



# DAVISCOPE

DAVISCO FOODS INTERNATIONAL, INC. ■ QUARTERLY NEWSLETTER

## The whey to health

### Whey Protein Institute promotes benefits of whey

#### ■ In This Issue

Page 3

Wilke bowls the perfect game



Page 3

Working with a veterinarian



Page 6

Le Sueur Cheese employees at work



In the mid 1960s, the cheese industry began experimenting with technologies to process a growing volume of whey from an expanding national cheese production.

Whey was known to contain many nutritional components, whey protein being one of the most exciting.

In the early 1980s Mark Davis, the manager of Le Sueur Cheese Company at that time, was in the process of exploring several whey protein extraction processes when a potential whey protein customer told Mark about a unique process being refined in England and Ireland. Le Sueur Cheese brought this whey protein isolation technology home to Le Sueur.

These nutrients had no prior record of use. However, Davisco believed in the nutritional value of whey protein and the company began experimenting in product development; specifically applications for whey protein isolates.

The experimentation paid off, eventually producing product samples with improved

nutrition, texture, flavor, and shelf-life.

Today, Davisco, as well as its customers, continue to develop applications for whey protein isolates. Some of the products that use whey proteins include infant formula, bakery products, and sports nutrition products, such as shakes and bars.

“At Davisco, we believe that the health and nutritional benefits of milk and whey proteins, in particular, are only just beginning to be discovered and incorporated into the diets of consumers,” said Mark Davis, Davisco President and CEO.

#### Health Benefits

Whey proteins are more popular now than ever, largely due to the amazing health benefits they provide. While the extent of the benefits continue to be studied, whey

proteins as part of a healthy diet, provide many rich nutrients to the body, no matter what the age or lifestyle.

● *Athletes* benefit from whey protein’s high branched chain amino acid content. (Whey protein has the highest branched chain amino acid content found in nature.) Branched chain amino acids are metabolized directly into the muscle tissue, instead of the liver like other amino

*The Whey to Health*  
Continued on page 2

**Whey proteins are more popular now than ever, largely due to the amazing health benefits they provide.**





**As the Whey Protein Institute spreads the good word about whey proteins, demand for the product will continue to grow.**

acids. Various forms of exercise increase the body's need for branched chain amino acids, and whey proteins can help meet that need.

- *Elderly* people benefit from the shot of energy and boost to the immune system that whey proteins provide. Another important benefit is the prevention of bone loss. A recent study at Boston University revealed that elderly people who consumed low levels of protein suffered significant loss of bone, especially in the hip and spine. A higher protein diet can help keep the bones strong. Whey proteins earn high protein ratings and fill this protein need.

- *Infant* formula containing whey proteins is often the best option when breast-feeding is not a possibility. This is because whey proteins contain many of the same components found in mother's breast milk.

- *Obesity* is a major health concern in the United States with 62% of individuals either overweight or obese. The rise in obesity is a contributing factor to diabetes, heart disease, and cancer. Recent studies published in the Journal of Nutrition highlight the importance of high quality, low fat protein—such as whey protein—for weight loss and maintenance. These studies also stress the value of proteins rich in the amino acid, leucine. Whey protein is naturally high in leucine.

- *Immune deficient* individuals—HIV patients, for example—can gain a boost to their immune systems by including whey proteins in their diet. The proteins raise levels of glutathione, an antioxidant that improves the responsive ability of the immune system, reducing the risk of infections.

- *Cancer* patients who are undergoing radiation or chemotherapy often have poor appetites and protein malnutrition. Because whey proteins are gentle and easy

to digest, they are ideal for cancer patients' sensitive systems.

#### **The Whey Protein Institute**

Because Davisco believes so strongly in the health benefits of whey, leaders looked for a way to spread the word about both its functional and nutritional advantages. Hence, the Whey Protein Institute was formed as a separate company entity in April, 2001.

Director Carla Sorensen and marketing assistant Angela Broadwater lead the Whey Protein Institute effort.

According to Sorensen, the Institute works to promote whey protein and build awareness of its excellent nutritional benefits. "We would like whey protein to be a well-known household name and category and for everyone to be able to benefit from it," Sorensen said.

The Whey Protein Institute has made progress in spreading the word about nutritious whey proteins. The Institute's website, [www.wheyoflife.org](http://www.wheyoflife.org), provides information to approximately 4,500 visitors per week.

"We receive e-mails and phone calls on a daily basis from people who want even more information (than found on the website), including where they can purchase whey protein," said Sorensen.

In addition to the website, the Whey Protein Institute reaches out to nutrition and medical professionals, and general consumers through advertising in consumer health publications, and promoting whey protein at health and fitness oriented events, such as Twin Cities Marathon, Mankato Woman's Show, and the Los Angeles Marathon.

Prior to the formation of the Whey Protein Institute in April 2001, there was no organization in the world devoted to promoting whey protein.

## **Study shows whey protein isolate lowers blood pressure**

The health benefits of whey proteins continue to be discovered and proven.

Most recently, a study at the University of Minnesota showed that Davisco Foods hydrolyzed whey protein isolate supplement, BioZate 1, can help lower high blood pressure.

In the study, scientists gave patients with borderline high blood pressure BioZate 1. The control group was given BiPRO, an unhydrolyzed whey protein isolate.

In comparison to the control group, those who received BioZate 1 saw a significant drop in both systolic and diastolic blood pressure after just one week of treatment. The drop persisted throughout the study.

Additional research is expected to confirm the results of the study, however early indications are that BioZate 1 can be a viable alternative to medication for reducing hypertension, especially for borderline hypertensive patients.

"We are seeing a steady growth in the number of requests from RD's, MD's, and chiropractors for patient handout materials," Sorensen adds. "These professionals are recognizing the nutritional value of whey protein and they want to share this information with their clients."

Another positive sign is the growing number of calls and e-mails the Institute receives from companies that manufacture or distribute whey protein products.

"These companies are using the information provided by the Whey Protein Institute to help promote and sell their products," explains Sorensen. "Many of them have links to the Whey Protein Institute website."

#### The Challenges Ahead

While the Whey Protein Institute has seen significant progress, it will continue to face the challenge of building awareness of whey proteins.

"One of the biggest challenges we face is competing with soy protein and the soy industry," said Sorensen. "They have had a long head start in promoting the value of soy proteins and have significant funds available for this initiative." Although soy protein is better known by general consumers, whey proteins hold numerous advantages over soy proteins.

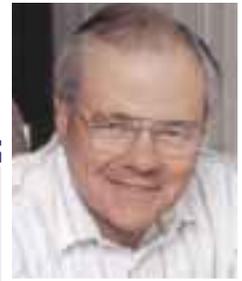
"In regards to functionality, whey protein concentrate is the clear winner over soy protein," explains Sorensen. "It has a clean, fresh flavor and helps provide products with a number of desirable characteristics with texture, appearance and stability."

As the Whey Protein Institute continues to spread the good news about whey proteins, demand for the product will continue to grow.

"We will continue to be the voice to the consumer and will communicate accurate, science-based information regarding the health benefits of whey protein," said Sorensen. ■



Carla Sorensen, Director



## In Focus

Mark Davis

Continuously expanding knowledge of the many nutritional and health enhancing benefits of whey proteins is a major and growing opportunity for the dairy industry.

For many, many years the industry has supplied high quality fluid milk, butter, nonfat dry milk and cheese to a growing and changing consumer population—a population that is looking not only for delicious traditional dairy products, but a variety of flavors, functions and new, healthy dairy based ingredients and foods.

Modern technology has allowed the dairy industry to use new processes that can isolate and capture unique components from milk.

Our industry must innovate and broaden its product offerings, which means manufacturing products that enhance other foods and contribute to their taste, and discovering new ways to prepare and present those foods.

Traditional product specifications for dairy foods and dairy ingredients must be revisited in order to expand uses and markets and take advantage of the many newly developed dairy-derived ingredients.

Whey proteins are such unique products. Harvested from high quality milk and whey, whey and milk proteins have a multitude of potential applications that can only enhance the whole of the dairy industry's market penetration and economics.

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### Wilke's On a Roll



Justin Wilke, foreman supervisor at Le Sueur Food Ingredient Plant, bowled a perfect 300 game and a 780 series in league action on March 10, 2003.

Wilke, who has been bowling since he was six years old, has come close to reaching the 300 milestone in the past. His previous high score was 289.

"It felt really good to get the 300," Wilke said. "And I felt really relieved."



# Producer Update

*Working with a Veterinarian*

**A**s dairy farms have grown larger and added more employees, the role of the veterinarian has changed.

According to veterinarian Jeff Paasch of Nicollet Veterinary Clinic, PA, historically, farmers depended on their veterinarians to provide nearly all medically related services.

Today, says Paasch, many dairies employ “hospital crews” who are in charge of procedures such as IVs, oral administration of medications, and fertility treatments.

Although the veterinarian may not hold as prominent of a role in dairies today, their importance should not be underestimated. Producers need to keep veterinary medicine involved in their operations.

“Vets still take care of surgery and should be involved in diagnostics. Anytime you’re making decisions regarding the nutrition of the herd, a vet should probably be involved,” advises Paasch.

Like most veterinarians, Paasch believes in the benefits of preventative medicine. Today, preventative medicine involves more than just traditional vaccinations. Paasch is concerned about bio-security and prevention of disease as animals are moved in and out of a farm.

“Ideally we would like to see new animals kept isolated from the rest of the herd for at least 30 days. Of course, producers are concerned with milk production numbers, and every day that an animal is isolated is one less day it is producing milk. You have to try and strike a balance between effective disease prevention and cost-efficiency,” said Paasch.

Paasch says that when producers are facing low milk prices and tight budgets, the veterinarian is not called in as often as he or she should be.

“The most frustrating thing for me as a veterinarian is that I’m often not called when needed,” says Paasch. “If you call too late, you will not get your money’s worth because there will be little your vet can do. Herdsmen have to be proactive and call when they have a cow that isn’t performing before it turns into a much bigger problem.”

In addition to seeking treatment in a timely fashion, Paasch recommends that dairy managers keep communications with their vets honest and open. “Vets want to help you reach your milk production goals and maintain milk quality. We can be more helpful with open communication.”

Paasch advises that a veterinarian can be a valuable sounding board for all of the information producers are bombarded with today. “Just because you read about something in *Dairy Herd Management* does not mean that it will work for your operation. Your vet can tell you if something new would be beneficial.

Looking towards the future, Paasch says that dairies, especially those in the upper midwest, need to improve reproduction efficiency. “Reproduction is important because buying new cows is very expensive. It is a lot less expensive to have babies than to buy babies.”

According to Paasch, the most cost efficient way to bring new cows into the herd is to reproduce within the dairy. In addition, he says custom rearing calves for several months will help lower costs.

“Producers are always looking for ways to cut costs. Improving reproduction efficiency is a very effective way to do so,” said Paasch. ■



**Veterinarian Jeff Paasch,  
Nicollet Veterinary Clinic**



# Writing a Dairy Job Description

A detailed job description is an invaluable tool for the management of dairy workers. While its obvious use is for advertising new employment openings, a description can also be very helpful in evaluating and guiding current employees.

When a job description is used for hiring purposes, it helps the owner define exactly what responsibilities he or she needs the new employee to undertake and what skills are required. Using the description, employers can eliminate underqualified candidates right away, making the entire hiring process more efficient.

In addition, the prospective employee will know exactly what type of commitment and abilities will be required and will be able to make a more educated decision whether or not the position would be a good match.

By writing job descriptions for current employees, herd owners will be able to more effectively evaluate how efficient and productive each employee is. This will give employees clear guidelines for improvement. If improvement is not seen after a certain period, owners will have justification for significant changes in employee status.

A job description should include a list of the expected responsibilities, complete with the knowledge, skills, or experience required to carry them out. To keep the chain of command clear, it is also helpful to indicate to whom employees should report.

Most dairy farm employees can fit into one of three categories: herd managers; feeder; or milkers. To the right is a condensed job description for a milker job. You can find a more detailed example for each of the three categories at [www.ianr.unl.edu/pubs/Dairy/g1224.htm](http://www.ianr.unl.edu/pubs/Dairy/g1224.htm). ■

**Bank  
on  
Success**

## Milker Job Description

Primary responsibility will be to perform the milking operation according to the State's Public Milk Ordinance.

### Milking responsibilities and procedures:

1. Prepare and clean the milking equipment and bulk tank for milking;
2. Milk all cows in an orderly, proper, and consistent manner;
3. After milking, be sure all machinery and sanitation procedures are carefully followed.

### Milking related activities:

1. Maintain treatment records and identify treated cows with markers;
2. Assist in maintaining supplies by bringing to the manager's attention any items in short supply;
3. Perform procedures that promote accurate identification and animal well-being.

### Other responsibilities may include, but are not limited to, the following:

1. Maintenance of free stalls;
2. Maintenance of grounds, pasture, fences;
3. Maintenance of vacuum pumps.

## Eagle View Farms thrives in Idaho

Like many producers, Jerry Visser grew up on a dairy. He was just two years old when his father started the family operation in southern California, forty-five years ago.

Jerry, who has wanted to dairy as long as he can remember, joined his father full time after attending one year of college.

Nearly two years ago the Visser's dairy, Eagle View Farms, was feeling the pressures of development in California. Jerry, his wife Carol, and their sons Brad and Russel decided to move Eagle View to western Twin Falls County, Idaho.

"We enjoy Idaho and the area. We are very happy here," said Jerry.

Eagle View Farms milks 3000 cows and has a total of 5000 animals on the dairy. Jerry sends the baby calves to a local calf nursery to be raised for six or seven months.

The dairy features free stall barns and a double 40 parallel milk parlor. In late 2002, they added a

separate hospital milk parlor to keep the less healthy animals separate from the rest of the herd.

Jerry says that while the dairy does not have an automatic milk metering system, he is very happy with the computerized wash up system that was purchased when they made their move to Idaho.

"It is all automated. The milkers just hook up two or three fittings. If it isn't hooked up properly, it won't work. You can't make a mistake," says Jerry.

Eagle View Farms employs 18 workers. Jerry says that developing a management system has proven to be a challenge. "But we have good people working here, so that helps," he said. "It has also been a challenge to keep up on all the rules and regulations as they change."

The Vissers enjoy life on the dairy. "It is a good way to bring up a family. You are always nearby for them. It is a good lifestyle," said Jerry. ■

We believe  
the success  
of dairying  
depends on  
an awareness  
of the forces  
at work in the  
marketplace  
and our ability  
to take control  
together.

# Hats off to Le Sueur Cheese Company employees

Every day more than 130 employees keep production in motion at our Le Sueur Cheese Company plant in Le Sueur, MN. From milk truck drivers to lab technicians, all work to ensure that our products are of the highest quality. Great job, Le Sueur Cheese!



◀ Jerry Hollister, Plant Manager

Maria Delossantos, Lactose Packaging ▼



◀ Dan McClurg, Lactose Dryer



▲ Dennis Johnson, Alice Glende and Scott Stude, Producer Liaison



▲ Ignacio Yerbafria, Double-O Operator



▶ Gladys Borjas, Cheese Packaging

▼ Duane Adams, Receiving



◀ Jeff Shoden, Maintenance

▶ Mindy Holisky (sitting), Lori Ammann, Colleen O'Neill and Frank Burg, Front Office



▲ Mark Lindorff, Evaporation Operator



▲ Jim Kutchma, Quality



▲ Lucy Jones, Lab



◀ Larry Card, Shipping/Receiving