

USDA Agricultural Outlook Forum 2007

# Overview of Whey Proteins

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# What is Whey

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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

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## Antiquity to 19<sup>th</sup> 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)

### 18<sup>th</sup> / 19<sup>th</sup> 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

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## 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

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- 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