10 Tips - Innovating With Dairy

1. Know Your Customers
2. Celebrate with Cheese
3. Explore a New Variety
4. Learn from a Chef
5. Develop a New Language
6. Play Up Protein
7. Catch Whey’s Triple Play
8. Milk Dairy’s Healthy Halo
9. Know Your Competitors
10. Team up Two Real Winners
Ask Your Customers First

Typical issues

- Consumer Insights is seen as a sensory function
- Consumer insights is brought into the project too late to guide product development

Integrate consumer input early into the process

Form X-functional team
Develop project plan
Consumer Insights
Ideation
Define product parameters
Product development
Sensory & Consumer Insights
Validation
Presentation
DMI Partners with Industry

Understanding Why Consumers Eat Dairy
- Attitude and Usage Studies
- Dairy Equity
- Market Trends

Source: 2005 FRI
Up Front Market Research

- **Target Audience**
  - Example - What teens are looking for in a beverage

- **Target Channel(s)**
  - Retail
  - Foodservice
  - Schools

- **Target Health Claim(s)**
  - High Protein
  - Low Glycemic Index

Source: DMI research
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Dairy Equity Study

- Qualitative Approach
  - Focus groups conducted to gain insights into the “equity” of dairy and to better understand the degree to which that equity extends to products with dairy ingredients
  - Four Groups conducted
    - Three with adult females
    - One with adult males
  - Chicago (November 9-10, 2005)
Key Visuals/Words Selected for Cheese Collages

Comfortable
Authentic
Sociable
Elegant
Cheese Equities Triggered by Visuals

- Complement to Other Foods
- Comfort
- Universal
- Health
- Later Growth
- Taste
- Interesting
- Authentic
- Family
- Social
- Versatile
- Festive
- Not cold
- Wholesome
- Value
- Expensive
- Soft
Cheese Equity Take Away

- **Cheese is seen as emblematic of things social**
  - Participants link cheese in highly positive ways to parties, festive celebrations

- **Cheese is fun, exciting, interesting**
  - Cheese is varied enough to be universally included as part of family and everyday social things as well as a symbol of status and sophistication/elegance

- **Cheese benefits from sharing a central role as an enhancer or complement to well regarded food favorites**
  - Pizza, Cheeseburgers, Mac ‘n’ Cheese are more then the sum of their parts
  - Cheese “married” to these foods...a critical ingredient
  - Cheese shares the emotional warmth granted these comfort foods
Cheese Equity Take Away

- Cheese is highly regarded for its appetite appeal
  - Delivery of sensory benefits

- Health component is secondary
  - Acknowledged as an alternative protein source

- Considered the more expensive of the dairy products
  - Value is granted given its versatility and practicality

- Cheese benefits from naturalness
  - But without the close associations to “wholesomeness”
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## New Main Dish/Side Dish Dish Flavors

<table>
<thead>
<tr>
<th>Flavor</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unflavoured/Plain</td>
<td>30</td>
</tr>
<tr>
<td>Flavours Unavailable</td>
<td>16</td>
</tr>
<tr>
<td>Cheese (Cheddar)</td>
<td>12</td>
</tr>
<tr>
<td>Garlic</td>
<td>10</td>
</tr>
<tr>
<td>Cheese (unspecified)</td>
<td>7</td>
</tr>
<tr>
<td>Sour Cream</td>
<td>5</td>
</tr>
<tr>
<td>Potato</td>
<td>4</td>
</tr>
<tr>
<td>Roasted</td>
<td>3</td>
</tr>
<tr>
<td>NEW Flavour</td>
<td>3</td>
</tr>
<tr>
<td>Mushroom</td>
<td>3</td>
</tr>
</tbody>
</table>

Source GNPD Data
Americans Increasing Cheese Consumption

Per Capita Cheese Consumption - Pounds

Source: USDA
WI Specialty Cheese Production

Wisconsin Specialty Cheese Production

(Millions of Pounds)


83 95 99 116 130 174 208 221 234 281

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Cheese Menu Items, Fine Dining

40% increase since 2000*

* Includes cheese plates and all cheeses, included imports

Source: 2005 FRI
Creole Cream Cheese

- **Fairmont New Orleans**
  - 5 grilled filet mignon with North Shore mushrooms with Creole Cream cheese mashed potatoes

- **Bayona**
  - Crayfish, spinach and Creole Cream cheese pasta

- **Creole Cream Cheese is a farmer style cheese. Use on baked potatoes in place of sour cream for a unique and interesting flavor change.** *(Chef John Folse & Company)*

Source: 2005 FRI
Mascarpone

- **Aqua**
  - Wild king salmon with onion Mascarpone sauce

- **Kuleto’s**
  - Ravioli di Salmone with goat cheese, Mascarpone and fennel cream sauce

- **Mascarpone** is heavenly as a dip or melted for a sauce. It is soft, sweet and entirely unforgettable.  
  (www.ilovecheese.com)

Source: 2005 FRI
Fontina

- **Wildfire**
  - Tomato, Basil and three cheese pizza with Fontina, Mozzarella and Parmesan cheese blend

- **Andrea’s**
  - Rigatoni pasta with Gorgonzola, Fontina and Grana Padano cheese

- **Fontina – Because of its superior meltability, Fontina is known as a great cooking cheese. Young Fontina has a nutty, buttery flavor.** (www.ilovecheese.com)

Source: 2005 FRI
Brie

- Shaw’s Crab House
  - Lobster Brie and penne pasta

- Trotters To Go
  - Caramelized onion and Brie tart

- Bayona
  - Broccoli and Brie soup with 7 bread croutons

- **Brie is creamy, rich, buttery and mellow with pleasant mushroom or earthy overtones. When heated, the smooth interior melts into a perfect spread.**

(www.ilovecheese.com)

Source: 2005 FRI
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Cheddar Cheese Lexicon

The Basic Cheese Lexicon

- Basic Tastes: bitter, sour, sweet, salty
- Aromatics: umami, cooked, whey, diacetyl, milkfat, brothy, sulfur, fruity, nutty, catty, FFA
Speaking a Common Language

Describing Dairy Flavor
- Coordinate Product Development
- Communicate With Suppliers
- Quantify Consumer Reactions

- Lexicons
  - Cheese
  - Butter
  - Dry Dairy Ingredients

Source: 2005 FRI
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Whey structure-function claims

- Dairy protein (whey) helps build and maintain muscle mass
- Dairy protein (whey) supports growth and development of muscle
- High quality protein foods, such as milk and other dairy products, support the growth and maintenance of lean body mass.
- Whey protein provides essential amino acids to help stimulate muscle protein synthesis after resistance exercise.
The Protein of Choice

- **Whey Protein**
  - Lean
  - Healthy
  - Strong
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Whey’s Triple Play

- The Protein of Choice
  - Flavor
  - Function
  - Nutrition
Flavor & Function

■ Sauces
  - Increased Viscosity
  - Higher Protein
  - Improved Flavor
  (Whey flavor is the perfect complement to cheese flavor)
Sensory analysis of WPC80

Source: MaryAnne Drake
## Functional Properties

Table 1. Important functional properties of milk protein products and milk powders.

<table>
<thead>
<tr>
<th>Caseinates</th>
<th>Whey Proteins</th>
<th>Milk Powders</th>
<th>Milk protein concentrate powders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emulsification</td>
<td><strong>Gelation</strong></td>
<td>Dispersibility</td>
<td>Hydration</td>
</tr>
<tr>
<td>Foaming</td>
<td><strong>Heat stability</strong></td>
<td>Wetability</td>
<td>Solubility</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Clarity</td>
<td>Solubility</td>
<td>Heat stability</td>
</tr>
<tr>
<td>Solubility</td>
<td><strong>Water-binding</strong></td>
<td>Stability in hot coffee or tea</td>
<td>Rennet coagulation</td>
</tr>
<tr>
<td>Heat stability</td>
<td>Foaming</td>
<td>Heat stability</td>
<td></td>
</tr>
</tbody>
</table>

Source: Austr J Dairy Tech, 2000 55:71
Online Supplier Database

- Connecting Food Manufacturers with Dairy Suppliers
  - Over 100 suppliers

- Over 180 ingredients such as
  - WPC – Heat Stable
  - Nonfat Dry Milk - High Heat
  - Hispanic Cheeses
  - Domestic MPC
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Weight Loss

- 3 servings of milk, cheese or yogurt each day
- Part of a reduced-calorie diet
- Lose significantly more weight and more body fat
  - Than just cutting calories
Key Visuals/Words Selected for Milk Collages

- Comfortable
- Natural
- Practical
- Daring

Images of various scenes and objects.
Milk Equities Triggered by Visuals

- Warm
- Comfortable
- Character Development
- Comfort
- Family
- Growth
- Physical Development
- Strength
- Active
- Bone Density
- Energy
- Childhood Memories
- School Should
- Wholesome
- Sincere
- Not Artificial
- Authentic
- Natural
- Practical
- Bland
- Not Risky
- Daring
- Home

Not Artificial
Authentic
Natural
Practical
Bland
Not Risky
Daring
Home
Milk Equity Take Away

- Milk is strongly associated with family values, early child development
  - Milk as essential part of life, growth of child
  - Milk’s nutrients understood to make a difference
    - Bone structure
    - Energy, strength

- Connected to family responsibility to assure child’s growth
  - Health
  - Character
Milk Equity Take Away

- Not surprising that milk triggers related family virtues, family wholesomeness
  - Sincere, honest, trustworthy
  - Comforting
  - Simple, basic
  - Upright
  - Part of doing the right thing
- Milk seen as emblematic of things natural
  - Genuine, authentic, “real thing”
Dairy Halo:

**Cornerstone:** Family, nurturance, connection, complement, tradition

**Source:** Natural, authentic, real

**Soul:** Wholesome, calm, comfort

**Modality:** Practical, efficient, versatile

**Style:** Simple, sincere, honest, bland

**Moment:** Pleasant taste, enjoyable textures, gratification, indulgence

**Impact/Effect:** Health, strength, energy, well-being, strong bones
Dairy Halo:

**Cornerstone:**
Family, Nurturance, Connection, Complement, Tradition

**Source:**
Natural, Authentic, Real

**Soul:**
Wholesome, Calm, Comfort

**Impact/Effect:**
Health, Strength, Energy, Well-being, Strong Bones

**Modality:**
Practical, Efficient, Versatile

**Style:**
Simple, Sincere, Honest, Bland

**Festive, Elegant, Status (cheese)**

**Moment:**
Pleasant Tastes and Textures, Gratification, Indulgence
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More Cheese, Please

- Good - Twice Baked Potatoes
- Better - Triple Cheese
- Best - Four Cheese
Be Creative

- A New Twist – Real Blue Cheese
Any way you stack it...

- Specify the right cheese
  - Melt-profile
  - Freeze-thaw stability
  - Flavor profile
  - Cost point

- Cheese is
  - Versatile
  - Exciting
  - Social
Cheese & Potatoes

- Always a Winning Combination
  - New concepts
  - Traditional foods
Ready for Today’s Consumer

- Top Three Claims – 198 New Products*
  - Microwaveable 102
  - Convenient 62
  - All Natural 22

- Top Package Materials
  - Plastic 122
  - Board 76

*Source GNPD Data – Main Dish/Side Dish
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Real Idaho Potatoes + Real Dairy

- DMI’s Dairy Real Seal
  - Basic dairy foods
  - Meet Standard of Identity
  - All US dairy ingredients

- Combined foods
  - At least 51% dairy

- Symbol of quality
  - Well recognized
  - Widely used

- www.realseal.com
Made with Real Cheese

Frozen Macaroni & Cheese Dinner
Made with Real Cheese

Low Fat Macaroni and Cheese
Real Cheese Denotes

Real Cheese Claim (n = 659)  Control (no claim) (n = 649)

- Cheesy: 70% vs 74%
- Creamy: 49% vs 54%
- Comforting: 28% vs 33%
- Satisfying: 26% vs 31%
- Delicious: 21% vs 27%
- Thick: 22% vs 27%
- Rich: 17% vs 24%
- Hearty: 13% vs 18%
Bottom Line

- Consumers claimed they would be willing to pay nearly 50 cents more for a frozen macaroni & cheese dinner if it contained real cheese

(options were given in increments of 10 cents)
Resources

- Dairy Research Centers
- 2 Dairy Application Labs
- 100+ Experts