 years, U.S. milk supply climbed 16% or 30 billion pounds*
  - *In past 20 years, U.S. milk climbed 33% or nearly 55 billion pounds*
  - *Domestic milk consumption hasn’t kept pace*
    - In 2000, Americans consumed 591 pounds per person
    - In 2010: 605 pounds per person
    - In 2019: 653 pounds per person
  - *Milk produced per person climbed: 596 pounds to 679 pounds*

U.S. Processing Opportunity

- As more international companies enter the marketplace, prices are bid up for domestic dairy assets and it’s more expensive for domestic players
- Why do business in the U.S.:
  - *Steady stream of milk that keeps growing*
  - *Stainless prices and modern processing costs are sky high*
    - Cheaper to buy existing assets and market share
- Is this a fair of assessment of the marketplace?

Dairy Sales in 2001

1. $5.9 billion – Dean Foods, Dallas, Texas
2. $4.2 billion – Kraft Foods North America, Northfield, Illinois
3. $3.1 billion – Land O' Lakes, Arden Hills, Minnesota
4. $2.8 billion – Kroger, Cincinnati, Ohio
5. $2.3 billion – National Dairy Holdings, Dallas, Texas
6. $2.0 billion – Schreiber Foods, Green Bay, Wisconsin
7. $1.7 billion – Dairy Farmers of America, Kansas City, Missouri
8. $1.5 billion – Leprino Foods, Denver, Colorado
9. $1.5 billion – Prairie Farms Dairy, Carlinville, Illinois
10. $1.4 billion – Dreyer's Ice Cream, Oakland, California

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Source : *Dairy Foods Magazine*

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Dairy Sales in 2010

1. $12.1 billion — Dean Foods, Dallas, Texas
2. $10.4 billion — Nestlé USA, a Swiss-based company
3. $5.5 billion — Saputo, a Canadian-based company
4. $4 billion — Kraft Foods North America, Northfield, Illinois
5. $3.7 billion — Land O' Lakes, Arden Hills, Minnesota
6. $3.6 billion — Schreiber Foods, Green Bay, Wisconsin
7. $3.5 billion — Agropur Cooperative, a Canadian-based co-op
8. $3 billion — Leprino Foods, Denver, Colorado
9. $2.5 billion — Prairie Farms Dairy, Carlinville, Illinois
10. $2.4 billion — HP Hood, Lynnfield, Massachusetts

Source : *Dairy Foods Magazine*

Dairy Sales in 2020

1. $10.9 billion — Nestlé USA, a Swiss-based company
2. $10.7 billion — Saputo, a Canadian-based company
3. $8.9 billion — Dairy Farmers of America, Kansas City, Missouri
4. $6.2 billion — Danone, a French-based company
5. $5.7 billion — Agropur Cooperative, a Canadian-based co-op
6. $5.2 billion — Kraft Heinz, Chicago, Illinois and Pittsburgh, Pennsylvania
7. $5.0 billion — Schreiber Foods, Green Bay, Wisconsin
8. $4.6 billion — Conagra Brands, Chicago, Illinois
9. $4.3 billion — Unilever, a British- and Dutch-based company
10. $4.0 billion — Land O' Lakes, Arden Hills, Minnesota
11. $4.0 billion — California Dairies, Visalia, California

- 5 international
- DFA moves to #3
  - Was $4.6 billion prior to Dean Foods acquisition

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Source : *Dairy Foods Magazine*

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The State of U.S. Dairy Co-ops

- Dairy Farmers of America:
  - *20 years ago, #7 at $1.7 billion*
  - *Last year, #3 at $8.9 billion*
- Land O'Lakes:
  - *20 years ago, #3 at $3.1 billion*
  - *Last year, #10 at $4.0 billion*
- Prairie Farms:
  - *20 years ago, #9 at $1.48 billion*
  - *Last year, #15 at $3.4 billion*
- Foremost Farms:
  - *20 years ago, #12 at $1.3 billion*
  - *Last year, #28 at $1.6 billion*
- AMPI:
  - *20 years ago, #15 at $1.2 billion*
  - *Last year, #26 at $1.8 billion*
- California Dairies:
  - *20 years ago, #16 at $1.2 billion*
  - *Last year, #10 at $4.0 billion*

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Source : *Dairy Foods Magazine*

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The State of U.S. Dairy Co-ops

- Agri-Mark:
  - *20 years ago, #25 at $625 million*
  - *Last year, #39 at $990 million*
- Maryland & Virginia Milk Producers' Co-op:
  - *20 years ago, #43 at $294 million*
  - *Last year, #43 at $861 million*
- First District Association:
  - *20 years ago, #46 at $267 million*
  - *Last year, #48 at $716 million*
- Upstate Niagara Cooperative:
  - *20 years ago, #48 at $260 million*
  - *Last year, #36 at $1.2 billion*
- Tillamook County Creamery Association:
  - *20 years ago, #49 at $240 million*
  - *Last year, #37 at 1.15 billion*

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Source : *Dairy Foods Magazine*

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Now in Top 50

Darigold: #22 with $2.4 billion in sales

Organic Valley: #35 with $1.1 billion

Michigan Milk Producers Association: #42 with $867 million

Bongard's Cooperative Creamery: #45 with $825 million

United Dairymen of Arizona: #46 with $798 million

Source : *Dairy Foods Magazine*

Co-ops Sold or Merged

Alto Dairy Cooperative

20 years ago, #41 at $329 million

Swiss Valley Farms

20 years ago, #48 at $273 million

Danish Creamery

20 years ago, #50 at $240 million

Source : *Dairy Foods Magazine*

The State of Dairy Processing

Have U.S. dairy processors and co-ops kept pace on new investment?

Based on foreign investment & market share . . . . No.

Some U.S. co-ops have made calculated moves.

Is the U.S. in Growth Plans?

Based on U.S. activity, it's already happening. Dairy sales in 2020:

1. Switzerland: $10.9 billion — Nestlé USA
2. Canada: $10.7 billion — Saputo
4. France: $6.2 billion — Danone
5. Canada: $5.7 billion — Agropur Cooperative
9: Great Britain & The Netherlands: $4.3 billion — Unilever
12. Mexico: $3.7 billion — Lala Group
18. France: $3.2 billion — Lactalis Group
19. Ireland: $3.1 billion — Glanbia Nutritionals
32. Switzerland: $1.3 billion — Emmi
40. France: $946 million — Bell Brands
41. France: $841 million — Savencia Fromage

U.S. Foreign Dairy Ownership

- 11 of the top 41 U.S. dairy processors headquarter outside the U.S.
- These “Foreign 11” held 130 processing plants in 2017
- Grew by 91 plants in 11 years (39 in 2006)
- Foreign interests may process 11 – 12% of U.S. milk
- “When combined with foreign-owned grocers, international interests could control up to 25 – 28% of U.S. milk,” Roger Cady

Source: Communications with Roger Cady, long-time dairy analyst

Where Does Canada Fit In?

Saputo #2, and Agropur #5 are good dairy community players

Investment has helped soak up milk

1996: 154 billion pounds of milk from 9.35 million cows

2021: 223 billion pounds of milk from 9.39 million cows

That’s 45% MORE MILK in the United States in 25 years

Where Does Canada Fit In?

<u>However…..</u>

Their first loyalty is to their home office

U.S. farmers can’t be Agropur members – profits go to members

Foreign interests have less at stake in U.S. dairy policy, and perhaps stand counter to it

Where Does Canada Fit In?

Canadian co-ops and companies can't grow at home due to supply management….That makes the U.S. a natural fit.

Agropur:

- *A U.S. based processer . . . owned by a Canadian co-op*
- *In 2020, Agropur processed 61% of its milk in the U.S.*
- *U.S. footprint: 4 billion liters*
- *Canadian footprint: 2.6 billion liters*

Source: 2020 Agropur Dairy Cooperative Annual Report

Where Does Canada Fit In?

- Saputo grows and grows
- Spent over $2.6 billion to acquire U.S. market share since 1997
- An American dairy processor with headquarters in Canada
- In 2020, $14.3 billion in revenue
  - *43% U.S. – 26 plants, 6,700 employees*
  - *29% Canada – 18 plants, 5,700 employees*
  - *22% other countries – 13 plants, 3,900 employees*
  - *6% Europe – 4 plants, 1,000 employees*

<u>That's how Canada's largest dairy company views the U.S. market!</u>

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Source: 2021 Saputo Annual Report

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The Changing Landscape

1. Canada's largest companies investing on both side of the fence as trade disputes continue to brew
   - *2 largest dairy processors have larger U.S. footprints than at home*
2. Canadian margins are better with higher profits due to supply management
   - *They have the cash and assets*
   - *Often buy when conversion of Loonie is favorable to the Dollar*

The Changing Landscape

3. Dairy trade is complex. Canada likes U.S. milk - except when the U.S. tries to sell dairy products to Canadians

4. Without Canada's investment, where would plant infrastructure be in the U.S.?

5. To be long-term, effective marketers at home and on the world stage, U.S. dairy co-ops and domestic processors must retool operations
   - *Requires dynamic leadership*
   - *St. John's Michigan cheese plant is a step in the right direction*

6. Will there be enough internal capital and human assets to get new green field plants that run $500 million to construct?

The Changing Landscape

8. We must broaden our circle for dairy communication given foreign dairy investment. Failure to do so will further fracture the dairy brand in the eyes of consumers because these folks are major players.

- A new paradigm for U.S. dairy farmers
- We must maintain multiple social licenses:
  - *U.S. consumers, USDA, FDA, EPA, and more*
  - *Foreign corporate and consumer demands*

Leaders Are Talking

"Ceding of domestic control and investment of U.S. dairy processing is one of my greatest concerns,"

Peter Vitaliano, National Milk Producers Federation

"We need to somehow put together an organization in which dairy cooperatives can go out and borrow money to reinvest in processing. We cannot allow foreign investment to overtake our domestic markets,"

Randy Mooney, Chairman, National Milk Producers Federation

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Source: Hoard's Dairyman

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What Does This Mean?

State rank for co-op milk and milk output				
	Co-op milk rank	Co-op milk share	U.S. milk rank	U.S. milk share
California	1	16.3%	1	18.5%
Wisconsin	2	9.9%	2	13.8%
New York	3	9.2%	4	6.9%
Minnesota	4	7.6%	8	4.5%
Michigan	5	6.2%	6	5.2%
Pennsylvania	6	5.0%	7	4.6%
Texas	7	4.6%	5	6.6%
New Mexico	8	4.3%	9	3.7%
Washington	9	4.0%	10	3.1%
Idaho	10	3.5%	3	7.3%

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- U.S. dairy co-ops can't solve all milk concerns
- Many independent producers in California, Wisconsin, and Idaho
- New York and Minnesota are big co-op states
- Top 50 co-ops handle only 81% of U.S. milk
  - *Put another way, 19% of milk is independent or direct shipped*
- We need more collaboration

What About Dairy Exports?

Growing marketing complexities require collaboration with all dairy processors, whether U.S.-based or owned by international firms

U.S. Dairy Export Council support:

- U.S. dairy farmer funded through the dairy checkoff
- Processor and marketer membership fees
- “Next 5%” from state and regional programs

What About Dairy Exports?

Vietnam and Vinamilk

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What About Dairy Exports?

Vietnam — a different market

What About Dairy Exports?

Japan and Curves

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What About Future Sales?

"By 2066, we will need to grow our exports to between 25 - 42% of all U.S. milk production if milk output grows as projected by Hoard's Dairyman,"

Tom Gallagher, CEO of Dairy Management Inc.

95% of customers live outside the U.S.

What About Future Sales?

Dairy markets will change faster moving forward than in the past

We will be better when we work together

Dairy product innovation takes investment

Our future involves growing both domestic and export markets

Remember, consumers want convenience

That convenience has centered on eating portable dairy products

U.S. dairy is global, both on the processing and the marketing side

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