

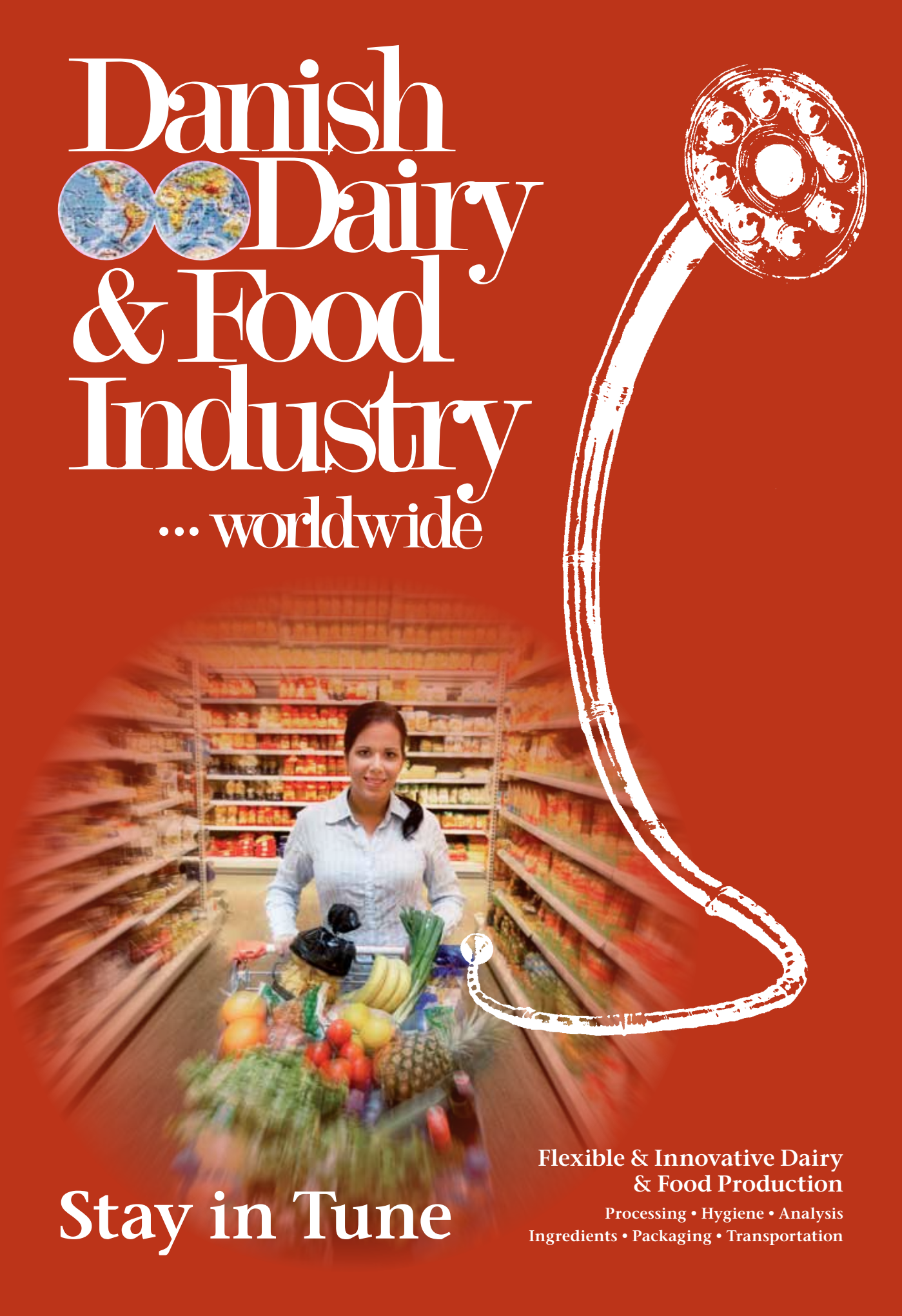
Danish Dairy & Food Industry

... worldwide

Stay in Tune

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Ingredients • Packaging • Transportation



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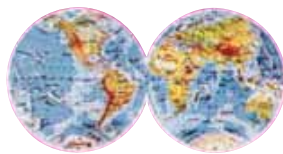
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Denmark - June 2011

Stay in Tune!

"Stay in Tune" is the major theme running through Danish Dairy & Food Industry ... worldwide this year.

With the musical term "Stay in Tune", we focus on how the dairy industry constantly must stay in tune on market conditions to meet trade and customer requirements. The global consumer preferences for dairy products are in fact multifaceted and cover besides disposable income also expectations of the industries high CSR-profiles along with a lot of other implicit food qualities such as: natural, environmentally friendly, ecology, functional, convenience, health and wellness, indulgence, gourmet and inexpensive etc. Thus, the dairies sharpen their demands on the supplying industry to stay in tune on innovative solutions and equipment enabling the industry to produce dairy products on market demands.

How do suppliers navigate through the dairy and food companies as well as the modern consumers constantly changing preferences for novelties? Flexible machinery easy adjustable for making different and often small scale product series are just one of the answers. Innovative and/or functional ingredients and packaging are others. Further also new and highly advanced analytical and hygienic concepts are needed to guarantee that the complex foods are of the highest quality.

A large number of supplier companies, educational and research institutions in the dairy area participate in Danish Dairy & Food Industry, which this year is introduced by the Danish Agricultural Minister Henrik Hoegh along with one of the world's leading dairy companies, Arla Foods.

Besides studying this magazine our readers are offered the opportunity to meet representatives from the Danish dairy and food industry at large international exhibitions in 2011-12 as for example: World Food Moscow in Moscow 13-16 September, GIDA in Istanbul 22-25 September, World Dairy Expo in Madison 4-8 October, ANUGA in Cologne 8-12 October, IDF World Dairy Summit in Parma 15-19 October, The New Danish Food Contest in Herning 8-9 November, WorldFood India in New Delhi 9-11 November, Food Ingredients Europe in Paris 29 November - 1 December, and further in 2012 Anuga FoodTec in Cologne 27-30 March.

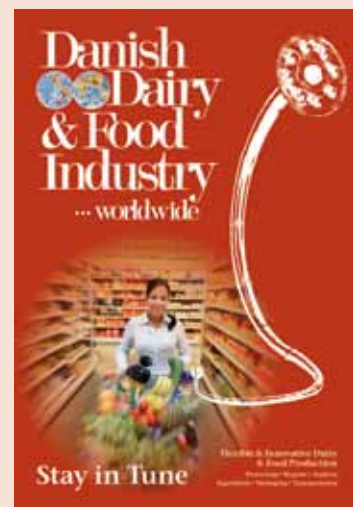
The Danish Dairy Managers Association and the Danish Dairy Engineers Association own and publish Danish Dairy & Food Industry ... worldwide. We have published the magazine since 1976 and this issue is the 21st in succession informing you about Danish dairy and food industry.

Danish Dairy & Food Industry ... worldwide is distributed in more than 120 countries in 10.000 copies. Furthermore, the magazine is available at our homepage: www.ddfi.dk or www.maelkeritidende.dk. Our experience tells us that about 100.000 dairy, food and marketing specialist worldwide study this journal every year.

You are always welcome to contact us for further information. ■

Anne-Sofi Christiansen
Chief Editor

Anna Marie Thøgersen
Editor



The cover shows a lure. This instrument dates from the Danish Bronze Age (about 600 B. C.). It has only been found in Denmark and the former Danish territories. Today it forms part of the Danish Quality sign known as the "Lure-brand", used on dairy products. Background picture by Colourbox.

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Index to Advertisers

- 17** Akzo Nobel
- 64** Alectia
- 29** Alvibra
- 26** Arla Foods
- 5** Au2mate
- 38** Chr. Hansen
- 35** Dairy Books
- 57** Dairy Fruit
- 33** Danish Food Exhibition
- 36** - Join & Visit
- 49** DSM
- 32** DSS Silkeborg
- 9** Elopak
- 55** FH Scandinox
- Plants for Sale
- 21** FH Scandinox
- 37** GEA Niro
- 47** Hans Jensen Engineering
- 23** Keofitt
- 19** Kerry Ingredients &
Flavours Denmark
- 43** KKA Partners
- 11** KOLD College
- 41** LOGSTOR
- 7** Palsgaard
- 61** Scan-Vibro
- 15** SPX Flow Technology
- 63** Tetra Pak
- 45** Tetra Pak HOYER
- 2** Trepko
- 13** University of Copenhagen,
Faculty of Life Science
- 59** VM Tarm
- 16** **Akzo Nobel:** The Simple Answer to Sodium Reduction,
by Eric Huisman
- 27** **Alectia:** How to Stay in Tune,
by Rolf Pedersen
- 8** **Arla Foods:** Closer to Nature™,
by Anna Marie Thøgersen
- 22** **Au2mate:** Dairy Applications and Customer Owned Automation Framework,
by Klaus Dam
- 52** **Chr. Hansen:** Perfectly Healthy Drinking Yougurts,
by Helle Rexen
- 56** **Dairy Fruit:** Constantly Changing Consumer Preferences,
by Crispin Gell
- 33** **Danish Food Exhibition:**
- 36** Join and Visit the new Fair
- 48** **DSM:** We Want a Brighter Future
- 34** **DSS Silkeborg:** Membrane Filtration for Recovery in Dairies,
by Karsten Lauritzen
- 20** **FH Scandinox:** Working on three Continents,
by Anna Marie Thøgersen
- 50** **GEA Niro:** SprayEye™,
by Martin Skanderby
- 46** **Hans Jensen Engineering:** State-of-the-art Conveyor System,
by Anna Marie Thøgersen
- 54** **Keofitt:** New Keofitt Aseptic Sampling Bag™,
by Henrik Salomon
- 18** **Kerry Ingredients & Flavours Denmark:** Many Different Tasty Cheese Tastes,
by Anna Marie Thøgersen
- 42** **KKA Partners:** Danish Equipment - Value for Money,
by Keld K. Andersen
- 10** **Kold College:** Tailor-made Dairy Courses at KOLD College,
by Hans Skjerning and Bjarne Vagn Larsen
- 60** **Scan-Vibro:** Vibration Technology - Multifunctional Possibilities,
by Lars Valentin Peters
- 14** **SPX Flow Technology:** Sustainable Solutions for Food & Dairy Processing
- 24** **Tetra Pak HOYER:** Tetra Pak Feeds an Ice Cream Trend,
by Cath Mersh
- 30** **Tetra Pak:** For Premium Quality Dairy Products,
by Keith Goodby
- 6** **The Danish Ministry for Food, Agriculture and Fisheries:** A visionary and Innovative Danish Agro-Food Sector,
by Minister Henrik Høegh
- 39** **Trepko:** Three Pillars of the Packaging Process,
by Agnieszka Libner
- 12** **University of Copenhagen, Dairy Technology Department:** Dairy Education & Research in Tune,
by Richard Ipsen
- 58** **VM Tarm:** Efficiency and Safety on the Agenda,
by Anna Marie Thøgersen
- 44** Who is behind Danish Dairy & Food Industry?

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A Visionary and Innovative Danish Agro-Food Sector

The Danish agro-food sector faces both great possibilities and challenges in the years to come.



**By Mr. Henrik Høegh,
Minister for Food,
Agriculture and Fisheries
(Foto: Anette Sønderby)**

More than 60 percent of the Danish area is used for agriculture. This means that agriculture and the associated food industry play an important role in the Danish economy when measured on GDP, employment, the balance of payments, etc. A recent analysis based on data from Monitor Group's Global Cluster Database demonstrates that the agricultural and food cluster in Denmark is the third biggest in Europe. The Danish cluster is unique because it is broadly based across various agricultural and food areas, e.g. production of perishable goods.

It is of great importance to the Danish Government to provide the *best possible business environment* for the agro-food sector - not only for the benefit of the sector itself, but also for the benefit of the Danish society.

Global presence

One of the characteristic and competitive advantages of the Danish agro-food sector - its ability to optimize traditional agricultural produc-

tion - is increasingly being copied by other countries and competition from other countries with lower production costs is steadily getting stronger which makes it harder to compete on price alone.

However, a growing world population and middleclass, mainly in China and India, provide opportunities for Danish food producers to place goods outside the borders. The opportunities are particularly prosperous because these consumers are increasingly *conscious consumers* focusing on food safety, health, quality and animal welfare etc.

Better products

New opportunities arise both on the global, home, and close-by markets. Organic production and locally grown food with special characteristics are receiving much attention. This development has in recent years been supported by the great success of Danish gastronomy.

The culinary scene in Denmark has over the years expanded remarkably - a development that has con-

tributed to the growth of high-quality food and placed Denmark on the gastronomic world map. Best known is the nomination of the Copenhagen restaurant Noma as "Best restaurant of the world" (2010), and the recent nomination of the Danish chef Rasmus Kofoed as "Best chef of the world". To support this development, the Danish Government has decided to establish an ambitious culinary institute.

By combining the knowledge and competences of the food industry and food science with consumer wishes and the work of Danish chefs, the new institute is expected to act as a melting pot and a Danish lighthouse to promote further growth and development of quality foods.

The Common Agricultural Policy

Debates on the future outline of the Common Agricultural Policy (CAP) after 2013 will continue over the next two years.

It is of outmost importance that the sector is able to further develop its production, export possibilities as well as contribute to cope with the societal challenges, e.g. on climate, environment and energy. We need to ensure the best possible business environment for the agro-food sector in order for it to stay competitive, innovative and sustainable. This will allow for both the large export oriented food producers and the small food producers to be present locally and globally. Hence, we need to invest in the development of the future agricultural production in Europe - not in the production of the past. ■

Emulsifiers and stabilizers for dairy products

Milk has been a central part of our diet for millennia, yet new dairy products hit the market all the time. That is largely thanks to emulsifier and stabilizer systems, which can improve the performance of such goods dramatically.

Formulating innovative dairy products requires the best raw materials and processing conditions – and a detailed understanding of how recipe components interact with each other.

At Palsgaard we don't sell standard solutions. Rather, we work with you to clarify your needs - and then design recipes around them in one of our fully equipped pilot plants around the world. Together we design your solution.

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Closer to Nature™



"House of Castello" is pure indulgence!

Closer to Nature

Part of the Arla brand is the company's slogan: Closer to Nature™ - and by this the cooperative dairy does not mean the "the good old days" - on the contrary!

The dairy farmers, who own Arla, are constantly expanding their farmyards, as for instance the Swedish organic milk farm, Vadsborg with 1.000 dairy cows. This number of cows gives a more efficient but yet sustainable milk production. Further the milk trucker, driving eco-friendly even, can collect the organic milk at Vadsborg in just one load full. In addition, Arlas cooperative farmers are striving to get closer to nature by increased focus on greater use of farmyard manure to produce biogas in replacement of fossil fuels.

As one of the worlds' largest dairies, Arla Foods constantly stay in tune on customers' and consumers' demands for dairy products in more than 100 countries. The global brands Arla®, Lurpak® and Castello® include hundreds of dairy goods suited every potential preference for taste and purpose: Basic, luxury, innovative, mainstream, culinary, less-fat, indulgence, organic, lactose-free, good for you, for babies, for elderly, lower/high-priced ... You name it - Arla Foods has it!

By Anna Marie Thøgersen, Editor

Also the dairy plants are becoming bigger, and Arla Foods is now constructing the world's largest fresh milk plant just outside London, and ready for production in 2012. - Not only are we building the world's first billion liter liquid milk dairy, it will also be the first zero carbon milk processing facility, tells Mr. Peter Lauritzen, CEO of Arla Foods UK. He adds: - The potential impact on the environment of each element of the new mega-dairy has been evaluated and the best available construction techniques, advanced process technologies and renewable energy opportunities will be utilized.

Arla® - Lurpak® - Castello®

But, back to the dairy products! The international dairy company successively launches new products under the global brands Arla®, Lurpak® and Castello®. Some of the new-comers are e.g. within the lactose-free and organic ranges. Although most consumers in Northern Europe, Arla's core market, have no problems with drinking milk, there are consumer groups suffering from lactose-intolerance. To accommodate these consumers - also in other parts of the world - Arla Foods has launched a range of milk products without lac-

tose content. These LactoFree® products are marketed under the Arla brand. This brand, of course is used equally on the very broad range of the Arla goods within milks, cheeses, butters, milk powders etc.

Further, Arla is well-established on the organic platform. Way back in the 1980'ies, Arla Foods - as well as other Danish frontrunner dairies - launched the very first organic milks. The organic food palette has grown steadily ever since - despite the global financial crisis. The organic product portfolio carries all three brands: Arla®, Lurpak® and Castello®.

More or less

Arla Foods is of course fully aware of the core-product; milks position in the forever on-going health discussions about recommended milk and calcium intake, saturated fats etc. Thus, the global dairy company dialogs with consumers and experts - and not least cover the entire spectrum of dairy foods containing more or less fat, lactose, proteins etc.

In the less-fat-category we find a brand-new blended spread with only 43% fat content, and this spread is valued by health-conscious consumers. In the more-protein-category we find the Arla Protin® products, con-

taining extra proteins and calories - meant for and increasingly valued by small-eating consumers. On the other hand, the fabulous Castello® cheeses belong to the eat-less-but-good-category. For cheese lovers “House of Castello®” is pure indulgence.

Egg-replacement in muffins

Arla Foods is also the world largest producer of highly-refined and functional milk ingredients used in both dairy products as well as other goods, including baby-foods. And more ingredients are in the tube! - Thanks to new technology, we just last year launched an innovative permeate ingredient, deproteinised lactose, tells CEO Henrik Andersen, Arla Foods Ingredients. He adds: - This ingredient is a functional breakthrough, as it can not only be used in e.g. ice cream and chocolate, but even replace eggs in bakery products like biscuits and muffins.



Sketch of the new UK Arla plant: The mega dairy will be the largest and most environmentally-friendly fresh milk plant in the world.

Arla Foods World-wide

Arla Foods is no. 7 on the world’s Top-10 dairy list, and last year the company had a total milk amount of 8.7 billion kg. The dairy giant is owned by 7.180 Danish and Swedish milk farmers. The company has 16.200 employees world-wide, and the net turnover was 49 billion DKK in 2010. Arla Foods has production

facilities in 14 countries and sales offices in further 20. The core markets are the UK, Sweden, Denmark, Finland, the Netherlands and Germany. In the last two mentioned Arla has fairly recently purchased two dairy companies, and are thus running production in the actual countries. Other primary markets are Russia, Poland, USA, China, and the Middle East. ■



Great taste comes in great packages.

The Diamond® Curve® gable-top carton from Elopak. Our innovative carton design features an exclusive shape that increases visual impact on crowded store shelves. And our variety of sizes and caps help satisfy changing consumer desires. At Elopak, we have the perfect packaging solution for your premium liquid foods.



Tailor-made Dairy Courses at KOLD College

KOLD College is an expert within tailor-made courses for the international dairy and food industries.



By Hans Skjærning, Principal, and Bjarne Vagn Larsen, Vice-Principal, KOLD College

Dalum becomes KOLD

In 1889, KOLD College was founded as part of Dalum Agricultural College. In 1979 the college was separated from Dalum Agricultural College and became the independent dairy college: Dalum Technical College. The college got its own board and principal, and focused fully on all educations from soil to table.

In January 2004 Dalum Technical College merged with the horticulture college Soehus, under the merging name Dalum Education Centre. On December 1st in 2008 the Dalum name changed to KOLD College.

Global outlook

At KOLD College's Dairy Training Centre the international aspect is integrated and has played a major role for years. Numerous courses and contacts worldwide bring inspiration to the college - and demand high standards of flexibility and quality. Our staff successively participates in international activities, and each year the dairy department teachers visit European dairy companies to catch up on new trends and tendencies within dairy production.

International Dairy Courses

Each year KOLD College arranges a number of tailor-made courses for Danida and international companies, e.g.:

- 12-week course: Participants from Nicaragua. Subject: General Dairy Technology.
- 2-week course: Participants from India. Subject: Milk Powder.
- 1-week course: Participants from Japan. Subject: Danish Cheese College.
- 1-week course, a KOLD/AEDIL cooperation: Participants from Europe. Subject: Cheese Making by Ultra Filtration.

International cooperation

KOLD College has participated at a transverse development project. Various dairy companies and other education centres with parallel problems have been involved, as well as organizations within the dairy industry. This cooperation has resulted in innovative and more flexible training programs as e.g. "split courses", in which the participants have home assignments at their work. Results from these assignments will be presented at the following course. The new courses consist of e.g.:

- Process and energy optimization (water, waste water, energy, CIP-cleaning)
- Specific Process Control
- Optimization of safe working conditions
- Optimizing CO₂ results
- Supplying the participants with an understanding of the optimizations

About
KOLD
College

KOLD
college

- All educations and courses at KOLD College are based on the concept "from soil to table".
- 180 employees, of which 110 lecturers have vocational or academic backgrounds.
- 1,150 full time equivalent students and course participants.
- 6,500 students attend educations or courses each year.
- Buildings covering 38,000 square meters.

Areas of education at KOLD College:

- Agriculture, horticulture, animal keeper, forestry
- Catering (Chef, Waiter, Butcher, Baker)
- Dairy technology (Dairyman, Dairy Operator)
- Technical gymnasium (3-year pre-university study course)
- Academy (Laboratory technologist, Process technologist within food, dairy or processing), Service economist (hotel and restaurant, service management, event and tourism)
- Bachelor (in Dairy, Laboratory, Food, Process)
- In-service tailor made training and courses

(Photo by: Ole Friis).



Courses for dairy drivers

In cooperation with another education centre, KOLD College each year arranges a number of tailor-made courses for drivers from different dairy companies:

- Day 1-3 deals with the EU-certification for drivers within the dairy industry. The drivers will comply with the legislation to hold the job as freight drivers based on the knowledge about traffic regulations, working hours regulations, driving and resting time, transport legislation as well as knowledge to secure driving, defensive and energy saving. The participant will be able to do heart-lung rescuing and emergency treatment.
- Day 4-6 is a complementary giving the driver knowledge of the microbiological composition of milk, methods and values of relevant measurements and milk product types. Further the driver can carry out transportation in connection with reception and distribution of milk according to the principles of HACCP, ISO and local quality control programs. ■

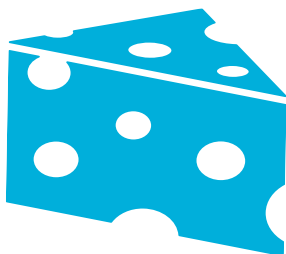
New name of Dalum Education Centre is: KOLD College!

Join the November 2011 Course!

In November 2011, week 45-48, KOLD College organizes a one month Theoretical & Practical Dairy Training Course. The course will be held in English and focuses on the following subjects: Milk treatment in general, and production of dairy goods as; fermented milk, special milk products, cheese, butter, ice-cream and milk powder. There will also be sessions within: Laboratory control of milk and dairy products.



More information about this dairy course is available at www.koldcollege.dk - A detailed program for this upcoming November 2011 one-month Dairy Course is available at www.koldcollege.dk or by contacting education coordinator Sten Holmgaard Sørensen on e-mail: SHS@koldcollege.dk (Photo by: Ole Friis).



Kold College is the new name of Dalum UddannelsesCenter

The high standard of Danish dairy and food technology is recognised and appreciated worldwide. Kold college has played an important part in developing and maintaining this excellence. Our international activities focus on the integration of food education and are based on our fundamental concept "from soil to table" .

Kold College offers tailor-made courses for the global dairy sector and food industry.

We houses the only dairy college in Scandinavia: The Dairy Training Centre of Denmark, which specialises in courses in dairy technology • laboratory techniques • maintenance of dairy equipment • environmental engineering • energy saving • quality control management • the operation of dairy plants.

Our mission is to continue the to expand our international courses and contacts. Please contact os for futher information.

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KOLDCOLLEGE.DK • KOLDCOLLEGE@KOLDCOLLEGE.DK



Dairy Education & Research in Tune

All teaching at M. Sc. Level is conducted in English, and 50% of the students come from abroad.

Education and research tuned to benefit the dairy and food industry - worldwide



By Richard Ipsen, Professor, Research Group Leader, Dairy Technology, Dept. Food Science, University of Copenhagen

Close to the centre of Denmark's busy capital students from all over the world gather to study dairy technology guided by a diverse group of researchers who not only teach but also closely collaborate and interact with industry on research projects tuned to benefit the global dairy and food industry. This is the Research Group for Dairy Technology at Department of Food Science, which is part of the Faculty of Life Sciences (LIFE) at University of Copenhagen.

Research collaboration

Recently the University of Copenhagen and the major Danish dairy company Arla Foods entered into a new strategic research collaboration. The university and Arla will make researchers, technology and skills available to each other in projects dealing with areas such as food safety, nutrition, milk composition, consumer science, packaging and sustainable manufacturing. Arla is also a leading

For students not able to travel to Copenhagen, the Dairy Technology Research Group offer a course based on e-learning thus making it possible for students to attend from anywhere in the world. The course is a nine week Introduction to Dairy Technology, aimed at students with a B. Sc. of Food Science or a similar background, and will run for the first time from September 2011.

global producer of highly specialized milk-based ingredients and the new agreement will strengthen the already existing research in this area.

Multi-disciplinary research

At University of Copenhagen we perform multi-disciplinary research and aim at obtaining insight that benefits science as well as industry and consumers. An example of this is the work we are presently conducting in close collaboration with Arla Foods on the application of microparticulated whey protein in dairy products. Whey protein is a versatile ingredi-

ent that has numerous uses in the dairy and food industry and that can be tailor-made to suit specific applications. Microparticulation is a process where the whey protein, by using simultaneous heating and shear, can be aggregated into particles of a size equivalent to the fat globules in milk (approximately 10 micrometers). Such particles have excellent properties in terms of acting as fat replacers in various food systems. They enhance the creaminess in low-fat yoghurt and ice cream and can even be used in the production of cheese. Our research has focused on understand-





ing how the properties of the micro-particulated whey protein affect the quality of yoghurt and similar products, thus enabling an optimal processing of the whey. This in turn secures a final, all natural ingredient that for example provides the best possible creaminess in low fat yoghurt for the benefit of dairy companies as well as consumers.

Global dairy technology network

The Research Group for Dairy Technology is also responsible for the two-year specialization in Dairy Technology, which is part of the M. Sc. Programme in Food Science offered at LIFE. All teaching at M. Sc. Level is conducted in English and 50% of the students come from countries outside Denmark. However, not all potential students are able to travel to Copenhagen and for those students, at universities or in industry, we offer a course based on e-learning thus making it possible for students to attend from anywhere in the world. The course is a nine week Introduction to Dairy Technology, aimed at students with a B. Sc. of Food Science or a similar background, and will run for the first time from September 2011. We are looking forward to serving the needs of the global dairy industry by teaching students in a virtual classroom and aiding in creating an international network on dairy technology. Stay in tune! ■



FACULTY OF LIFE SCIENCES
UNIVERSITY OF COPENHAGEN

Dairy Technology – In a Global Classroom

Take a course that provides you with all the basic knowledge on dairy technology - and take it anywhere in the world!

From September 2011 we offer a course: **"Introduction to Dairy Technology"** as e-learning, so all you need to attend is access to the internet and a webcam.

Content

The course will cover:

- Milk production and biosynthesis
- Basic dairy chemistry
- Microbiology of raw milk and dairy products
- Quality assurance of raw material and product
- Processing of dairy products: Fluid milk products, Fermented milks, cheese, Butter and Powder
- Cleaning and hygiene

The course is based on a series of e-learning modules integrating literature studies, exercises relating to theory and case studies.

Requirements?

We have designed the course to fit students with a background equivalent to a B. Sc. in Food Science.

Successful completion of the course is based on a final written exam as well as on finishing each e-learning module, i.e. participation in on-line discussions, fulfillment of individual assignments, group work and questionnaires.

Teachers

The teachers are from the Department of Food Science, Faculty of Life Sciences, University of Copenhagen. They are all experienced researchers with a comprehensive knowledge of the science and practice of dairy technology.

Schedule

The course will start on Monday 5th September and end on Friday 11th November 2011.

We plan to offer the course every year.

About the Department of Food Science:

The Department of Food Science, Faculty of Life Sciences, University of Copenhagen performs research and conducts teaching at the highest academic level in the area of food science. More at <http://www.en.ifv.life.ku.dk/>



More information:
For more information contact the course responsible, Professor Richard Ipsen at ri@life.ku.dk



SPX Flow Technology

Sustainable Solutions for Food & Dairy Processing

Food, beverage and dairy processing have never been more challenging. Margins are being squeezed, food safety is paramount and consumer demands for new products make formulation changes a regular occurrence.

Partnership in challenges

To meet these challenges head on, you need a partner with a deep understanding of process engineering and a broad portfolio of equipment. Look to SPX and its industry leading brands to provide unparalleled technical support, equipment versatility and food processing expertise. Recognizing our customers are under pressure to remain competitive, our solutions address key business drivers, such as product flexibility, waste and energy management and regulatory compliance.

Sustainable solutions

SPX is highly committed to delivering sustainable based solutions which exceed customer expectations in value and return through a focus on:

- Waste prevention and loss reduction
- Reuse of resources
- Improved value of raw materials
- Water and energy reduction
- Product safety and security
- Social responsibility

Comprehensive portfolio

It's difficult to find a more comprehensive portfolio of processing equipment anywhere else. Many of our designs incorporate patented features and our research and development efforts continue to produce groundbreaking technologies. When you specify SPX equipment, you get more than a product - you get a partner. We listen to your goals and design the best solution to help you achieve them. By testing your formulations at one of our many application centers worldwide - you'll have a proven process before you implement it in your plant. SPX's food technologist can help you with process optimization services and our Innovation Centers and Pilot Plants are available to support you further with new product or process innovations and improvements in the development of financially attractive and sustainable food and beverage products.

Your partnership with us doesn't end at the sale. Our supportive After-Sales Services

About SPX

SPX Corporation (NYSE: SPW) is a Fortune 500 multi-industry manufacturing leader that provides its customers with highly-specialized, engineered solutions to solve critical business issues.

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The scraped surface heat exchanger, the Nexus, which uses CO₂ as cooling medium.



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WHERE LEAD MEET INNOVATE

The Simple Answer to Sodium Reduction

By Eric Huisman, Akzo Nobel

Reducing sodium levels

Reducing sodium levels in food isn't easy. As well as the taste salt provides it has many practical functions that must be met. While developers have a range of solutions at their disposal, finding the right mix takes time and effort. Introducing new ingredients into production brings fresh challenges and there can be problems related to dust formation, contamination of equipment by hygroscopic materials, transport and dosing. Suprasel Loso OneGrain offers a direct, one-to-one replacement for regular salt with products that look, taste, flow, blend and dissolve in exactly the same way. OneGrain technology from AkzoNobel Salt Specialties can achieve

up to 50 percent sodium reduction by combining regular salt, a 'salt replacer' and taste-enhancing flavours in single salt grains, as illustrated in the OneGrain figure.

OneGrain in cheese

Salt plays a vital role in cheese making for flavour, moisture control, and preservation. Salt is a natural preservative with few natural alternatives.

The reasons for salting cheese, besides enhancing taste and flavour, are: Control of undesirable microbial growth and activity, Control of enzyme activities, Syneresis of the curd, Reduction of moisture and water activity (Aw value), Influence on the physical, chemical

and biological attributes of the mature cheese.

There are various methods of salting cheese: Direct addition and mixing of dry salt to broken or milled curd pieces, e.g. Cheddar, Cheshire and cottage cheeses. Rubbing or spraying dry salt or a salt slurry on to the surface of the moulded curds, e.g. blue cheeses, Stilton. Immersion of moulded cheese in brine solution, e.g. Gouda.

By substituting AkzoNobel's Suprasel Loso A30 or A50 for salt, it is possible to produce a reduced sodium cheese product with similar taste, texture and preservation profiles (Table 1). By use of AkzoNobel's Suprasel Loso A30 and A50 no differences in microbiological data were detected!

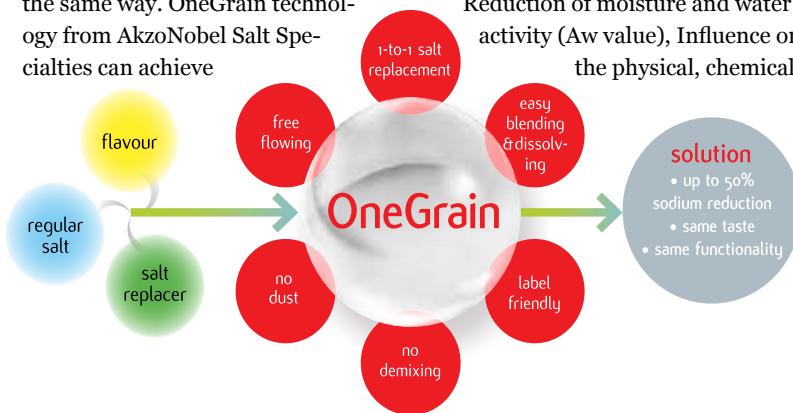
50% sodium reduction

OneGrain technology from AkzoNobel Salt Specialties can achieve up to 50 percent sodium reduction by combining regular salt, a 'salt replacer' and taste-enhancing flavours in single salt grains. Table 2 shows the 'replacer' and flavouring details for Suprasel Loso OneGrain A30 and OneGrain A50.

Strict claim rules

The European Food Safety Authority (EFSA) has given a positive, scientific view on health claims related to potassium. Potassium is important for maintaining normal blood pressure levels and to help muscles and nerves function properly.

There will no doubt be a raft of food products aimed at this new nutritional issue. However, this doesn't mean manufacturers can say what they like about the potential benefits of potassium. European Claims Regulations means there are controls and very strict rules around what is classed as a health claim or nutritional claim. As an ingredient, potassium chloride can be listed on labels as either potassium chloride, potassium salt (KCl) or E508 - so naming the E number is not obligatory. ■



| | Reference, regular salt | Suprasel Loso OneGrain A30 | Suprasel Loso OneGrain A50 |
|--|-------------------------|----------------------------|----------------------------|
| Potassium | | 0.369 | 0.573 |
| Sodium | 0.732 | 0.501 | 0.385 |
| Total salt based on chloride in cheese | 1.83 | 1.67 | 1.63 |
| Total fat | 15.1 | 15.1 | 15.4 |
| Moisture | 48.17 | 48.05 | 48.88 |

Table 1: Example, results in half fat Cheddar cheese. All data in g/100 g.

| | Salt | Salt replacer | Flavour |
|----------------------------|----------|---------------|--|
| Suprasel Loso OneGrain A30 | 70% NaCl | 26% KCl | Natural flavour (yeast extract) |
| Suprasel Loso OneGrain A50 | 50% NaCl | 46% KCl | Yeast extract based nature-identical flavour |

Table 2: OneGrain sodium reduction.

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Suprasel Loso OneGrain can achieve up to 50% sodium reduction while still tasting like regular salt. Using AkzoNobel Salt Specialties' OneGrain technology, these salts can be handled and stored just like regular salt, making them a convenient replacement in food manufacturing.



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Kerry's Danish state-of-the-art plant in Glamsbjerg on the island Funen employs 100 highly skilled experts within developing and producing functional and tasty cheese powders to be used in other foods - upon customers requests.



Kerry Ingredients & Flavours

Many Different Tasty Cheese Tastes

The Irish based company Kerry is the global leader within food ingredients and flavours. Kerry offers end-user solutions for improving foods, whether it is e.g. applications within coatings, breadcrumbs, bouillons or cheese. In the cheese segment Kerry Denmark is a major subsidiary offering many different natural cheese combinations to enrich sauces, soups, ready meals, snacks, crackers ...

By Anna Marie Thøgersen, Editor

Ducklings become swans

- Based on H.C. Andersen's fairy tale I like to introduce Kerry Denmark - located on H.C. Andersen's native island, Funen - as a company transforming commodity cheeses into a large variety of the most wonderful cheese powders composed to add value to other food products. So tells Kerry Denmark's director, Lars Daugaard poetically.

The Danish cheese powder plant has decades of experiences, and was acquired by the Irish Kerry company in 2004. So during the last seven years the factory on Funen has been part of the worldwide Kerry Group that among other runs several global food ingredients companies and corresponding R&D centres.

Value-adding cheese ingredients

The Kerry cheese ingredients are typically used to improve and optimize taste, mouthfeel and texture in other foods such as ready-meals, breads, soups and sauces, snacks and crackers.

Kerry in Denmark has excellent access to all types of cheeses as raw material. In the refining process the cheeses are minced and melted and afterwards pasteurised and heat-treated before the drying and powdering processes. All powder products are standardized and undergo chemical analysis and taste profile tests. Further the cheese powders are mixed according to the specific type of foods they are intended for.

A cheddar-cheese sauce for instance packed in cardboards for either refrigerating, UHT-display or in glasses requires different mix recipes to provide the expected cheddar taste.

- As all cheese powder blends are standardized, the customers can always be certain, that these ingredients retain the desired cheese taste in whatever food or snack they are used, Lars Daugaard underlines. He adds that the factory is certified according to several standards e.g. ISO and the British BRC as well as approved for the market in Japan.

Cheese crackers to Japan

- Speaking of Japan - did you know, that Kerry actually taught Japanese consumers to eat cheese crackers? Well we did, Lars Daugaard tells. - The significant cheese taste is far from the Japanese sweet/sour cuisine, but during our year long contacts in Japan we assisted in introducing crackers and other fine foods with cheese ingredients a few years ago. Within just one year, consumer demands for cheese crackers rose dramatically and nowadays we cooperate with Japanese food companies developing an increasingly broader

range of crackers with exiting new cheese tastes - even Blue Cheese!

The Japanese food producers, as all other customers off course, are taken well care of by the Kerry Ingredients experts. The Danish Kerry company develop cheese powders with specific functionalities regarding taste and texture, but also functionalities in terms of the shape and thin/thickness of the cracker. In this matter the cheese-team consults and cooperates with the other Kerry food experts at one of Kerry's international R&D Centres - in this case placed in Spain.

Facts about the Kerry Group

The Irish based Kerry Group was founded in 1972 and is today a world leader in food ingredients and flavours serving the international food and beverage industry, and also a leading supplier of added value brands and customer branded foods to the Irish and UK markets. The total turnover of Kerry Group was ap-



Lars Daugaard, Director of the Irish Kerry Ingredients subsidiary in Denmark.

prox. 5.4 billion Euros in 2010, and the staff is 20,000.

- Kerry Foods: operates in Ireland and the UK marketing own brands across a wide range of categories and further the food group supply supermarket with private labels in selected areas.
- Kerry's Ingredients & Flavours: service the requirements of major

customers in the seafood and meat sectors, prepared foods, dairy, ice-cream, confectionery, breakfast products, bakery, beverage and foodservice sectors. The ingredients portfolio extends approx. nine thousand products to food processor and foodservice markets in over 120 countries. The portfolio includes e.g.: Coatings systems, breadcrumb applications, cheese applications, functional ingredients, savoury dairy flavourings, convenience foods, nutritional foods, infant formula applications, dairy based systems for the confectionery industry, plus bouillons, marinades, glazes, and textured as well as functional proteins.

Kerry Ingredients & Flavours' annual turnover is 3.6 billion Euros, and this business segment is organized in three geographic sectors: Americas, Asia Pacific - and Europe, where Kerry Denmark is placed. ■

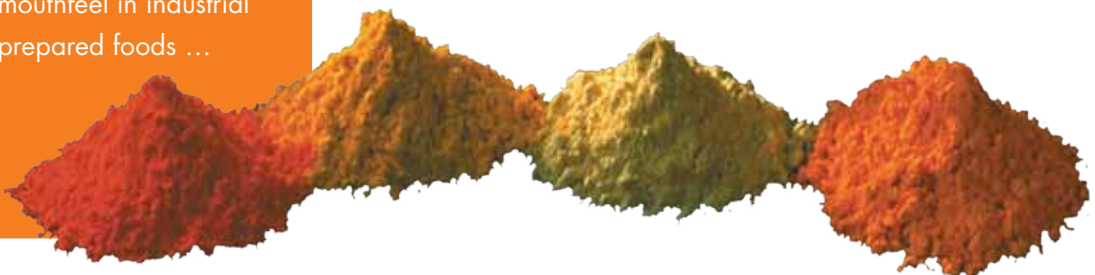


KERRY Ingredients & Flavours Glamsbjerg, Denmark offer the cheese that adds optimal taste and mouthfeel in industrial prepared foods ...

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Working on Three Continents

Quite impressive the smaller Danish company, FH Scandinox recently obtained three global dairy contracts and thus for the time being works on three continents around the world: Europe, Africa and the Far East. But projecting and building an ice-cream plant in Ireland, a mixing plant in Nigeria, respectively a shortening plant in Malaysia is not surprisingly. - But of course it is very welcomed, underlines the company's Sales Manager, Torben From.

By Anna Marie Thøgersen, Editor

Small dairies or giant plants

- Although we are indeed a smaller company in global terms, we have great expertise in planning, constructing and implementing various food plants of various capacities. Just last year, FH Scandinox was the main contractor on restoring a small Danish dairy, and a few years ago, we completed a new ice-cream unit worth several million Euros in Teheran. So, we do have great experiences within all sizes of contracting, explains the company's Sales Manager, Torben From.

Kerry plant in Ireland

FH Scandinox doesn't have a large marketing budget, and often the company is recommended by former and present customers. But how they won the task of building a new Kerry ice-cream plant is nevertheless quite exceptionally! Torben From explains: - Last year, I was stranded in Dublin during the volcanic outbreak in Iceland, and instead of touring - I decided to pay the Kerry headquarter a visit. As the Irish dairy was just planning to expand the company's ice cream production in Omag, I



FH Scandinox - New or refurbished

FH Scandinox holds three decades of experience in engineering technical solutions, enabling dairy and food customers continuously to stay in tune on the ever changing consumer demands worldwide.

Rumor has it, that FH Scandinox only operates with refurbished equipment. But the company equally performs projects including refurbished as well as new equipment - always by customers' requirements.

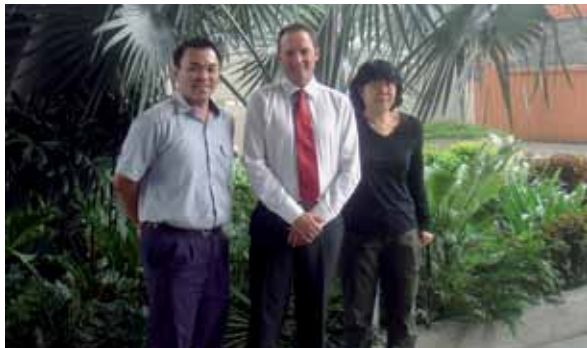
FH Scandinox employs 40 highly skilled and dedicated professionals that have great experience within projecting, planning, building and implementing dairy, food and other industrial processing plants all over the world.



Fan Milk Nigeria: Ice cream plant

The capacity of the Fan Milk mixing plant is 10.000 l/h. Supervised by FH Scandinox technicians the plant will be installed this summer in extended production facilities at the Fan Milk premises in Nigeria.

FH Scandinox is in charge of projecting the flow/production on the mixing plant, purchase of needed equipment and engineering of production units. The total order includes: Debagging, mixers, various tanks, pumps and valves, plate heat exchangers and flow plates, automation and pipe mounting to existing freezers. (Photo kindly made available by Fan Milk).



Sales Manager Torben From, FH Scandinox (in the middle), visiting Mewah Oils in Malaysia.

asked permission to offer them a complete plan for plant projecting, equipment and installation. Back in Denmark our skilled staff drafted the accurate plant dimensions and required space, listed the needed equipment for a complete technical solution and in particular included detailed plant designs on 3D AutoCAD. This comprehensive plan was crucial, and FH Scandinox won the contract!

Fan Milk plant in Nigeria

Recently, FH Scandinox received another large contract placed by Fan Milk International A/S. This company owns a number of dairies in West Africa and is represented in seven countries in the region. As Fan Milk's dairy and ice

cream products are very popular among its consumers, the company was looking for a contractor to build a new mixing plant in Nigeria. The company's Deputy Director Einar Mark Christensen paid FH Scandinox a visit and he soon learned that the engineering company was able to project, build and install a state-of-the-art mixing plant at Fan Milk's dairy in Nigeria. - The FH Scandinox team is highly professional, and I am impressed by their skills. Furthermore, the company size is attractive, neither too small nor too large, it's easy to get - and keep in touch on our Fan Milk project in Nigeria, Einar Mark Christensen underlines.

FH Scandinox in the Far East

For several years FH Scandinox has served customers in the Far East. Right now the Danish company is finishing a task for Mewah Oils in Malaysia. This company is a huge market player within vegetable and palm oils, and FH Scandinox has projected, built and installed a shortening plant as well as a pilot plant for developing innovative products at one of Mewah Oils plants.

- We received this order through our agent in the Indonesian capital Djakarta. The Far East is a booming market, also within milk and vegetable oils, and as we often operate in this region, we recently established this FH Scandinox Far Eastern sales office to serve our customers, Torben From informs. ■

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Dairy Applications and Customer Owned Automation Framework



By Klaus Dam,
Managing Director,
Au2mate A/S

The intensified global competition increases demands for development and fast transition to new products, minimized resource use, highly skilled employees, quality and traceability. Individual product specifications place new demands on production equipment including automation of dairies and minimization of costs.

Food security

Product breeding is increasing as the boundaries between medicine and dairy products are degrading; thus the requirements for product quality and food safety are increased. Central licensed product specifications, recipes, and reporting on actual production processes are becoming requirements.

Quality documentation

The consequences for the automation systems are increased documentation requirements for the basic functionality of the plant and processes, validation and tracking of the product going through the entire plant.

Rapid product development

Shorter time for product development and more customized products

means increased demands for reduction in the production time, inline measurements and a shorter delivery time for plant changes and implementation of new projects. The consequence for the automation systems are increasing demands for advanced measurement and regulation, integrated systems for planning and fast processing, alignment and commissioning of software solutions.

Cost optimization

Pricing and management of costs associated with increased value-added products and a wider product range will be key parameters. The consequences for the automation systems are requirements to measure and allocate raw materials, resources and environmental pressures in connection with the preparation of each

product. The challenge for automation systems here is to ensure stable and reliable measurements and reporting in a cost-conscious manner.

Automation with open standards

Moreover, there must be free choice when choosing the supplier and the ability to integrate highly specialized process equipment from a wide palette of different vendors into a cohesive system.

The challenge for the automation industry in this regard is to future-proof systems with a high level of documentation, modular design of both hardware and software. In addition, the platforms must be based on open standards that are readily available and where the dairy has free disposal of the source software.

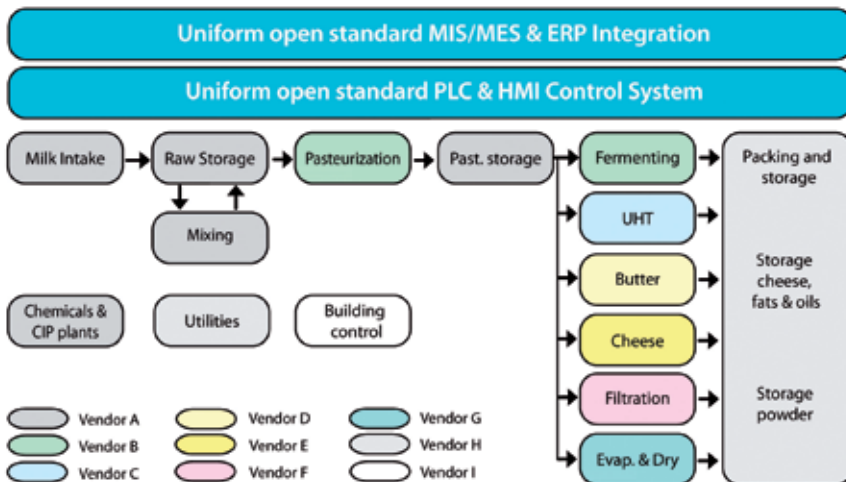


Figure 1: Customer owned automation framework => Free choice of vendors.

Free choice of provider is precisely what Au2mate values highly; Au2mate supplies software within the leading PLC, Scada and DSC systems and platforms. The free choice allows the customer ownership and freedom to choose other solutions later.

Free choice of vendors

One of the parameters that provide greater opportunity to optimize and improve the competitiveness is a customer owned automation framework from Au2mate. The framework is a tool that allows dairies to choose among vendors of process equipment, while maintaining a homogeneous automation system across all process sections (Figure 1).

Consistent automation system across all process sections provides optimum opportunity for uniform documentation, reporting, scheduling and fine tuning of the entire process plant at the highest level.

Flexible dairy plants

Dairy plants and process equipment have longer lifetime than the products. To secure the investment in the capital plant the requirements of the production equipment must be quick and inexpensive transition with minimal downtime in connection with the



ongoing adjustments during production of new dairy products.

Future flexibility requirements

However, this will put more demand on dairy employees for deeper insight into the dairy automation system.

The entire production flow from cow to consumer will be automated and recorded. The fundamental pil-

lar in our continuous process to develop future operating systems is the professional skills of the dairy employees.

Combined with modern and future-oriented IT-solutions for manufacturing, we can jointly achieve the competitive advantages required for all food producers who want to be among the most competitive and flexible in the industry and who want to future-proof their business.

Training and Service

Au2mate provides a complete range of training and services via modem and Internet connections. This makes it possible to diagnose software problems quickly and then implement the relevant measures rapidly and economically. ■

4 quick facts about Au2mate A/S

1. Founded in 2001 by Carsten G. Jensen & Klaus Dam, both with multiple years of experience in dairy automation.
2. Has 40 employees at offices in Silkeborg, Dubai and in the UK, and holds more than 400 man years of experience in dairy automation.
3. Project-oriented, has delivered more than 800 projects, PLC, SCADA, MIS / MES and ERP integration to dairies throughout the world including Nordic countries, Europe, Middle East and Africa, America and Asia.
4. Delivers solutions based on open standard platforms and internationally recognized methods for software development and project management.

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Tetra Pak Feeds an Ice Cream Trend

Customer dialogue shapes the ingredient feeder for a new ice cream favourite

By Cath Mersh, British Journalist, Denmark

Many consumers will have tried one by now - a premium ice cream richly infiltrated with delicious chunks of fruit, nut, cookie dough or other appealing morsels. And, if one thing is sure, very few will have even considered the advanced processing technology that goes into making it.

As the world's leading supplier of ingredient feeders, Tetra Pak knows all about the challenges involved in ensuring the accurate dosing and even distribution of large, often fragile inclusions in ice cream.

This summer the company will be ready to field test its new generation Tetra Hoyer Addus FF ingredient feeder - a machine designed to make the production of ice cream with large inclusions easier, more efficient and more reliable.

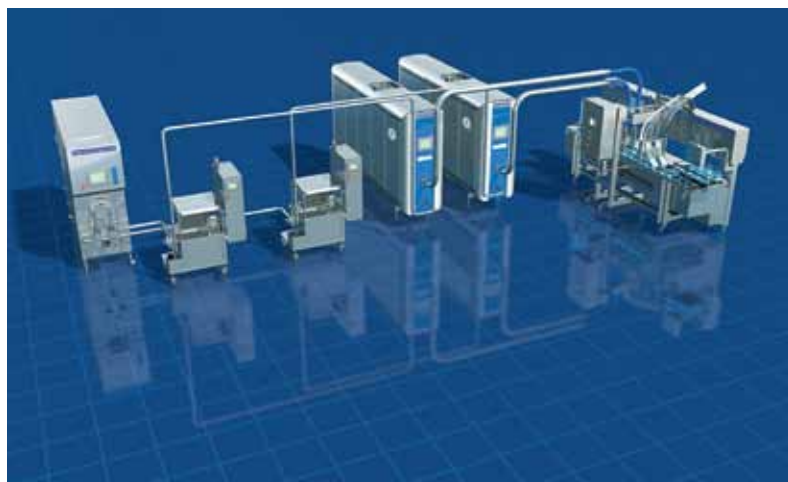
Ahead of the trends

Over the years, Tetra Pak has shown that developing ice cream machinery is not about keeping up with

consumer trends, but about staying ahead of them. When the market started to demand processing equipment capable of handling inclusions, Tetra Pak was already able to supply it.

The new Tetra Hoyer Addus FF reinforces Tetra Pak's leading position. Along with an overall improved design that reduces maintenance costs, the machine features a novel transportation system for gentler handling of ice cream inclusions. This prevents sticky ingredients, such as cookie dough, from being compressed into lumps that are difficult to separate on addition to the ice cream mix. At the same time, the system maintains the integrity of, for example, candied walnuts and other fragile inclusions.

"We have focused on ensuring both a high level of dosing precision and more even distribution of individual ingredients throughout the mix," says Per Henrik Hansen, Innovation Manager.



About Tetra Pak - Specialists in Ice Cream Processing

Ice cream machinery with a Tetra Hoyer label is a common sight at ice cream processing plants all over the globe. The ability to combine performance with profitability has made Tetra Pak ice cream processing machinery the first choice of many of the world's leading manufacturers.

Based in Denmark, Tetra Pak's ice cream specialists match components and processing lines to individual needs for ice cream mix processing, freezing, filling, extrusion, packaging, cartoning and hardening. All the equipment is characterised by the latest, most advanced processing functions - accompanied by high reliability, extreme clean-ability and dedicated lifetime support.

The ice cream business unit is part of the Tetra Pak Group, which has more than 20,000 employees in more than 170 countries. Net group sales in 2010 totalled EUR 9,980 million.

Easier to optimise

Another major improvement lies in the level of operator friendliness. New guides incorporated in the control software make lighter work of setting the production parameters.

"Operators have previously had to do some guesswork when setting the parameters for a new product. The new machine makes recommendations based on the ingredients in the recipe and provides more information about operational status. Opti-

The Tetra Hoyer DeepBlue line including the new Tetra Hoyer Addus FF. The new Addus FF ingredient feeder is designed to produce ice creams with large inclusions.

mal production is easier to achieve,” Hansen adds.

Customer-driven innovation

To identify the principal improvement areas for the new generation Tetra Hoyer Addus FF, the project team has drawn on the expertise of Tetra Pak’s international sales companies - a far-reaching network with a finger right on the pulse of ice cream industry needs. Dialogue with key customers in Europe and North America has also played a defining role.

“After we presented our ideas to customers, we listened to their needs for optimising their own production. Our response to them is strongly reflected in the machine design,” says Peter Gonon, Portfolio Manager.

One such need relates to traceability in production. Should a problem arise on the line, the ability to point out the exact part of a process where it occurred is crucial for fast rectification.



Per Henrik Hansen (Innovation Manager, Tetra Pak Hoyer A/S).



Peter Gonon (Portfolio Manager, Freezing and Inclusion, Tetra Pak Hoyer A/S).

“If a blockage occurs that impedes the flow of inclusions into the ice cream, the new software also documents the time so the affected products can be quickly identified. That way it is not necessary to withdraw half a days’ production,” Gonon states.

Ready for the field test

Close customer involvement is not only beneficial during the design process. It means Tetra Pak already has a customer ready and willing to conduct the field test, starting in June. General release of the new Tetra Hoyer Addus FF is expected during 2012. ■

Join the New Danish Food Exhibition

Exiting events

During the two-day exhibition there will be dairy and food ratings, contests, awards and several other events: Danish Dairy Contest, Scandinavian Dairy Contest, Danish Food Contest, Food theme presentations, Chefs preparing foods dishes, Conferences, and Evening get-together for exhibitors etc.

How to rent a stand

Manufacturers, distributors, wholesalers and exporters of food and food technology can rent a stand starting from 3 x 3 meters at a prize per square meter DKK 1,145 (ex. Danish VAT). For further information contact: Team Manager Mr. Sven Aalborg by phone +45 3339 4815, mobile +45 4043 5125, e-mail saa@lf.dk or visit www.DanishFoodContest.dk ■

Join the upcoming Danish Food Exhibition to be held in MCH Herning, Denmark 8-9 November 2011. The organizers invite suppliers of food technology to book a fair stand and meet representatives from the Danish food industry as well as from the Danish and Scandinavian dairy companies.

The supplying food technology industry can be certain of visits paid only by representatives from the food producing industry, as the exhibition is for professionals exclusively.



(Photo: Colourbox).

Read more about how to join the New Danish Food Exhibition on page 33!

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The future and the consequences for Dairy & Food business

How to Stay in Tune



**By Rolf Pedersen,
M.Sc. Dairy
Technology,
Account Manager
Dairy, Alectia**

Possibilities and challenges

According to some experts, the demand for food will rise by up to 70 pct. until 2040, driven by population growth and increasing wealth of the consumers. The growth of the world population and the development of the world economy can be seen as a possibility but also as a threat. The higher income drives an increasing demand for high quality food and processed food products, including convenience products. At the same

time there is a rising concern for the future of our planet.

The food and dairy industries along with other businesses must acknowledge that the issue is not a matter of choosing between growth and sustainability, but rather a discussion as to how we can secure both. We are not in a position where we can choose between the two. So how do we ensure a higher productivity and at the same time also a sustainable production. Actually, sustainability is part of the solution. By becoming more sustainable the business will also become more productive. Thus, the food and dairy business must define strategic goals that satisfy not only the growth of the business but also ensure a sustainable business.

Examples of potential goals:

- Halving the environmental impact from products

- Supporting wealth development in local communities
- Helping people to healthier products and making the products more attractive
- Developing growth together with sustainable suppliers

We can help you ensure growth in a controlled and sustainable environment for the benefit of future generations and ourselves.

Optimizing operations & projects

The individual company will also strive to improve the business and the project portfolio, and this operation can be categorized on three levels:

- Supply Chain Level; for the entire business that analyses the production and logistic structure: Number of processing sites within the com-



The food and dairy business must define strategic goals that satisfy not only growth of the business but also ensure a sustainable production.

pany, product portfolio at different sites, optimal capacities and capabilities, milk collection and product distribution systems.

- Site Level; a master plan for the company describing how and in which steps the company can be transformed and expanded to its maximum capacity at the site.
- Department Level; containing expansion, refurbishment and optimization projects within the department.

Environmental considerations

The projects can contain a significant environmental impact, being on energy consumption, water usage and/or product losses. Thus, the key issue is a structured approach that spans all three levels of projects making it possible to balance investments, saving total costs of ownership and environmental impact.

Projects at site and supply chain level are often complex to analyze:

- Can we merge several sites into one?
- Should we consider a green field project at a new location?
- Can we increase the supply grid by using local concentration of raw milk, reduce transport cost and increase the raw material supply?

- Can we speed up the maturation process using new cultures or enzymes, and thereby reduce warehousing requirements?

Despite the complexity, these projects are attractive with potential large savings and a broad environmental impact. The main drivers for implementing the projects are efficient processes, sustainable utilities, maximum utilization of processing capacities, and buildings designed with efficient flows and layout for future expansion.

ALECTIA as consultant

ALECTIA has a unique position as consultant for the international dairy and food industry, based on more than 60 years of experience. The company has its roots in the Scandinavian traditions for pure and high quality food and dairy products, and has developed a specialized knowledge in combining hygiene and optimized operations resulting in highly effective production facilities.

ALECTIA consultancy services are based on dialogue and understanding. We offer advice during the entire process - from the very first idea until the project is completed and a new processing line or facility is in operation. We use a structured delivery

model with clearly defined deliverables in the different project phases. Together with our clients we find the right mix of resources from the clients own staff, ALECTIA consultants and local suppliers - resulting in a project building on the maximum utilization of the knowledge of the involved parties.

ALECTIA offers a wide range of services - from business consulting, planning & logistics to process, utilities and building design to improvement of operational performance, including environment, health and safety. Our contracts varies from short term assignments, e.g. performing a supply chain audit and delivering a master plan to project assignments taking the idea all the way to implementation including investment in processing equipment and developing the site and buildings. ■

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NOTE! Alvibra A/S states up to 80% savings in power consumption as a realistic scenario, when comparing the **ViFlex™** Drive towards the prevalent standard magnetic vibratory drives on the market today. When comparing the **ViFlex™** with traditional conveying systems like belt conveyors and screw augers the savings can be even better.



Vibratory standard products and complete solutions
- changing conveying and processing in the right way

For Premium Quality Dairy Products

The new generation Tetra Therm Aseptic VTIS unit cuts losses and costs



By Keith Goodby,
Dairy Category
Manager, Tetra Pak
Processing North
Europe

Premium quality

Tetra Pak has recently launched its new Tetra Therm Aseptic VTIS, a direct heating unit for UHT dairy production which incorporates innovative design to deliver significant efficiencies. Thanks to instantaneous heating and cooling, Tetra Pak's direct UHT technology minimises thermal impact on the product, thus enabling premium quality.

The unit gently treats heat-sensitive products such as milk, enriched milk, cream, ice cream mixes, other dairy desserts and soy milk products - whilst cutting operating costs by 15% compared to the previous generation of direct UHT systems.

Features of the VTIS

The new Tetra Therm Aseptic VTIS unit:

- Cuts products losses by up to 40% compared to current industry standards
- Boosts running time up to 60 hours
- Reduces heat load to minimise impact on properties such as taste and colour
- Offers the highest operational efficiency of any direct UHT system on the market.

"Tetra Pak focuses its innovation on developing more effective and efficient solutions. It means our customers can maximise production whilst cutting waste and costs. In developing the new Tetra Therm Aseptic VTIS unit, we have explored every stage and examined every component to deliver better ways of processing heat-sensitive premium dairy prod-

ucts," said David Pomeroy, Food Category Director.

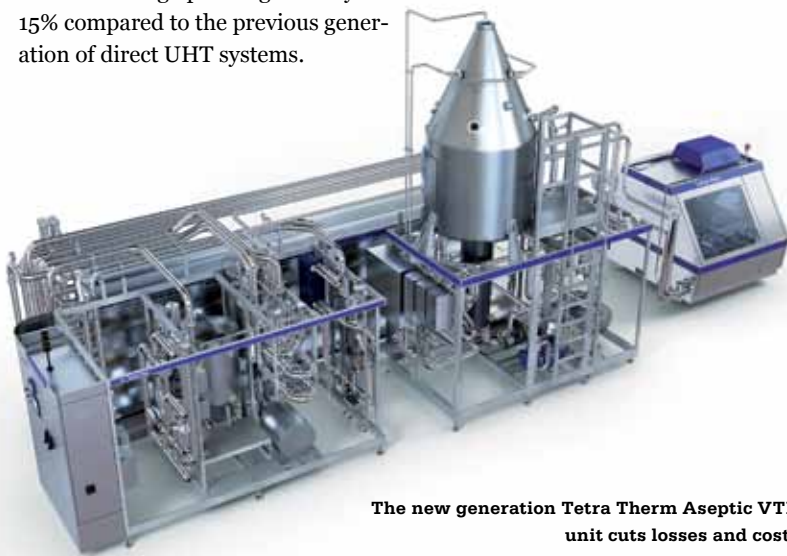
Innovations drive efficiencies

Tetra Therm Aseptic VTIS introduces a range of design innovations to drive efficiencies:

- A new double balance tank system, with one tank for product and one for water, making it possible to completely empty the main balance tank of water before filling it with product, reducing losses in

About Tetra Pak

Tetra Pak is the world's leading food processing and packaging solutions company. Working closely with our customers and suppliers, we provide safe, innovative and environmentally sound products that each day meet the needs of hundreds of millions of people in more than 170 countries around the world. With almost 22,000 employees based in over 85 countries, we believe in responsible industry leadership and a sustainable approach to business. Our motto, "PROTECTS WHAT'S GOOD™," reflects our vision to make food safe and available, everywhere. More information about Tetra Pak is available at www.tetra-pak.com



The new generation Tetra Therm Aseptic VTIS unit cuts losses and costs.

the mix phase, adding also possibilities for more frequent product changeovers with a minimal of product loss.

- A unique flash cooling system combines a new conically topped vessel and built-in spray condenser, rather than a conventional external condenser, to reduce product carry-over during cooling to 0.01%. The new chamber design, with easier access for inspection, maintenance and service, helps ensure uncompromising food safety.
- The preheating now enables product/product regeneration, using the heat-treated product, rather than hot water, to transfer heat to the cool inlet product. This reduces steam consumption by 5% compared to previous models and provides significant cost savings over time.
- An improved steam injector and holding cell design prevents hot-spots and minimises fouling in the system. This enables longer run-

ning times - up to 60 hours between cleanings compared to 30 hours with previous generation units. Savings on cleaning and pre-sterilisation reduce production cost per unit.

Tetra Therm Aseptic VTIS solutions can also be configured to match each customer's specifications for one or more individual products, as well as

production requirements for highly versatile and efficient product-optimised operation.

Tetra Therm Aseptic VTIS is available as a separate unit or as part of a Tetra Lactenso Aseptic dairy production solution, with guaranteed performance on key indicators such as running time, energy consumption, product losses, cleaning times, pre-sterilisation time and more. ■



Tetra Pak Lactenso.



Visit the New Danish Food Exhibition

Dairy and food professionals from all over the world are invited to visit the upcoming Danish Food Exhibition in MCH Herning, Denmark 8-9 November 2011.

Visit the exhibition

The Danish Food Exhibition is a new professional event, but yet dating more than a hundred years back, when the Danish dairies held their first product evaluations and competitions at national fairs, also attended by the supplying industry. During the last decades the Danish Dairy Contest has included the Scandinavian Dairy Contest, and this year the entire Danish food industry is invited. Thus, at the beginning of November this year, hundreds of Danish food products as well as Danish and Scandina-

vian dairy goods will be on display at the large exhibition centre MCH in Herning.

The organizers invite all colleagues worldwide to visit the fair, indulge in tastings and meet representatives from the Danish/Scandinavian food - and the supplying industries.

Opening hours

During the two-day exhibition there will be dairy and food ratings, contests, awards and several other social events and possibilities for networking. All professionals within the dairy

and food industry are very welcome to visit the Danish Food Exhibition in MCH Herning, Denmark 8-9 November 2011. Opening hours will be from 9 am to 5 pm both days. Tickets are available at DKK 100 per day.

Further information about the Dairy and Food Exhibition on www.DanishFoodContest.dk Further information about accommodation in Herning etc. on www.mch.dk ■

Read more about how to visit the New Danish Food Exhibition on page 36!



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GREEN technology for a GREEN industry 

(Photo: Colourbox).



Join the New Danish Food Exhibition

Join the upcoming Danish Food Exhibition to be held in MCH Herning, Denmark 8-9 November 2011. The organizers invite suppliers of food technology to book a fair stand and meet representatives from the Danish food industry as well as from the Danish and Scandinavian dairy companies.

The supplying food technology industry can be certain of visits paid only by representatives from the food producing industry, as the exhibition is for professionals exclusively.

Dairy & Food Products

At the beginning of November this year, hundreds of Danish food products as well as Danish and Scandinavian dairy goods will be on display at the large exhibition centre MCH in Herning.

The Danish Food Exhibition is a new professional event, but yet dating more than one hundred years back, when the Danish dairies held their first product evaluations and competitions at national fairs, also attended

by the supplying industry. During the last decades the Danish Dairy Contest has extended to include the Scandinavian Dairy Contest as well - and further this year, the entire Danish food industry is invited.

Come meet them all

Thus, the new Danish Food Exhibition is a golden opportunity for the supplying industry to meet the entire food producing industry. Is your company for instance an expert within:

- Equipment suitable for processing dairy as well as meat products?
- Equipment for packaging sliced cheese as well as chicken?
- Automation/optimization solutions for dairy dessert and fish factories?
- Healthy ingredients for yoghurts and breads?
- Analyzing equipment for milk and juice?
- Hygiene concepts for dairies and the rest of the food industry?
- Or any other solutions for one, two, more or the entire food producing industry?

Then sign up for the upcoming Danish Food Exhibition to be held in MCH Herning, Denmark 8-9 November 2011.

Exiting events

During the two-day exhibition there will be dairy and food ratings, contests, awards and several other events:

- Danish Dairy Contest
- Scandinavian Dairy Contest
- Danish Food Contest
- Food theme presentations
- Chefs preparing foods dishes
- Conferences
- Evening get-together for exhibitors

How to rent a stand

Manufacturers, distributors, wholesalers and exporters of food and food technology can rent a stand starting from 3 x 3 meters at a prize per square meter DKK 1,145 (ex. Danish VAT).

If you need further information please contact:



Team Manager
Mr. Sven Aalborg
by phone +45 3339 4815,
mobile +45 4043 5125,
e-mail saa@lf.dk or visit
www.DanishFoodContest.dk

Who's behind? The organizations behind the new Danish Food Exhibition are: The Danish Agriculture & Food Council, The Danish Dairy Managers Association, The Association of Denmark's Private Dairies, and Danish Cheese & Butter Association.

Membrane Filtration for Recovery in Dairies



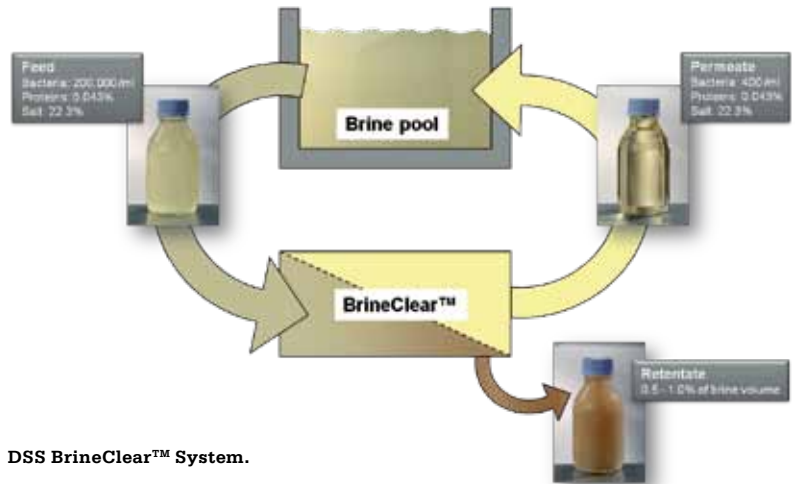
By **Karsten Lauritzen**,
Manager R&D, DSS
Silkeborg

For more than 10 years DSS has been the leading supplier of membrane filtration technology to the dairy industry world-wide. We are 35 employees with up to 25 years' individual experience with membrane filtration and dairy processes. Our focus is custom-made equipment, service and replacement membranes/ spare parts, and we have a fleet of pilot plants for demonstration and development of new membrane based dairy ingredients and applications.

Protection of the environment and the reuse of resources are in great focus these days, and environmental awareness has become essential to the dairy industry, who is putting still more attention to green image and sustainability. Focus can be on many different factors in the production, such as raw materials, water, chemicals, and waste. Membrane filtration has proven to be a powerful technology for solving many of the challenges facing the dairy industry. This article will cover four different recovery applications where membrane technology is used.

Water Recovery

Today, water is an important but not unlimited resource in the dairy industry. In consequence, reverse osmosis (RO) has become an important technology for recovery of water from products or streams. In addition, re-



DSS BrineClear™ System.



Caustic before and after recovery.

covery of condensate from evaporators is a well documented application, which enables the dairy to reduce the intake of well water by running condensate through an RO system.

RO technology has also proven helpful for concentration of product prior to evaporation or transportation. In this case the product, which can be whey or milk, is concen-

trated by removing water, which can be used for cleaning or other process steps. Like condensate recovery, this process will reduce the intake of well water and will have a significant impact on reduction of transportation costs, if the product is to be transported to another production site.

Milk Recovery

Milk Recovery is defined as concentration of the intermediate phase of a flush, where flush water and milk is mixed. The intermediate phase is therefore diluted milk that ends up in the waste water, wasting the value of the solids contained. DSS has developed a membrane based technology, where the intermediate phase is collected in a silo and the total solids content is concentrated to that of the original milk (approx. 9-13 % DM) by removing water by means of RO. Consequently, the dairy optimises use of the raw material (milk), and reduces the environmental load by not wasting the dry matter and making it possible to reuse the recovered water.

So Milk Recovery will save you money and protect the environment at the same time.

Caustic Recovery

The Caustic Recovery technology is the latest development in the cat-

egory of membrane based recovery technologies from DSS. Focus is on dairy ingredient installations where large volumes of caustic are used every day for cleaning of evaporators and dryers.

The principle of the technology is to collect all the spent caustic in a silo and send it through a filtration unit, where suspended solids and some of the dissolved solids are removed. Clear caustic is recovered and fed back into the clean caustic. Recovery can be up to 95 %, depending on the volume of suspended solids.

Caustic Recovery will reduce the consumption of caustic and reduce the need for heating, as the filtration process can run at 70°C.

Brine Recovery

A brine bath is continuously being polluted by the cheese. Proteins, fines and other nutrients accumulate in the brine when the cheese is leaving the process step. This makes it possible for micro organisms to grow

and eventually spoil the brine. For this reason the brine has traditionally been pasteurized or discarded. Today, DSS has a membrane based technology (Brine Clear), in which bacteria, fines and some of the nutrients are removed by microfiltration. The system operates like a "kidney" and is very flexible. Some dairies operate Brine Clear on a continuous basis; some only run the system when needed.

By use of the Brine Clear system from DSS the brine can remain in production longer than before, saving time and money otherwise spent on renewing and pasteurizing the brine. ■

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International Dairy Books is a publishing house specialising in literatur for the dairy industry.

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Visit the New Danish Food Exhibition

Dairy and food professionals from all over the world are invited to visit the upcoming Danish Food Exhibition in MCH Herning, Denmark 8-9 November 2011. The organizers hope that also colleagues from abroad want to indulge in tastings and meet representatives from the Danish/Scandinavian dairy and food industries.

Dairy & Food Products

At the beginning of November this year, hundreds of Danish food products as well as Danish and Scandinavian dairy goods will be on display at the large exhibition centre MCH in Herning.

The Danish Food Exhibition is a new professional event, but yet dating more than a hundred years back, when the Danish dairies held their first product evaluations and compe-

titions at national fairs, also attended by the supplying industry. During the last decades the Danish Dairy Contest has included the Scandinavian Dairy Contest, and this year the entire Danish food industry is invited.

Come visit the exhibition

"If our colleagues from abroad want to learn more about the wide range of Danish/Scandinavian dairy and food products as well as the required

processing technology they should visit this fair." So tells the Chairman of the Danish Food Exhibition, Søren Jensen, and adds: "The dairy and food companies and their supplying industries are enlarging and becoming more global and this will be reflected at the new Danish Food Exhibition. But at the same time the fair has a regional approach and offers opportunities for professionals to meet and network on a corporate culture within the dairy and food world by means of supplementary training, professional pride, product knowledge, quality assessment and building positive images internally as well as public."

Exiting events

During the two-day exhibition there will be dairy and food ratings, contests, awards and several other events:

- Danish Dairy Contest and awards
- Scandinavian Dairy Contest and awards
- Danish Food Contest and awards
- Food theme presentations
- Chefs preparing foods dishes
- Conferences
- Social events
- Networking

Opening hours

All professionals within the dairy and food industry are very welcome to visit the Danish Food Exhibition in MCH Herning, Denmark 8-9 November 2011. Opening hours will be from 9 am to 5 pm both days. Tickets are available at DKK 100 per day. Further information about the Dairy and Food Exhibition on www.DanishFoodContest.dk

Further information about accommodation in Herning etc. on www.mch.dk Chairman of the Danish Food Exhibition, Søren Jensen invites professional colleagues from the global dairy and food industry to visit the new food and technology fair in MCH Herning 8-9 November 2011.



Who's behind? The organizations behind the new Danish Food Exhibition are: The Danish Agriculture & Food Council, The Danish Dairy Managers Association, The Association of Denmark's Private Dairies, and Danish Cheese & Butter Association.

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GEA Process Engineering

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CHR HANSEN

Improving food & health

Dairy products mean healthy business

Health and Wellness is the strongest trend in the food industry today – and nowhere is it stronger than in dairy. From low fat to probiotics to heart health, the healthy dairy products lead the way. Consumers recognize yoghurt, milk drinks and cheese as safe and natural products, and they are hungry for more.

Chr. Hansen is the world's leading supplier of healthy ingredients for the dairy industry. We believe that a close partnership with our customers is the natural forum for creating new and innovative solutions. Let's meet, discuss recipes and inspire each other on how to create tasty, healthy and safe dairy products for today's and tomorrow's consumers.

The TREPKO concept



By Agnieszka Libner, MSc,
Vice-President,
Marketing & Sales
Director,
TREPKO Sp. z o.o.

The three pillars

The philosophy behind the TREPKO's activity was always to listen to the food producers' changing needs and requirements. These ideas have been translated to an engineering language and reflected in numerous installations of packaging machines and lines. Both the TREPKO experience, present and future development can be summarised in three main pillars that support the packaging process:

- *Safe product:* Hygienic environment and conditions of packaging as well as the final product safety
- *Flexibility:* The machines provide a variety of possible applications and take part in the creation of an innovative product
- *Comprehensive delivery:* Integrated solutions for all phases of the packaging process

All three pillars can be perfectly illustrated by the projects recently realised by the TREPKO Group.

Case: Australia

One of the projects is a 232 KSP machine delivered to an Australian subsidiary of a dairy worldwide leader.

For a long time there was a conviction that the high hygienic level requires a large in-line machine. This two-lane turntable machine proves that a rotary construction can feature a number of hygienic options thus enhancing product safety. The solutions installed include e.g. cups' deionization combined with vacuum cleaning of the cups prior to UVC radiation. Considering the limitations of the standard UVC radiation, TREPKO has developed a system designed especially for effective decontamination of deep and large containers. This rotary machine offers also seal check with an automatic elimination of defective packaging. The project shows that even small or medium size production can respond to the most stringent hygienic expectations.

Flexibility of the packaging machines is a tool that accelerates the

response to the market changes. In terms of product innovations it has two major meanings:

- Fast and easy change-over to other packaging dimensions and shapes
- Product creation by a packaging machine.

The systems used in all TREPKO filling & closing machine are prepared for changing the container within very narrow time limits and without using specialised tools. However state-of-the-art technology allows for even more than just changing containers. TREPKO offers solutions, where the same machine works with two different packaging sizes at the same time with an additional option of turning-off one of the lanes. An alternative solution is the filling & closing machines with changeable number of lanes, depending on the size of containers.

Case: South Africa

On the other hand, variety of the dosing systems combined with modern drive technology allow of offering filling machines for even the most sophisticated products. A per-



Seal-check station installed on a TREPKO 6-lane rotary machine (246 KSP).



Product filled on a TREPKO rotary machine (223 KSP).



Vacuum cleaning of cups on a 232 KSP machine.

fect example of such a machine is a 223 KSP (a three-lane rotary unit) installed at Fair Cape Dairy in South Africa. Thanks to special dosing systems with separated servodrives the machine manages different types of multi-layer products, including twisted desserts, products with whipped cream on top or pudding with top decoration. All of these products can be created by the same machine.

Case: Russia

During the years TREPKO has incorporated new packaging technologies into its market proposal. Now, the Group is one of the most compre-

hensive suppliers and offers the integrated solutions for all phases of the packaging process. This development results in fully automated packaging lines: from a single container or brick to a pallet. Several solutions of this type have recently been delivered to the subsidiaries of the Russian Wimm-Bill-Dann holding, including high-speed rotary machines, tray erectors, pick & place and sweep palletizing units as well as product transportation system. Also brick packaging can be solved in a similar way - by using the TREPKO's brick forming & wrapping machines together with wrap-around cartoners and palletizing robots. An alternative

solution - for smaller production size - is using semi-automatic brick stackers delivered as an option with the forming and wrapping machines.

Relationships with customers

The adjective „comprehensive” applies not only to the delivered machinery types. For TREPKO it has a larger meaning - it is an overall approach to relationships with customers, more than just supply of machines. From the basic idea to the ready and successful product for the consumer - TREPKO's three pillars support the whole way. ■

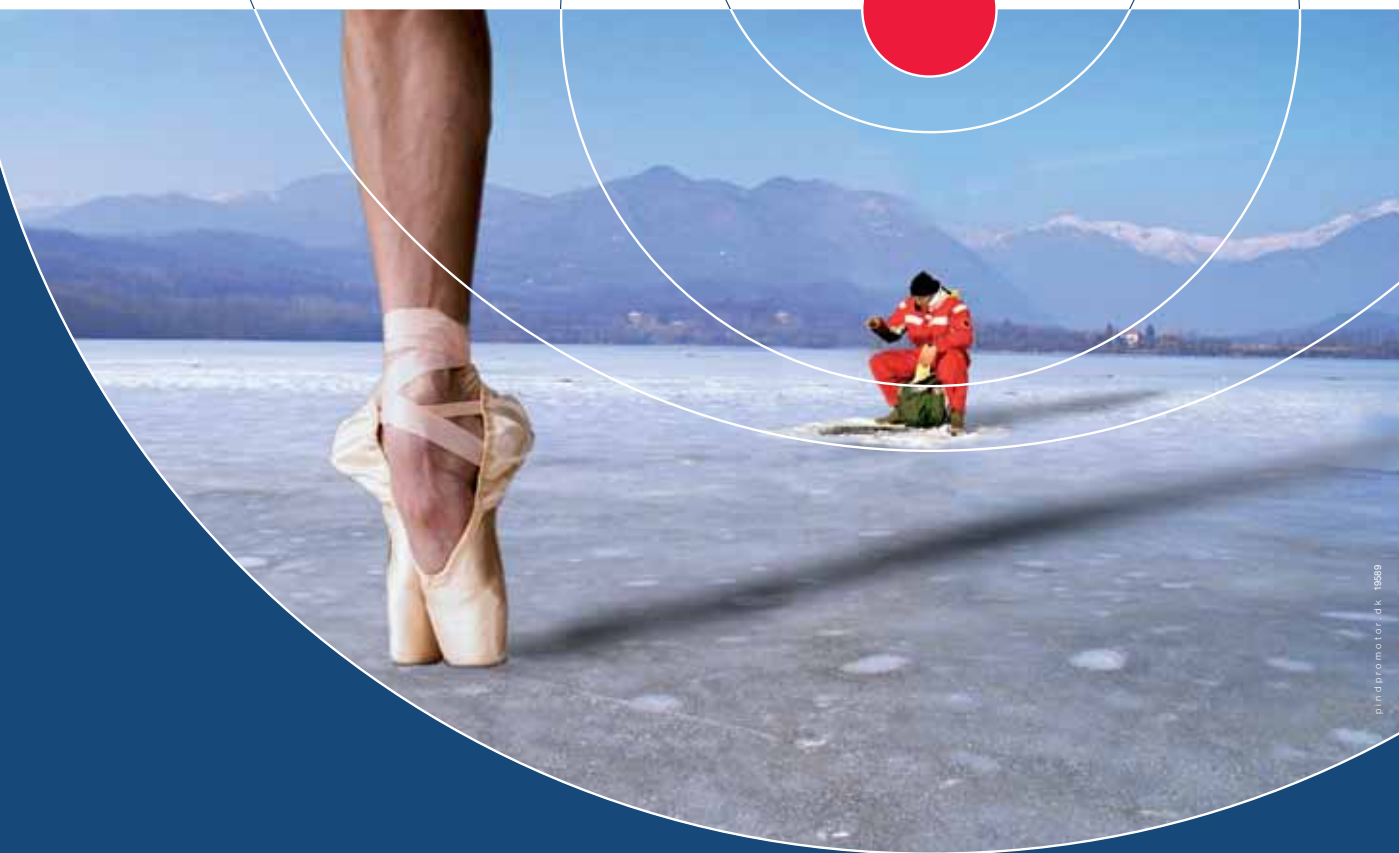


Product filled on a TREPKO rotary machine (223 KSP).



Complete line for bricks: PMG 4 (forming & wrapping machine), 710 (wrap-around cartoner), 740 (palletising robot).

The right gear for the job ...



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The better the insulation, the lower the energy consumption

LOGSTOR pre-insulated pipe systems are the ideal way to equip your refrigeration set-up with exactly the right insulation thickness to get the job done effectively.

Dry, energy-efficient insulation means

- reduced energy consumption
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LOGSTOR pre-insulated pipe systems are designed for strength and durability that ensure they remain completely intact and 100% energy efficient.

LOGSTOR pipe systems are easy to install, and maintenance free once in place.

- distributing energy efficiency

Danish Equipment - Value for Money



By Keld K. Andersen B. Sc. (Mech. Eng), Owner and CEO, KKA Partners

The proud dairy traditions in Denmark go way back, and it is profitable to look this way when expansion and shopping is on the agenda. KKA Partners have the knowledge needed when a dairy company wants to buy equipment in Denmark, - second hand and/or new. In order to be successful, a project needs good coordination and cooperation between the partners involved. Here KKA Partners is the key.

From Denmark to South America

In 2007 the Danish dairy company Arla Foods aamba closed its cheese factory in the town of Aars in Denmark. Halfway around the world in Chile in South America, this came to the benefit of one of the large players in that region, Watt's, who were looking to expand one of their factories. Here KKA Partners came in. A quick reaction from the partners together with KKA Partners' project management led to a successful outcome. The facility was set up and ready to run only a year after the disassembling in Denmark, and according to the chief of production in Watt's, Henning Nielsen, who has his roots in Denmark, the equipment is now running at its full capacity.

Chile and Mexico

Before, KKA Partners has worked with another Chilean dairy company,



Yoghurts filling machine from DK arriving at LALA in Mexico.

Mulpulmo, preparing a project for expansion and modernization of their cheese plant. The most recent activity of KKA Partners is with the grand dairy company LALA in Mexico. In September 2010 Arla Foods aamba contacted KKA Partners because they were selling three yoghurt packing lines to LALA. The lines were packed in seven containers and two special boxes, and by the coordination of KKA Partners, the lines will be implemented and ready to use during the spring of 2011.

Know-how and networking

When Arla Foods aamba sold the cheese factory of Aars to Watt's the keywords were know-how, coordination and cooperation. These are also the keywords of KKA Partners, along

with the network of the business. In a project, KKA Partners are partners with everyone and works as the anchorman, who coordinates and makes sure that all information goes out to the right people. This way the network is kept together in the project. The network within the dairy business is of great value as well. Among others, KKA Partners collaborated with the Danish based company Kekmia Ltd. in the Chilean projects of Watt's. The combination of Kekmia Ltd.'s grand knowledge of dairy products and KKA Partners' know-how of dairy equipment and production was the key to the success of the project.

The proud Danish tradition

Because of the great tradition within the sector, the Danish dairy indus-

The process of implementing second hand and/or new dairy equipment

- Disassembling the machinery
- Labeling and packing all
- Transportation and control when shipping/receiving the equipment
- Installation and testing
- Final transfer to production
- KKA Partners is with you all the way



Second hand cheese plant installed at Watt's in Chile.

The process of buying second hand and/or new dairy equipment

- Contacting KKA Partners and their network
- Deciding which type of facility: UHT/milk for consumption, yoghurt, butter, milk powder, cheese, whey powder etc.
- Figuring out the needed capacity
- Drawing up an investment budget and a time schedule
- Making the decision to buy
- KKA Partners is with you all the way

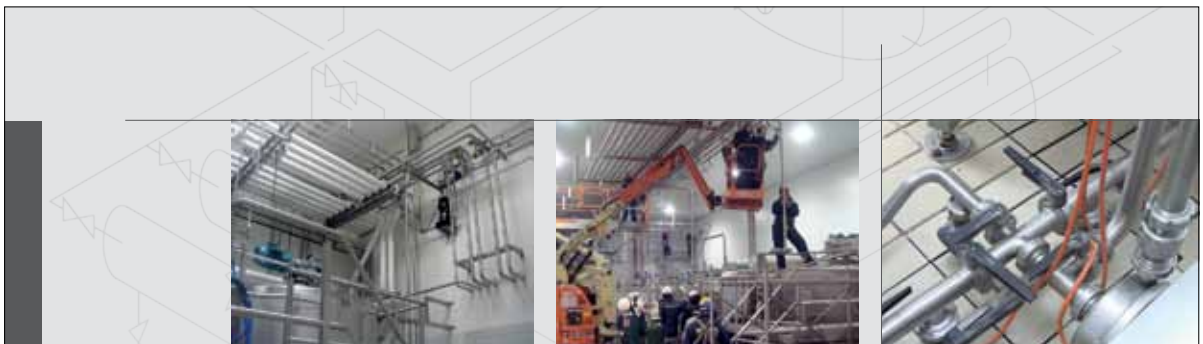
Why buy Danish second hand and/or new dairy equipment?

- To stay in tune via process technology, flexibility, hygiene and innovation!

try has a lot of valuable knowledge. The automation of the machinery, the hygiene aspect (CIP for example) and the high degree of maintenance in the dairy industries are the reasons that Danish equipment is a really good investment. The machinery is build to last, and around the world

you will find gear from the old firms of DDMM, Paasch & Larsen Petersen and Silkeborg Maskinfabrik, which were turned into Pasilac and together with Danish Turnkey Dairies (DTD) bought by APV, today SPX. Before the founding of KKA Partners eight years ago, the author, Keld Kragh An-

dersen, worked in APV for 15 years as project engineer and project manager, where I among many other things worked on the building of the large green field cheese plant in Taulov, Denmark. ■



Technical support and consulting services

Within a great network, KKA Partners collaborates with a large number of Danish and foreign based dairy companies and suppliers to the dairy business. KKA Partners by the director, Mech. Eng. Keld Kragh Andersen, offer:

- Project development
- Budgeting/evaluation of price
- Time and activity scheduling
- Disassembling and installation
- Transfer and initiation of used dairy equipment



KKA Partners

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Who is behind Danish Dairy & Food Industry ... worldwide?

The Danish Dairy Managers Association and the Danish Dairy Engineers Association own and publish Danish Dairy & Food Industry ... worldwide. The associations have published the magazine since 1976 and this issue is the 21st in succession informing you about Danish dairy and food industry.

Foreningen af
mejeri ledere og funktionærer

Danish Dairy Managers Association

The prehistory of the Danish Dairy Managers Association dates almost 125 years back to the time when the very first Danish cooperative dairy was established in 1882. In the years to come several hundreds of co-operative dairies were built all over Denmark by the Danish milk farmers. The managers of these co-operative dairies founded their organization "Danish Dairy Managers Association" on October 21st in 1887. Thus, the Association can actually celebrate its 125-year anniversary next year!

The present several hundred members of Danish Dairy Managers Association are trained and skilled professionals, of whom most are graduates from Kold College (former "Dalum"). Today the members are typically employed as managers, line managers, supervisors, teachers etc. within the dairy sector, the supplying industry and colleges in Denmark and abroad.

Mælkeritidende

On January 15th in 1888, the Danish Dairy Managers Association founded the member magazine, Mælkeritidende. Over time, many topics have been debated in Mælkeritidende,



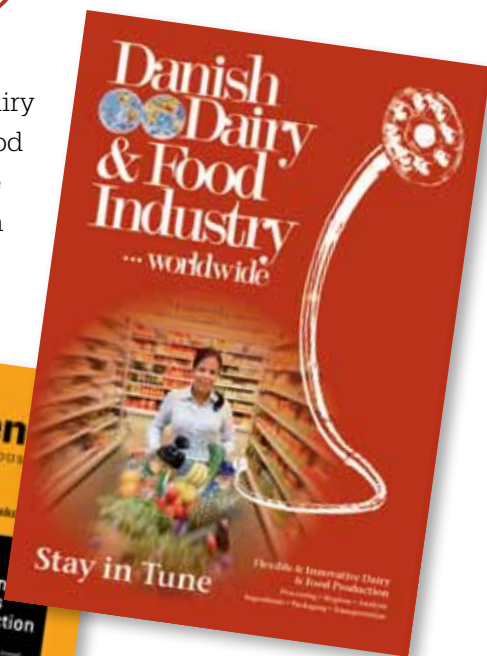
among others the dairy managers working conditions, technological developments within equipment for production of milk, butter and cheese. The magazine also focuses on dairy educations and research.

Mælkeritidende is the world's earliest professional dairy journal. The magazine is still published - every second week, and in 2013 Mælkeritidende can celebrate its 125-year anniversary.

Danish Dairy Engineers Association

In April 2012 the Danish Dairy Engineers Association can celebrate its

Dansk
Mejeri ingeniør
Forening



80-year anniversary. Way back in the 1920-ties the very first M.Sc. in Dairy Technology graduated from The Royal Veterinary and Agricultural University, today University of Copenhagen, KU-Life. In 1934, these university graduates founded their Danish Dairy Engineers Association in order to handle the professional interests of the members. Today the members are typically employed as managers, supervisors, researchers and teachers within the dairy sector, supplying industry, universities and colleges in Denmark and abroad.

Danish Dairy & Food Industry ... worldwide

In 1975, the Danish Dairy Managers Association and the Danish Dairy Engineers Association decided to establish a joint secretariat and run the shared member magazine Mælkeritidende. In 1976 the two associations for the first time published the magazine Danish Dairy & Food Industry ... worldwide, and this issue is the 21st in succession informing you about Danish dairy and food industry. ■

YOUR PROFITABILITY

Profitable ice cream production is directly related to the performance of your production line. At Tetra Pak, the link between performance and profitability is key to our designs.

Our knowledgeable specialists will ensure you choose components and processing lines that match your needs – from ice cream mix processing to freezing, filling, extrusion, packaging, cartoning and hardening.

In all our equipment, you will find the best and most advanced processing functions, accompanied by high reliability, extreme cleanability and dedicated lifecycle support.

We guarantee your performance to maximise your profits.

You're welcome to visit us at
www.tetrapak.com/icecream

Tetra Pak,  and PROTECTS WHAT'S GOOD are trademarks belonging to the Tetra Pak Group.



State-of-the-art Conveyor System

Tunnel freezers from Hans Jensen Engineering is well known and in operation throughout the world. However, the Danish company constantly develops new equipment to the benefit of food producers. Thus, the new HJ50 Conveyor was launched in early 2011. - We offer the new HJ50 as a stand-alone solution, but of course it is also suitable for conveying food products to/from our HJ40 cooling/freezing tunnels, underlines Olaf Møller, CEO and owner of Hans Jensen Engineering.



The new HJ50 conveyor is built in electro-polished 2B stainless steel and equipped with plastic conveyor belt - both steel and belt is constructed with no cavities.

By Anna Marie Thøgersen, Editor

Completing the HJ-Line

The new HJ50 Conveyor is constructed to meet Hans Jensen Engineering's own preferences, respectively on demand from many of the company's international food customers. - Our HJ50 can be deployed anywhere in an existing production, but the conveyor is designed and built to suit our HJ40-MRT freezing/refrigerating tunnel. This way we can program and control the transport to and from our tunnels, explains Olaf Møller. During the last 15 years Mr. Møller has owned and headed the company Hans Jensen Engineering, located just west of Aarhus, Denmark.

Features of HJ50

The HJ50 steel frame is constructed without cavities, and likewise there are no dangerous cavities

in the Unichain plastic conveyor belt joints. As a final finish the 2B stainless steel frame is electro-polished, and the conveyor is designed according to EHEDG rules. These conditions make the HJ50 top-hygienically and extremely easy to clean. - We introduced the conveyor at a large exhibition last year, and besides some minor corrections, we were praised by the dairy and food industry for our innovation, tells the company's Sales Manager, Niels E. Thomsen.

The conveyor can be designed and built with curves in all desirable angle and slope degrees on the drive-ups and descents. Further, the HJ50 can be fitted with drum motor or external gear, on customer requirements. - Also the desired length is constructed on demand, and recently we built and delivered a 60 meters long HJ50 to the world's largest shrimp process-

ing plant in Saudi Arabia, tells Olaf Møller.

HJ40 for all food products

Actually, shrimp producers have become a major customer group for HJ Engineering. Years ago, the company established itself as an expert within freezing/refrigeration tunnels, and several HJ40's are on work in ice cream factories and fish plants all over the world.

The HJ40 freezing/cooling tunnel features several advantages, e.g.:

- Built and designed to fit the size of the customer rectangular production facilities.
- Shelf tunnel can be varied in length, height and number of trays.
- Horizontal layer switch using synchronized chain wheels.
- Shelves with perforated plates fitted with rollers and pin bolts in a 3 "main chain.
- IT control built into easily accessible stainless steel cabinet.
- Control on finger-touch color screen, displaying the complete production.
- Handles different product sizes simultaneously.
- Suitable as buffer night/weekend.



Owner and manager of Hans Jensen Engineering, Olaf Møller (left) along with the company's Sales Manager, Niels E. Thomsen.

The HJ40 Tunnel is suitable for ice cream manufacturing as well as freezing/cooling of other applications such as cheese, yoghurt/cultured products, fish, meat, bread etc.

Nothing too big or small

Hans Jensen Engineering is an expert in solving any assignment from the international food industry, and has e.g. constructed huge refrigerating tunnel solutions for an international food giant as Iranian Solico and Saudi Arabian Robian/National Prawn Company. At the other end of the competence scale, the company holds a number of agencies including filling equipment from Grief Velox and palletizing system from Möller. Further, Hans Jensen Engineering also serves and repairs food equipment supplied by others. - We design and produce all kinds of equipment in stainless steel - from minor fittings - to complete, turnkey systems including motors and IT control systems, Olaf Møller underlines.



HJ40 Tray Tunnel behind the isolated white walls, and the front shows the stainless steel enclosure with electrical controls easy to operate on a finger-touch screen. The picture to the right gives a peek into one of the turning stations in HJ40.

Certainly, Hans Jensen Engineering meets the company's own slogan "Nothing is too big or small".

Hans Jensen Engineering

Hans Jensen Engineering was founded in 1939 by Mr. Hans Jensen. In 1995 the company was bought by Mr. Olaf Møller, the present CEO and sole owner of the company.

As manufacturer of machinery and equipment for the ice cream and food

industries in general, Hans Jensen Engineering is specialized in customized solutions. The company employs a staff of highly skilled engineers and stainless steel smiths, and moreover co-operates with a wide range of sub-contractors, e.g. in the Middle East. Sales and services in this region will soon be reinforced by a local Hans Jensen Engineering Sales Office in cooperation with a local partner in Jeddah, Saudi Arabia. ■



**No task is too big
- or too small**

Hans Jensen Engineering launches New Flexible HJ50 Conveyors

- ◆ In 2B electrical polished stainless steel
- ◆ Efficient pin-less and easy snap-together belt
- ◆ No cavities in construction or conveyors
- ◆ Individual angels and gradients
- ◆ Drum motor or external gearing
- ◆ Hygienic design according to EHEDG guidelines



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www.hj-galten.dk • hj@hj-galten.dk



We Want a Brighter Future

Join us in creating a Brighter World

When you think of a corporate brand, the first thing that springs to mind is, more often than not, a company logo. But a corporate brand is much more than that. It is a manifestation of a company's mission, culture, behaviors and values - both internal and external - expressed through a logo, visual identity, brand promise etc. but also through its employees.

A company brand cannot, however, remain static. Companies are continually evolving and adapting to changing market conditions. Brands must be actively managed to reflect this. In this article, Martin Larken, Senior Account Manager, DSM Food Specialties, examines the company's evo-

lution and introduces its new brand promise: Bright Science, Brighter Living.[™]

Rebranding: the rationale

DSM has transformed in recent years. From our roots in chemicals, we have gradually evolved to become a leading Life Sciences and Material Sciences company, creating solutions that nourish, protect and improve performance. We have used science to serve our customers and society, and our focus has grown increasingly external.

We are committed to responding to major world challenges, such as health and wellness, climate, energy and other global shifts. Our "old" brand simply did not communicate this. Launching a new brand was therefore the next logical step in our evolution. We wanted to confirm the changes that have already taken place and highlight our goal of creating brighter lives - both for people today and generations to come: Bright Science. Brighter Living[™].

Bright Science in action

We believe that by looking through the lens of "Bright Science. Brighter

Living[™]", we will help create shared value for and with our customers. We have many of the answers, but not all of them. To create shared value, we develop an in-depth and sophisticated understanding of the challenges and opportunities our customers face. This open and collaborative innovation is fundamental to our approach.

Sustainability is fundamental to everything we do. As a recognized leader in this field, our long-term focus is delivering sustainable products and processes. We help improve the planet by reducing carbon emissions and resource use throughout the value chain.

Innovation is the vehicle through which we enable sustainability, performance and value creation. We remain focused on improving performance and creating value through new and enhanced functionalities and processes. We are solution-oriented and draw on our scientific expertise to innovate in health, nutrition and materials. For example, Maxilact[®], our solution for easily digestible milk and dairy products serves the lactose intolerance market. Maxilact[®] makes it possible for lactose intolerant consumers to consume dairy products as part of a balanced diet, without digestive side effects.

Summary

We are excited about where we are as a company, and our ability to help customers successfully address challenges and opportunities. We'd love to discuss how we can apply Bright Science. Brighter Living[™] for you and your customers. Together, we can build a better, greener world. ■



Companies are continually evolving and adapting to changing market conditions, and thus brands must be actively managed to reflect this. So tells Senior Account Manager, Martin Larken, DSM Food Specialties about the new DSM logo.



I want a brighter world.

What will we want in the future? Who can tell? We may not value what we value today. But we will certainly expect a happier, healthier, safer world. At DSM we believe Bright Science can take us there. It's our name for an approach that brings together ideas, sustainable solutions and innovation from across Life Sciences and Materials Sciences. And it could make all our lives brighter.

LEARN MORE AT DSM.COM

HEALTH · NUTRITION · MATERIALS



Keeping an Eye on Spray Drying Performance

SPRAYEYE™



By **Martin Skanderby**, Sales Group Manager, Food & Dairy Division, GEA Niro

Visual camera systems

Safety and plant performance has always been a key area for GEA Niro. In 2007 the company launched its first new generation of visual camera systems for the surveillance of atomization nozzle performance. Since then, the original system has undergone further development and a new SPRAYEYE™ visual monitoring system, using infrared detection has been launched.

From a safety point of view, one of the most critical areas in a spray dryer is the atomization zone where liquid concentrate of product is atomized to droplets while simultaneously being exposed to the hot air driving the drying process. Furthermore, in the case of agglomeration, the product fines recovered in the dryer's ex-

haust air system are often introduced into the drying chamber in the atomization zone.

The atomization nozzle plays a crucial role in the spray drying process, since this is where the most common, costly and time-consuming complications often occur. Leaks, blocks, product build-ups and uneven spray dispersals can lead to expensive operational downtime, and if left untreated might even cause destructive fires or explosions.

Monitoring the spray nozzle

SPRAYEYE™ uses specially designed cameras to give a highly detailed, unimpeded and real time view of the spray nozzle located inside the critical area of the drying chamber at any time during the process. Typically, several cameras are installed to ensure an optimal view of all nozzles and making sure that no nozzle is impeding the view of another.

SPRAYEYE™ uses two types of camera technology in order to cover all angles - visual monitoring for quality control and infrared scanning for absolute safety.

About GEA Niro

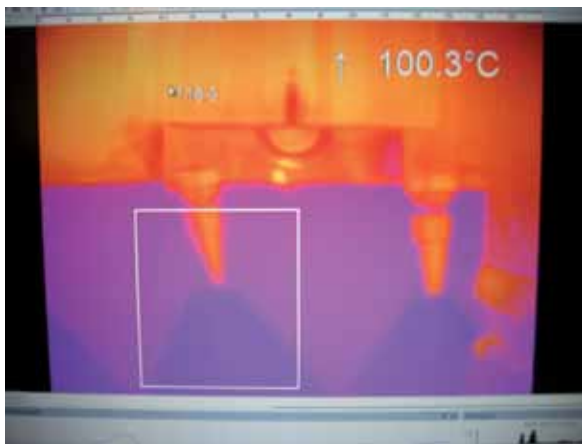
GEA Niro is a core technology centre in GEA Process Engineering, a business segment in GEA Group. The technology centre is a world leader in industrial drying and maintains a focus on its core technologies that count spray, freeze, and flash drying as well as fluid-bed processing. GEA Niro supplies process units and complete process lines for powder production to the food, dairy, pharmaceutical, and chemical industries. The technology centre is headquartered in Denmark with close to 500 employees.

Both technologies offer different advantages, but used in combination they secure optimum effectiveness, reliability and results.

Monitoring for optimal quality

The SPRAYEYE™'s visual cameras help customers keep a close eye on quality while at the same time delivering a host of benefits for manually monitoring the spray drying chamber:

- Real time, continuous image of the spray zone
- Quickly identifying product build-up and inconsistent spray pattern
- Monitoring start-up and shutdown problems for fast and accurate maintenance
- Instantly checking high pressure shut-off valves for leaks



Infrared scanning: Infrared scanning technology eliminates the need for an operator to watch the monitor to detect abnormalities.



With safety, quality and reliability as our paramount concerns, we've fitted all our camera casings with PPSU food grade protection windows instead of standard glass.

- Reducing the risk of dangerous temperature fluctuations
- PPSU camera housing for image clarity and safety
- Greatly improving overall quality and efficiency.

The camera system is highly valued among operators and plant managers worldwide because it makes quick corrective action possible.

Infrared scanning for uncompromised safety

Most fires start due to spray nozzles operating incorrectly. The SPRAY-EYE™ patent pending infrared scanning technology delivers:

- Pre-warning system to highlight problems before they can be seen by the human eye
- Full reliability and hardly any maintenance
- Automated monitoring to free up operators' time
- Adequate time for operators to solve a problem before it escalates

- Accurate, reliable surveillance for total safety and control
- No extra housing costs to the visual cameras.

The combination of visual and infrared cameras makes it possible to check the nozzle performance while simultaneously making sure that no surfaces get overheated, which might lead to the product getting burned or eventually causing bigger fires and explosions.

Safety comes first

With safety, quality and reliability as our paramount concerns, all GEA Niro camera casings are equipped with a PPSU food grade protection window instead of standard glass. PPSU creates images that are particularly vivid and clear thanks to a sun-glasses-like quality that dampens the reflections from stainless steel components.

Furthermore, the material is not prone to chipping, which allows for

greater safety when drying food products.

SPRAYEYE™ is easy to use and due to the uniqueness of its design, requires no maintenance except the replacement of small parts every third year.

SPRAYEYE™ on any spray dryer

The camera system is optional for all new GEA Niro spray dryers, which use nozzle atomization. However it can also be installed in existing GEA Niro spray dryers within 3-4 days, as well as spray dryers of other manufacturers. However, installing SPRAY-EYE™ on other manufacturers' dryers might require that the air disperser is changed to the GEA Niro type DDD.

Installing a SPRAYEYE™ camera system in your spray dryer is an investment which will pay for itself, while at the same time ensuring spray dried products of the highest quality under the safest possible conditions. ■

Are you looking for new Markets for your Products or Highly Skilled Dairy Employees? Contact:

Mælkeri tidende

TIDSSKRIFT FOR MEJERIINDUSTRIEN



New markets or employees?

Are you looking for markets to launch your products, such as new dairy plants, ingredients, packaging, analysis or sanitary equipment?

Or are you looking for highly skilled dairy employees with international experience such as dairymen, dairy technicians or M.Sc. in Dairy Technology? No matter what, you can always advertise in Mælkeritidende!

For more information please visit www.maelkeritidende.dk

Mælkeritidende

"Mælkeritidende" as well as "Danish Dairy & Food Industry ... worldwide" is owned and published by the Danish Dairy Managers Association and the Danish Dairy Engineers Association.

The topics of Mælkeritidende are scientific, technical, and political information about the dairy industry and related areas. Furthermore, Dairy R&D, dairy product information, company profiles and exhibition information are accepted by the journal.

Further information

If you want further information about Mælkeritidende and Danish Dairy & Food Industry ... worldwide, please contact Chief Editor, M.Sc. in Dairy Technology, Anne-Sofi Christiansen or Editor, M.A., Anna Marie Thøgersen. Mælkeritidende and Danish Dairy & Food Industry, Munkehatten 28, 5220 Odense SØ, Denmark. Phone: +45 66 12 40 25, Fax: +45 66 14 40 26, www.maelkeritidende.dk - www.ddfi.dk - info@maelkeritidende.dk



Chr. Hansen has joined the Industrial Platform of the Netherland's Kluuyver Centre for Genomics of Industrial Fermentation.

The Kluuyver Centre (www.kluuyvercentre.nl) is a Dutch initiative at university level, which aims to use the techniques of genomics to understand and improve industrial fermentation processes.

The use of genomics information - the study of all gene sequences in living organisms - helps to further improve the enzyme and culture production and to gain new fundamental knowledge about the production strains. By entering the Industrial Platform of the Kluuyver Centre, Chr. Hansen obtains early access to research results within this Centre.

"Our involvement will allow us to gain important insight into the developments in genomics, which is a strategic focus area for us. The strengths and focus of the Kluuyver Centre can be used to generate an important knowledge and technology base for our future research activities," says Eric Johansen, Associate Vice President, Innovation, Chr. Hansen.

Chr. Hansen maintains a close relationship with academia on a global scale. The company engages in more than 200 scientific partnerships with universities, research institutions, PhD students etc. every year and is represented in over 20 scientific associations, advisory boards etc.

Innovative Cultures for

Perfectly Healthy Drinking Yoghurts

Two years of thorough research and development have resulted in the first range of cultures specifically for drinking yoghurt.



**By Helle Rexen,
Communications
Consultant,
Chr. Hansen**

Chr. Hansen has introduced a series of YoFlex® and probiotic nu-trish® cultures specifically developed to manufacture drinking yoghurt, one of the fastest growing sectors of the dairy market according to www.dairy-foods.com (global sales of yoghurt drinks topped 7.2 billion liters in 2008 - and the trend is rising).

The new products scale make it possible to ensure optimum quality in terms of smoothness and a pleasant mouthfeel, with the potential of removing starch/thickeners, which are currently used, at extra cost for the producer, in the majority of drinking yoghurts.

Available in three different flavor profiles the cultures "Mild", "Classic" and "Twist" make it easier for dairy producers to meet consumer expectations by enabling production of low fat products with a short ingredient list, which are tasty, smooth and with probiotic health benefits from Bifidobacterium BB-12®.

Meet predominant health trend

"Drinking yoghurts are a great vehicle for providing probiotics to consumers, as they can be provided in an adequate daily dosage in a convenient form. Consumers want the health ben-

efit provided by the probiotic BB-12®, but this must be in combination with good taste and texture, and this is exactly what the new cultures ensure," says Sarita Bairoliya, Global Market- ing Manager, Probiotics, Chr. Hansen.

According to the global market intelligence agency Mintel, the main trends within drinking yoghurts are health considerations (low fat, low sugar), functional benefits (health effects above nutrition), natural, clean label (without addition of unnecessary ingredients and fortifications (added vitamins and mineral). The new cultures enable dairy producers to manufacture products that are lower in fat and sugar whilst at the same time offering a top-of-the-range flavor and texture.

Eliminates need for thickeners

Chr. Hansen relied on its strong international development organization in combination with its competence level within selection and characterization of lactic acid bacteria and composing of unique cultures. This has been the backbone in the development of the company's first range for drinking yoghurt.

"In addition to the benefits described our new cultures address a

number of problematic areas traditionally linked to producing drinking yoghurt such as graininess and off-flavor from thickeners,” adds Morten Boesen, Marketing Manager, Fermented Milk Cultures, Chr. Hansen.

Today the majority of drinking yoghurts are stabilized to improve texture indicating that texture is indeed important and not satisfactorily covered by the current cultures in the market. As a forerunner in the global dairy industry, Chr. Hansen set out to develop new cultures to serve the growing market for yoghurt cultures.

Understanding leads to innovation

“The first step was to build a foundation of knowledge based on sampling a huge amount of drinking yoghurts world-wide. This enabled us to establish specific quality parameters from which we could work our way back in the development chain.

The result is new cultures with excellent smoothness and mouthfeel properties that are robust enough to withstand the harsh production processes needed to obtain homogeneous drinkable products. With the new

Chr. Hansen has launched the first range of cultures specifically for drinking yoghurt. The cultures are available in three different flavor profiles “Mild”, “Classic” and “Twist”.

range we have introduced a premium solution for producers of drinking yoghurts worldwide. To our knowledge ours is the first range specifically developed for this purpose,” Boesen concludes. ■



Join & Visit the New Danish Food Exhibition

Join and visit the upcoming Danish Food Exhibition to be held in MCH Herning, Denmark 8-9 November 2011. The organizers invite colleagues from all over the world - and suppliers of food technology to visit and join the new professional exhibition.

Exiting events

During the two-day exhibition there will be dairy and food ratings, contests, awards and several other events: Danish Dairy Contest, Scandinavian Dairy Contest, Danish Food Contest, Food theme presentations, Chefs preparing foods dishes, Conferences, Social events, and Networking.

Join & Visit the Fair

All manufacturers, distributors, wholesalers and exporters of food and food technology are welcome to rent a stand. For further information contact: Team Manager Mr. Sven Aalborg by phone +45 3339 4815, mobile +45 4043 5125, e-mail saa@lf.dk

All dairy and food professionals are very welcome to visit the Danish Food Exhibition!

- Takes place in MCH Herning, Denmark: 8-9 November 2011. Opening hours: 9 am to 5 pm.
- Further information about the Dairy and Food Exhibition on www.DanishFoodContest.dk
- Further information about accommodation in Herning etc. on www.mch.dk ■

Read more about how to Join & Visit the New Danish Food Exhibition on page 33 & 36!

New Keofitt[©] Aseptic Sampling Bag[™]

Identifying ten weak links in the sampling chain - and eliminating a few.



By Henrik Salomon,
Managing Director,
Keofitt A/S

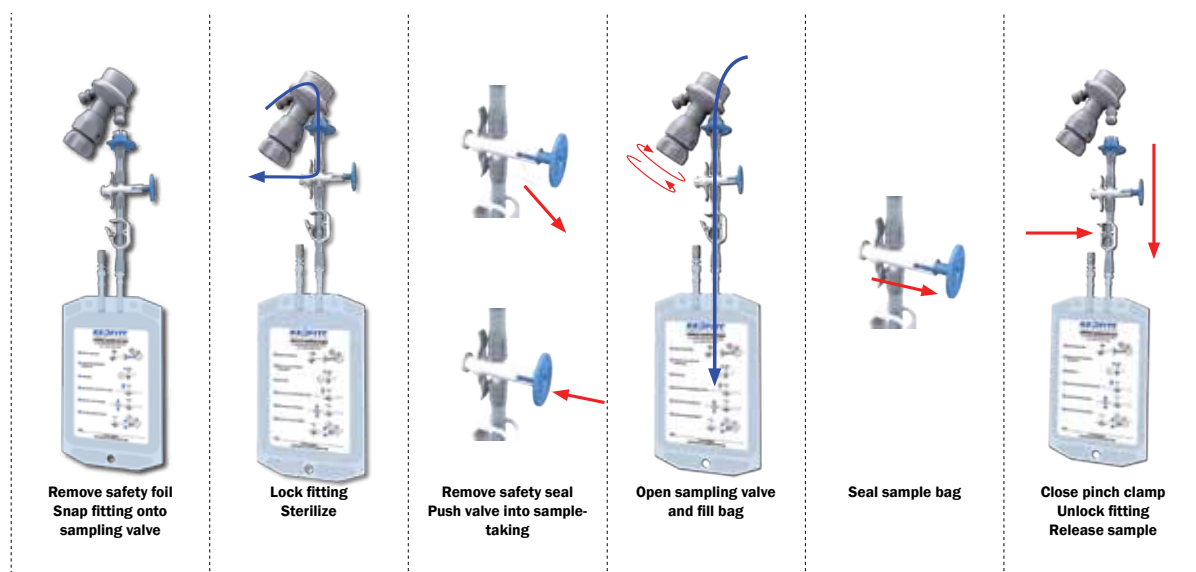
Don't jeopardize sampling

Being able to sample your products during their processing stages - what would quality control be without it? Well, maybe we should rephrase the question: Does it make any sense to put so much emphasis on lab tests for quality control, HACCP and traceability, if the sample we are using for it is not representative in the first place? Of course not. It would be like using inexpensive diesel fuel for an expensive jet engine; we may be able to document we have a full tank, but it will not take us to our destination. Sampling, too, is a chain of interdependent - and po-

tentially weak - links that need our utmost attention. If not, we will surely jeopardize every subsequent step in our quality control.

Link no. 1 to 4

We all know that "the proper use of sanitary and sterile sampling equipment is the precondition for true sample testing". But this general guide-line and statement (often referred to in ISO standards etc.) is not operational at all. We need to be more specific and break the sampling chain down into links. You might say that identifying the location of the sampling points is Link no. 1. Link no. 2 would be selecting the appropriate and proven sampling equipment. Link no. 3 is the physical installation of the sampling device while no. 4 is the maintenance of the sampling equipment. These first initial steps constitute the primary links in our sampling chain. Based on experience poor sampling and, consequently, false conclusions can often be derived from link no. 2, 3, and 4.



New: The Keofitt[®] aseptic sampling bag[™] (pat.pend.).

Indeed, the identification of these first weak links has driven the success and development of the original KEOFITT sampling valves for more than 30 years now. More than 150.000 valves are in operation. Whether steam-sterilisable (SIP), sanitary (CIP) or double-seat, KEOFITT offers the world's biggest sampling valve range facilitating the correct selection, installation and maintenance for any application. But please watch out for copies!

Link no. 5 to 10

So does that mean the sampling chain is secure now, provided you use KEOFITT sampling valves? No, not necessarily. The chain does not end with the proper equipment installed and maintained. It goes on with link no. 5 being the standard operating procedure for sampling. Link no. 6 is the education and instruction of the sampling equipment operators. Physically receiving the sample is no. 7 and containing it no. 8. Link no. 9 is the transport of the sample to the laboratory for testing. The final link is the quality control of the quality control, i.e. the capacity to not only focus on testing procedures, but constantly question the sampling equipment, the sampling procedures and their execution. This completes the loop of weak links.

Handling weak links

The new *Keofitt Aseptic Sampling Bag (pat.pend)* is simply the best way to address the weak links 7, 8 and 9: Receiving, containing and transporting the sample. It is a pre-sterilised and tamperproof disposable plastic bag system designed to be connected via quick-fittings or mini-clamps to sampling valves of all styles and brands - including KEOFITT. An integrated and patented 3-way valve enables the operator to sterilize the connection to the bag before opening it, thus eliminating the risk of airborne contamination of the sample. Extremely easy to use, this new and unique product also serves the need for transport and any subsequent sampling. Also available: are simpler versions without the 3-way valve.

More information on: www.keofitt.com ■

4 Dairy plants For sale in 2012

Complete cheese production line. Manufacturer Tebel. 3.000 kg/h. Round & rectangular traditional white cheese production.



Complete cheese production line. Manufacturer Tebel. 3.000 kg/h. Traditional white cheese production.



Complete cheese production line. Manufacturer APV & Sulbana. 1000 kg/h Cheddar and 2000 kg/h Mozzarella production.



Complete powder plant, incl. spray dryer. Manufacturer Anhydro & Niro. Capacity depending on requested dry solid matter.



Several milk & whey pasteurizing lines, incl. self-cleaning separators.



CIP stations - Butter equipment - RO plants - UF plants - Membrane filtration - SS Tanks.

The dairy plants will be sold "in as it is working condition" ex works Norway. Inspection & Sale during Autumn/Winter 2011. Dismantling during 2012.

For company registration with statement of equipment interest, please send e-mail or fax to the following responsible contact:



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Stay in Tune

Constantly Changing Consumer Preferences!



By Crispin Gell,
Sales Director,
Dairy Fruit

Fast changing preferences

How do we meet the demand of the consumer who is, more than ever, changing their food preferences on a regular basis?

In October 2010 Relaxnews reported from the Sial exhibition: "Some of the major food and drink manufacturers believe innovation is going to serve up new tastes, textures and "it" ingredients, could they be";

- Tastes: Spiciness, fruit & spice combinations, chilli chocolate, honey, wasabi, ginger
- Textures: Frothy, crispy/crunchy (with bits), multi-texture
- Ingredients: Seeds, super-fruits (acai berry, acerola, cranberry, wolfberry, guarana, noni, yumberry, blueberry, guava, morello cherry), natural sweeteners (stevia), ewe>s and goat>s milk, flowers.

As a business do we focus on all of these potential tastes, textures and

'it' ingredients, will the consumer demand a new yogurt tasting of chilli-chocolate with a crispy texture using stevia for sweetness? May be, may be not! However, we must be ready and fully aware of the new trends and consumer demands. As a B2B company we are working very closely with our customers trying to anticipate the consumers every move, not always the easiest task as trends can be unpredictable, quick to market and can possibly disappear as fast.

New trends

As soon as the market starts showing signs of the consumers wanting these types of new tastes then our first step is to work together with our suppliers to find and secure the relevant ingredients. For us it is vitally important we work closely with them, they are a valuable asset, they can offer support, suggestions, and indeed information and advice on trends they are experiencing and seeing around the world. These are valued relationships, and ultimately our customers reap the benefits of these.

The trends we have recently seen are Natural, Organic, Fair Trade, Health (healthy and nutritious products), Convenience (on the go, fast foods, semi and finished meals), Indulgence (Luxury, quality, pleasure), and importantly, price, especially

with the recent global financial difficulties we have all experienced.

At Dairy Fruit we have developed products to fit these product groups by working with our customers, our suppliers and understanding the market changes, and striving to achieve the consumer's needs and desires.

But trends can come from all sorts of areas, during the past few years we have seen an increasing interest for these specialised products, the consumers wanting the basic products, but at the same time they want the choice of more unique, exotic, healthy products, many having some kind of benefit for your body and health. It means functional products are still a growing market with a huge potential in the future, and the origin of raw materials is of great interest to both retailers and the consumers.

Chefs and TV shows

Another area where trends have grown is with celebrity chefs and TV shows. In recent years some of the UK retailers have secured the signatures of well known celebrity chefs who will endorse various products which are subsequently priced very competitively in the relevant super-market and in addition to this menu cards are written to help the consumer understand the product and

how to cook it, plus the retailer promotes 'in store' and through TV advertising, newspaper's and food magazines.

In addition to this there has also been a boom in 'TV food programs'; a vast range of chefs having their own TV shows; and the highly popular Come Dine With Me TV show has been a huge success. This is a program based on every day consumers cooking for each other at their own houses and even celebrities entertaining other celebrities by cooking at home, all this has resulted in a 'Culinary Expansion' for eating at home.

This could be viewed as two trends, one- a rising interest in home cooking and the return of more traditional kitchen skills and secondly- retailers wanting their own 'versions' of the chefs /TV's products.

Sourcing raw materials

As previously mentioned sourcing raw materials suitable for these

trends, especially within the fruit business can be something of a challenge. Not only do we work with our customer and their consumers needs but also when working with our suppliers we have to consider the environmental aspects both within actual production, as well as transportation of goods.

With today's ever changing world, all our suppliers will firstly have to adhere to our CSR policy (Corporate Social Responsibility). Companies have to demonstrate they are socially responsible within their own organizations as well as their partners and suppliers. All these aspects are affecting the demand for new products on many markets and it is definitely becoming an important part in the development of tomorrow's new products.

So with the consumers constantly changing their preferences, we must 'stay in tune', and therefore continue to work very closely with our



We look forward to being your natural choice!

suppliers to grow our position of being Northern Europe's leading supplier of flavored preparations to the dairy and food industry. We deliver more than 700 different aseptic fruit and liquid spice products, both conventional and organic, in particular to the Northern European dairies. The products we develop are in close cooperation with our customers and our vision is quite clear: ■

Nature's Taste

Dairy Fruit A/S offers our customers Nature's Taste, by developing and offering healthy and good tasting products. We believe in looking forward, using our technical and innovation skills.

Dairy Fruit's expertise:

- Clean label
- Health and quality
- Environmentally awareness
- Organic
- Nature guides our innovation
- Joint working partnerships ...The driving force behind today's new developments
- 30 years experience of providing custom solutions, using our team of experts to inspire creation
- Working together we can design your next product based on ...

... **Nature's Taste**



DAIRY FRUIT
THE NATURAL INGREDIENT

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Phone: +45 66 13 13 70 • WWW.DAIRY-FRUIT.COM**



Efficiency and Safety on the Agenda

Successively, VM Tarm launches new features to optimize the company's wide range of milk tanker solutions. Recently, the Danish company has constructed innovative man lids placed on the tank side. This solution improves both efficiency and working conditions for the truck driver, explains VM Tarm's new Sales Manager, Kristian Olsen.

By Anna Marie Thøgersen, Editor

Safe and more efficient

- Our new solution with man lids placed on the tanker side is inspired by similar features on beverage tanks, Kristian Olsen tells, whereas he leaves the technical explanation to one of VM Tarm's innovators, diploma engineer Knud Lauritsen, whose father actually founded the company almost 50 years ago. But that's another story.

About the side placed man lids, Knud Lauritsen explains: This new type of man lids are constructed and built directly into the tank wall, protected by a stainless steel door, and further equipped with a valve for sterile sampling to ensure ultimate quality control. Further, special kip valves are constructed and placed on top of the tank to prevent under-pressure in the milk tanker system.

The side placed man lids ensures the working conditions of the truck driver, as he no longer has to stand on the narrow tank walkway - not to mention has to climb the several meters high milk tanker - in all kinds of weather. Besides improved working conditions, the truck driver can even



work more efficiently, as all operations are now placed on ground level.

Safe milk tankers to TINE

- Actually this new feature is developed on request from the Norwegian dairy company TINE, as they want to avoid accidents amongst truck drivers climbing milk tankers in severe icy and cold weather, explains Knud Lauritsen.

From Norway, TINES Transport Manager Inge Letnes informs: We chose VM Tarm, as one of our milk tanker suppliers, to construct our newest milk tankers for several reasons. First and foremost the company could meet our demands for safer working conditions for our truck drivers. Further VM Tarm is very constructive and offers functional tanker solutions easy to operate on the uneven Norwegian roads. VM Tarm is very service minded, and least but not last the craftsmanship of the stainless steel tankers is excellent with an impressive finish.

Innovations on demand

Also the Danish-Swedish dairy giant, Arla Foods called on VM Tarm's expertise as the dairy company a cou-

New Sales Manager at VM Tarm A/S, Kristian Olsen (42) is a trained engineer, and he holds 10 years of experience in the sector. Kristian Olsen will be the co-coordinator of the VM Tarm sales team and also responsible for the milk tanker sales in both Denmark and at the export markets.

Box 1:

VM Tarm Milk Tankers

- Designed by customers requests
- Flexible choice of vehicle, axles and trailers
- Quality craftsmanship on the stainless steel tankers
- Flexible choice of pumps, valves, meters and registration
- Pumping and metering equipment in easy cleanable stainless steel cabinet
- Advanced two pump system for gentle milk intake
- Up to 1.300 liters of milk per minute
- IT solutions for metering, milk data receipts, reporting
- IT communication and planning of milk collection routes
- IT reporting on GPRS/3G or SMS
- 24-hour hot-line on VM Tarm IT solutions
- Robust tanker solutions - Long durability

ple of years ago ordered eight new milk tankers to operate on Arlas UK market. VM Tarm constructed a compact and aerodynamic vehicle easy maneuverable on the narrow roads and farm gateways in UK. These milk tankers too, were equipped with specially constructed man lids placed in cabins on the side of milk tankers to the benefit of the tank driver. In combination with this lid solution, VM Tarm's high performing pumping system lead to an overall increased efficiency of approx. 30%.

Indeed, this "innovations on demand" approach to customers is significant for VM Tarm. The company offers a very wide range of milk tanker solutions designed by customers' requests as mentioned in box 1.

On the roads in North Europe

VM Tarm holds decades of experience in building milk tankers. In the early days of the company's history

Facts about VM Tarm

- Founded in 1962
- Employs 120 highly skilled engineers, constructors, stainless steel smiths, IT specialists and electricians
- Designs and constructs complete stainless steel tanker solutions for transportation of milk, beer, fodder, manure, chemicals, oil and petrol.

the tankers were ordered and built solely for Danish dairies. But during the last three decades the company has constructed, built and sent dozens of milk tankers on the roads in Northern Europe, especially in Scandinavia, UK, Germany, and The Netherlands, but also in The Middle East. Each and every one of the tankers is constructed by the highly skilled technicians at VM Tarm - on dairy customers' demands. ■

Special Milk Tanker Solutions tailored to your needs ...



Compact and easy maneuverable



Side placed man lids improves ...



... safety and efficiency



VM Tarm a/s

Feel free, to contact us for further information

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Vibration Technology - Multifunctional Possibilities

Scan-Vibro A/S is an expert and global partner within vibration technology. Custom-designed sifters, conveyors and feeders are built - and in operation at many food plants all over the world. Our company offers multifunctional vibration equipment for: Sorting, spreading, draining, conveying, cooling, heating



Lars Valentin Peters, Business Development Manager, M.Sc. Dairy Science, Scan-Vibro A/S

The food industry is constantly improving existing products through the application of new technologies and innovations. Consumer demands are often directly channeled to the manufacturer of food processing equipment. And thus, also Scan-Vibro experience increased demands in different areas of food processing.

Large size vibration equipment

These demands reflect food manufacturers efforts to become more cost and partly also environment efficient. An example of this is the production of bulk milk powders, where the spray drying plants become larger and hereby also the downstream equipment like vibration sifters and -conveyors.

Today, Scan Vibro SRS-Sifters supplied to the milk powder industry handle up to 24 tons of milk powder by the hour. We also see an increase in processing capacity from manufacturers of specialized food products like food ingredients, baby food and others, following the consumer demands of more functional foods. When designing the large size vibra-



Reversible vibration Conveyors TRS with two outlets for babyfood.

tion, “vibration know-how” becomes even more important.

In-line CIP-able equipment

Large-scale production increases the need for process traceability, and food manufactures look for automatic cleanable process equipment - true CIP. During recent years, Scan-Vibro has indeed strengthened our focus on developing top-hygienic equipment, and we now offer fully CIP-able SRS Sifters, and thus it is no longer necessary to inspect the interior of the sifter after CIP. The CIP-able SRS remains closed at all times, and possible exterior contaminations are prevented.

Further, our vibration technology - for use in the food industry, is con-

structed in easy cleanable stainless steel surfaces with a minimum of corners. From an environmental point of view, this implies a minimum of energy and water consumption during cleaning.

Also, Scan-Vibro’s conveyors type TRS and TRS-R can be supplied with CIP equipment making the conveyors part of a total CIP-solution.

Extreme environments

We also experience food production growth within extreme environments, as e.g. freeze dried coffee, which takes place in an environment of minus 45-60°C. This requires special designed vibration conveyors and sifters regarding for instance the bearings, electrical cabling, flex con-

nections etc. Many components have to be made in special materials to resist the extreme operation conditions.

The rising number of single households and the increasingly mobile society is changing consumption patterns in favor of convenience foods, like for instance healthy drinks, ready meals and frozen vegetables. In addition, production of freeze dried bacteria cultures for the dairy and food industry often takes place under very cold conditions. Requirements from these industries are off course accommodated by Scan-Vibro's vibration technology.

Streamlining production

We also experience request from the dairy and food industry regarding equipment capable of handling more functions (unit operations) in one-process-step. This is part of the overall process optimization focusing on product safety, efficiency and environmental impact.

Scan-Vibro has, in co-operation with customers, developed vibration machines to convey chicken fillets and other poultry cuts in an even and adjusted layer, feeding the following processing equipment and for spreading out/separation of the same poultry cuts before freezing. The machines contribute to solve

CER Spiral Elevator gently transports products from bottom to the top.



process tasks, but similar important to the customer, they have replaced personnel and increased efficiency.

Conveying of fragile product

Conveying of fragile products is also a specialty of Scan-Vibro A/S. If a fragile product needs to be elevated gently to another level in the production process - e.g. to the packaging machine, standard equipment is not adequate, in general. For these special tasks the Scan-Vibro CER Spiral Elevator is the right choice. Besides

the very gentle vibration transport it also has a very low foot print and energy use.

Vibration conveyors TRS and CER Spiral Elevators are often used for gentle conveying: Corn flakes, instant coffee, cheese cubes, hamburgers, French fries, onions, vegetables, fruit, chewing gum, and candy etc.

Scan-Vibro A/S

Scan-Vibro's technological solution superiority rests on knowledge and the employees' year-long high technical experience. The staffs count 65 highly skilled engineers, smiths, CAD draughtsmen and other technicians.

The company is engaged in long lasting and innovative relationships with large international plant and engineering companies. When it comes to collaboration with these companies, Scan-Vibro contributes as a subcontractor within the field of vibration technology expertise. However, Scan-Vibro also works alone, when customers worldwide learn about the company's expertise and want to either replace or expand their plants with new types of vibration equipment.

Scan-Vibro, founded in 1949 under the name Vester Åby Vibrator (VAV), operates two production facilities and serves customers all over the world. ■

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Based on our wide range of standardised products and our expertise and know-how in products and processes we develop tailor-made and innovative solutions in close cooperation with our customers. For a general view please visit our website.



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Sanitary sifter type SRS CIP 1540



Sanitary reversible conveyor type TRS-R

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The logo for Danish Dairy & Food Industry ... worldwide is set against a red background. The text 'Danish Dairy & Food Industry' is in a white serif font, with 'Danish' on the top line, 'Dairy' on the second line, '& Food' on the third line, and 'Industry' on the fourth line. The words 'Dairy' and 'Food' are separated by two small globe icons. Below this, the text '... worldwide' is written in a smaller, white sans-serif font.

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Dialogue and understanding in focus

ALECTIA has a unique position as consultant to the international dairy and food industry, based on more than 60 years of experience. The company has its roots in the Scandinavian traditions for pure and high quality food and dairy products, and has developed a specialized knowledge in combining hygiene and optimized operations resulting in highly effective production facilities.

ALECTIA consultancy services are based on dialogue and understanding. We offer advice during the entire process – from the very first idea until the project is completed and a new processing line or facility is in operation. We use a structured delivery model with clearly defined deliverables in the different project phases.

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