GPS Leaders Conference:
Global Dairy & Milk Protein Opportunities
November 2016

Hoogwegt U.S. Adding vision and value.
If this can happen.....anything can happen!
Topics covered

+ **Hoogwegt Organization**
+ US Dairy Export Update
+ Global Trends

+ Where can the US play?
+ Market Outlook
+ Conclusion
The Parent Company: Hoogwegt Groep B.V.

- Established in 1965
- Privately held dairy commodity provider
- Annual turnover: €3.5 bn (2014)
- 2 million metric tons of dairy products
- 6 continents
- 130,000 TEU/year
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U.S. Export Evolution

Source: USDEC

- **Testing the Water** 1995-2000
- **Changing Trade Dynamics** 2000-2003
- **Brave New World** 2003-2008
- **'Ah-ha' Moment** 2008-2010
- **Embracing Globalization** 2010-2014
- **Fighting for Share** 2014-ongoing

Total milk solids, % of U.S. production

Source: USDEC

US Dairy Export Product Mix

- Cheese
- Lactose
- Whey
- Nonfat

Non-Fat Dry Milk
Whey
Lactose
Cheese And Curd
Butter And Milkfat
Dry Whole Milk&Cream
Yogrt&Othr Ferm Milk
US Export Product Mix - 1996 to 2015

1996:
- Non-Fat Dry Milk: 7%
- Whey: 41%
- Lactose: 26%
- Cheese and Curd: 11%
- Butter and Milkfat: 7%
- Dry Whole Milk & Cream: 2%
- Yogurt & Other: 1%

2015:
- Non-Fat Dry Milk: 32%
- Whey: 25%
- Lactose: 21%
- Cheese and Curd: 18%
- Butter and Milkfat: 1%
- Dry Whole Milk & Cream: 2%
- Yogurt & Other: 1%
US Trade destination evolution: 1996 to 2015

1996
- China 24%
- Mexico 19%
- Canada 14%
- Southeast Asia 7%
- Latin America 9%
- Middle East & Africa 6%
- Oceania 1%
- Other 19%

2015
- Mexico 25%
- Canada 6%
- Southeast Asia 20%
- China 15%
- Japan & S. Korea 10%
- Other 4%
- Latin America 9%
- Oceania 6%
- Middle East & Africa 5%
2015 Annual Export Trade Data Highlights

$5.2 billion
Total Value of U.S. Dairy export

14.0%
Percent of U.S milk production exported

55%
Percent of U.S SMP/NFDM exported

3.65 billion
Total Lbs. U.S milk solids exported

64.0%
Percent of US whey proteins exported

6%
Percent of U.S. cheese exported

2.6%
Percent of U.S. butterfat exported
2016 Most Recent Results- on the upswing

+ Overall volume up 23% through August
+ NFDM YTD Exports up slightly through August
  + Mexico +30%, SE Asia down 5%, Pakistan down 16%
+ Cheese YTD exports down significantly
+ WPC exports up significantly, a bright spot
  + China up 46%, SE Asia up 13%
"There is no reason anyone would want a computer in their home."

– Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977
Global Trends and Dietary Implications

+ Urbanization
  + More restaurants, particularly “QSR”, to serve a busy lifestyle.
+ Improved Cold-chain infrastructure
  + Transportation of goods easier and safer than ever before
+ Better science and consumer nutritional awareness
  + Benefits of dairy for all ages
+ Trade liberalization
  + As markets open, some distortions in trade allow dairy to become more affordable
Protein Consumption vs GDP Per Capita (2010)
### NUMBER OF INTERNATIONAL RESTAURANTS AS OF 2013

<table>
<thead>
<tr>
<th>Restaurant</th>
<th>Number</th>
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<tr>
<td>Papa John's</td>
<td>755</td>
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<tr>
<td>Dairy Queen</td>
<td>802</td>
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<tr>
<td>Dunkin Donuts</td>
<td>3,005</td>
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<td>Domino's</td>
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<td>Burger King</td>
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<td>Pizza Hut</td>
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<td>Subway</td>
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<tr>
<td>KFC</td>
<td>11,798</td>
</tr>
<tr>
<td>McDonald's</td>
<td>18,710</td>
</tr>
</tbody>
</table>

Source: Forbes
2025 Milk Supply Forecast

Source: IFCN
2025 Consumption Forecast

- **More Cows:** 370 million dairy animals now to 405 million. Increase of 35 million dairy animals needed in 10 years.

- **Global Dairy appetite:** Dairy consumption per capita expected to grow from 114 kg ME to 127 in 2025—12% increase

- **World trade gaining importance and relevance:** World trade increased by 29% from 2005-2015. For the next 10 years, trade is expected to grow 51%, or 26 MMT of more products. 13 times US’s exports

Source: IFCN
Annual Growth Rates of Per Capita Consumption

- Fresh dairy products
- Cheese
- Butter
- Skim milk powder
- Whole milk powder

- Developed
- Developing

2006-15
2016-25
2006-15
2016-25

- 45% higher growth rate

Source: FAO
Topics covered: Where Can the U.S Play?

“The entrepreneur always searches for change, responds to it, and exploits it as an opportunity.”

– Peter Drucker
Opportunities abound
## PROJECTED MARKET GROWTH - DAIRY PRODUCTS

- **Yogurt - Low Heat**: 7%
- **Bakery products - High Heat**: 2%
- **Ice Cream - Low Heat**: 3%
- **Biscuits - Medium Heat**: 2%
- **Coffee - Instant**: 2%
- **Chocolate**: 3%
- **Infant Formula Micro spec**: 10%
- **Milk and dairy drinks: Low Heat, high heat stable**: 10%
Higher Quality Spec Potential Growth
Product Innovation

Yearly WPC (50-89.9) Production

- **101% increase**

Yearly WPI Production

- **148% increase**
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Dairy commodity prices FOB Oceania, 2006-2016

* Note: Whey is FOB in western Europe.
Source: USDA, Rabobank 2016
Production Decline

Milk Production growth, Big 7 exporters, 2008-2017f

Milk Production growth in key export regions May-Jul 2016

Source: Rabobank
Imports January – July 2014-2016 - total of the big 8
But Stock Overhang

EU-28 monthly SMP stocks estimates ('000t)

- Intervention
- Private
General price direction, upside and downside influences

**Upside influences**
- EU supply contracts due to weak cash positions and reduction premiums
- Weak start of the Southern hemisphere supply season
- Chinese import levels increase gradually
- Commodity prices are translated into lower retail prices

**Downside influences**
- Russia remains absent
- US supply growth improves due to weather and solid farmer margins
- Above average end user coverage
- Better than expected market recovery could trigger EU to start reselling intervention stocks

Source: Hoogwegt
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“Failure is not fatal, but failure to change might be.” –John Wooden
Conclusion

+ We are part of a global economy and cannot escape.
+ If we want to grow we need to think globally and give attention to global customers.
+ Adaptability and agility is key to success.
Thank you for your attention

www.hoogwegtus.com