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USDA Agricultural Outlook Forum 2007

Overview of Whey Proteins

Jim Page

American Dairy Products Institute

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What is Whey

What is Whey



Where it comes from

From milk

What it is

Liquid which separates from the curd when milk curdles

What it does

Whey Protein has high nutritional values; noted as one of best nutritional sources available

What it is good for

Lean body mass protection

Better weight management

Improved gut health

Historical Overview: Evolution of Whey

Historical Overview: Evolution of Whey

Antiquity to 19th century

Middle Ages

- Whey = Staple Treatment
 - Digestive problems; Gout; Kidney disorders; Rheumatis; Overeating and constipation; Jaundice; Infected skin and lesions; Gonorrhoea and Epilepsy
- Natural skin-care product (i.e., lotion)

18th / 19th Centuries

- Different and constant uses for treatment throughout centuries
- 160 “whey spas” throughout the Alpine region (equivalent to modern day bars and pubs)

Historical Overview: Evolution of Whey

Whey Falls From Favor

- Widespread perception of whey as waste product; used as animal feed
- Prevalent negative connotation
 - Disposal of whey becomes increasingly problematic for dairy industry

Whey's Comeback: Current Environment

Whey's Comeback: Current Environment

Turning Lemons Into Lemonade

- Next Proteins' impact, marketability as athletic supplement and used for health-boosting benefits
- Whey protein becomes a building block of muscle metabolism and improved performance for endurance athletes (i.e., weightlifters, runners, etc.)

Whey's Comeback: Current Environment

Turning Lemons Into Lemonade

- Advantages of powder form/drying process
 - Liquid > powder > enhanced shelf life, traditional nutritive qualities increase CPF market viability
 - Whey products containing between 35% and 95% protein became available in products (i.e., baby formulas, food supplements, sports bars and beverages)

Whey's Comeback: Current Environment

Whey Today

- Most highly nutritional and multi-functional proteins available
- 10 to 20 grams of whey improves synthesis in seniors
- Assists dieters with weight loss
 - Calcium, lactose, protein and BCAA's
- Increases satiety, influences glucose homeostasis and maintains lean muscle mass and cardio-vascular health

Whey's Comeback: Current Environment

Whey Today

- Advent/benefits of whey protein isolate
 - 84% to 95% protein
 - Used to increase lean muscle mass, cardiovascular health and weight management and improve immune defenses
 - T-cell activity that prevents wasting

The Future of Whey

The Future of Whey

- Moving past muscle metabolism to health and nutritional benefits
 - Whey optimizes levels of glutathione (GSH), creating a healthy and stronger immune system = offsets high levels of stress
 - Whey offers benefits to EVERYONE
 - Athletes and physically active individuals
 - Older adults
 - Dieters
 - People with a stressful lifestyle
 - Those with a comprised immune system

The Future of Whey

- Role of CPG marketers
 - Effectively promote whey and open avenues for commerce as yet unimagined

The Future of Whey

- Whey key component in 2006 fastest-growing categories:
 - baby formula, dairy-based drink, etc.
- Category of finished products containing whey is valued at \$1 billion and still growing

The Future of Whey

Overview of current products as springboard for future offerings

- Future focus on whey as value-added ingredient
 - Protein shakes, power bars, supplements
- Category shows new application opportunities and significant annual growth rates
- Proteins such as a-lac and GOS are growing annually by 10%
- High-end WPC, WPH and WPI are experiencing significant growth, spurred by increased demand for nutritional segments

The Future of Whey

Popularity among seniors, dieters, athletes

– Seniors

- Maintains muscle mass to optimize mobility and prevents falls

– Dieters

- Steers weight loss toward fat, sparing lean tissue

– Athletes

- Improves lean muscle mass and muscle repair

The Future of Whey: Market Outlook

Strengths

- Excellent product with proven benefits
- Growing market
- Scientific research +++
- Fits to new food trend : less milk = need for healthy / tasty alternative
- World-wide cooperation to ensure supply meets demand

The Future of Whey: Market Outlook

Weaknesses

- Limited contacts with media
- Limited visibility / awareness
- Limited understanding of whey

The Future of Whey: Market Outlook

Opportunities

- Media interest which leads to better consumer understanding
- Co-ordinated approach of stakeholders, producers, general public
- Expansion of products featuring the benefits of whey
- Trend towards functional foods and nutritional value of foods
- Weight management attributes
- Increase share of stomach !
- Development of long term beneficial health claims