FOOD SAFETY
New ideas to ensure consumers’ wellbeing

BARGOLINK Competitive barges
HAGOROMO Feeding Japan’s taste for pasta
FOOD SAFETY
A panel of Bühler and industry partners debates ways to raise food safety ahead of new FDA regulations.

FOOD INNOVATION CENTER, USA
Bühler’s lab in Minnesota tests new ideas for safe machinery and processes.

CUSTOMER CASES

HAGOROMO FOODS, JAPAN
How this food products company meets the growing demand for premium pasta.

CANADA BREAD, CANADA
Hamilton, Ontario, is home to Canada’s largest and most advanced bakery.

MEYERHANS MILL, SWITZERLAND
A 100-ton wheat mill introduces Bühler’s “New Art of Milling” to Swiss firm Meyerhans.

BIG BAZAAR, INDIA
The Future Group uses Bühler machines to sell premium wheat at its Big Bazaar stores.

CHRYSLER, CANADA
The Carat 320L Compact die casting system makes aluminum components for Chrysler.
Dear reader,

The topic of food safety has always been an elementary issue for Bühler and its customers and an area in which our engineers have acquired a huge collective expertise over our company’s long history. Food safety equals consumer safety, a matter that is of essential importance for the reputation of our clients and their products. The design of our machines, the blueprints for our plants, and our overall process flows are all geared towards maximizing the safety of the final product.

This issue will become even more important as the US Food Safety Modernization Act comes into full effect, imposing new regulations for process monitoring and controls, inspection and compliance, and proven methods for inactivation of contaminants. At a forum held at Bühler’s North American headquarters in Plymouth, Minnesota, food industry representatives discussed efforts to increase food safety in the context these new rules (see p. 10).

The venue for this expert panel highlighted another way in which Bühler is raising the bar on safety: The new Food Innovation Center in Plymouth will test new ideas, products, and machines and optimize process safety and efficiency in a sanitary environment (see p. 14), illustrating our commitment to safe and healthy food that meets the highest standards.

We wish you a pleasant read.

Calvin Grieder, CEO
BÜHLER EXPANDS IN BRAZIL

Bühler opened its new factory and offices in Joinville, Brazil, in early April. The 14,000-square-meter production facility – it is 3.5 times as large as the existing one – will produce plant and equipment for processing grain, rice, and oilseeds for the food and feed industries in the local market and for export. The target is to achieve a production capacity of 100,000 hours annually.

BÜHLER ACQUIRES TURKISH PELLETING DIE SERVICE PROVIDER

Bühler acquired the Turkish company Tijdhof Tarim in February 2012 and can thus further expand the range of services it offers. Tijdhof Tarim is the agent of pelleting die manufacturer Tijdhof Persmatrijzen, which Bühler acquired in May 2011 and has been renamed Bühler B.V. Oldenzaal. The freshly acquired company with headquarters in Izmir supplies the Turkish and parts of the Near Eastern markets with dies and roller shells. An additional service provided is the reconditioning of used dies and rollers. This service is to be offered even this year through existing Bühler service stations to customers from the feed and biomass industries around the world.

LEYBOLD OPTICS IS NOW PART OF BÜHLER

Bühler has acquired the German company Leybold Optics, a market leader in the field of vacuum deposition equipment. Leybold Optics develops and produces systems for coating glasses and a wide range of other substrates with special thin films. It employs 600 persons at its headquarters in Alzenau (Germany) and in other development and production sites in Germany, the United States, and China. Bühler can thereby expand its know-how and offerings in the field of functional layers. Demand for such coatings is increasing steadily in the optical, automotive, packaging, photovoltaics, glass, and display industries.
The lithium-ion battery (LIB) market is growing. Especially automobile manufacturers plan to invest heavily in the production of LIBs in Europe and North America. The required systems for producing electrode pastes (slurries) can now be supplied by Bühler – thanks to an exclusive cooperation agreement with the Japanese Primix company. Bühler manufactures bead mills even today, which are needed for grinding the raw materials into particles with a size of only a few microns. The next process step is one of the strengths of Primix: Its Filmix mixing technology disperses the particles into a homogeneous paste which allows the electrodes to be coated with very high precision. Now Bühler can integrate this process stage and offer complete systems for making electrode slurries.

There was reason for celebration on 21 March 2012, as Bühler executives officially opened the upgraded factory of Bühler Yijiete Color Sorting (Hefei) Co., Ltd, together with local authorities and some of the company’s main customers. The inauguration of the new facilities came a year after Bühler had acquired Hefei Yijiete Optoelectronic Technology Co. Ltd. The merger combined the Chinese company’s products with Bühler’s optical sorting solutions for a wide range of applications, including affordable products for the Chinese market.
THE FOOD INDUSTRY’S HIGH-WIRE ACT

In everything they produce, food manufacturers seek a delicate balance, knowing that the methods used to make foods safe may affect their quality for consumption. Bühler is forging collaborations to develop a better understanding of the science of food safety, just as regulators prepare to demand this knowledge as a prerequisite for doing business.

By Greg Freiherr  Illustration by Claudia Blum
BUHLER’S NEW FOOD SAFETY CHIEF IN THE US

Rolando Gonzalez has worked both ends of the food safety spectrum, ensuring the standards of a produce company, as well as the quality and safety of food sold across a major chain of US retail stores.

Now, as Bühler vice president of food safety, Rolando Gonzalez has a new charge: promoting a culture of food safety within the company while asserting its leadership as a solution provider to customers.

Both will come by achieving “an understanding of the issues that the industry and our customers are facing in food safety and quality, so that we can remain ahead of the game,” Gonzalez said.

He plans to do so through collaboration with academia, industry, and US regulatory agencies made possible by Bühler’s position as an innovator of equipment and advanced food processes.

The end goal is as simple as it is ambitious — to prepare Buhler and its customers to reach a level of food safety that will eclipse any known today, one that will satisfy regulators and consumers alike.

Knowing how to make food safe while minimizing the negative impact on color, texture, or taste determines the success of a product … and its maker. Bühler is positioning itself as the fulcrum of this balance between food safety and quality, accumulating knowledge about how to inactivate noxious bacteria with minimal negative effect.

These efforts are timely, as the US Food Safety Modernization Act (FSMA) subjects food companies to unprecedented hazards analysis, validation, and record-keeping in the most sweeping new regulation for 70 years.

More than just inactivation

Bühler has found that a deft touch in the application of inactivation technologies can protect the qualities that delight customers, while increasing food safety. Senior Expert Food Science & Technology Beatrice Conde applies Bühler’s expanding knowledge about inactivation processes and food science to come up with strategies to achieve multiple objectives. She has found, for example, that because cooking behavior and texture are related to protein transformation, the drying process can be fine-tuned to achieve the desired texture of a product, such as pasta, while achieving the desired shelf life stability. “If
I know both sides of the desired reaction, I can optimize my processing conditions to balance desired and undesired reactions,” she said.

Regulatory concerns on the horizon
Optimizing processes might be reward enough for food manufacturers seeking to balance overall quality and safety. Soon, however, there will be an added incentive. The scientific basis for inactivation – and its documentation in food processing – will be key ingredients in the food industry’s ability to comply with FSMA.

This new law applies to any company that manufactures, processes, stores, or transports food or feed products. It was written by the US Congress in response to a recent spate of high-profile food poisoning outbreaks and food recalls due to salmonella contamination, according to Kristin R. Eads of the Minneapolis-based law firm Faegre Baker Daniels.

The proactive legislation focuses on preventing outbreaks instead of reacting to them. FSMA requires in-depth hazards analysis and preventative controls, while subjecting companies to audits to verify the effectiveness of processes and heightened record-keeping requirements. It confers new and expanded powers to the FDA, including inspection, detention, and recall authority.

Bühler’s evolving role
Many of the rules required by FSMA have yet to be written by regulators. This is where Bühler comes in. As a catalyst for gathering knowledge about inactivation techniques and the development of advanced processing technologies, Bühler can help reduce food safety risks. This, in turn, could enhance the industry’s opportunity to influence the development of these rules through discussions with the FDA.

Once established, these rules will have a major impact on Bühler customers. By getting involved early, Bühler expects to have the knowledge to provide the guidance and counseling to help its customers not only to handle the regulatory requirements, but to address the issues that make food products both safe and tasty. “We want to contribute to the success of our customers,” said Jens Ostergaard, head of food safety at Bühler. “That means we need to take on the issues that are important to our customers.”

Greg Freiherr specializes in medical technology, having written for nearly 30 years for leading trade magazines and websites. He has also written for the Smithsonian’s Air & Space magazine, and The Scientist.

MANY KINDS OF KILL STEPS
DIL (German Institute of Food Technologies) is investigating several inactivation technologies, including:

- Thermal processes
  - Steam (most widely used)
  - Infrared
  - Ohmic heating
  - Dielectric heating
- Mechanical processes
  - High-pressure processing
  - Homogenization
- Electromagnetic processes
  - Ultraviolet/pulsed light
  - Irradiation
Technology and regulations can serve as tools for ensuring food safety, but they also require the will and ability of an industry to use them. At a forum held at Bühler’s North American headquarters in Plymouth, MN, food industry representatives discussed efforts to increase food safety in the context of FDA plans to regulate it.

By Greg Freiherr

Some food processing plants in the US were built a century ago. The equipment in them may be just as old. Methods to kill health-threatening bacteria are effective, regardless of age, say industry leaders. But they may not meet the rising standards that industry must meet in the future. They certainly will not have the documentation regulators may soon be asking to see.

Food industry experts tackled these issues in early May 2012 as part of a panel discussion focused on the need for industry to re-invest in its infrastructure and the equipment used to process foods. Discussions revolved around the technologies and scientific understanding that underlie the kill steps that inactivate disease-causing bacteria and the procedures needed to prevent recontamination.

A rising tide

Two types of improvements will raise food safety to new levels in the years ahead, according to panelist Beatrice Conde, Bühler’s Senior Expert Food Science & Technology. One will be associated with the hygienic and sanitary design of equipment and facilities, the other with the design and validation of processes.

Through collaboration with customers, Bühler has “learned that cleaning is important,” Conde said. Through partnerships with academia, including the German Institute for Food Technologies (Deutsches Institut für Lebensmitteltechnik, DIL), the company has also broadened its understanding of the proven and yet to be realized capabilities of inactivation technologies.

Panelist Stefan Toepfl, DIL business unit manager for process design, noted that these technologies cannot take all the risk out of food. Food manufacture must balance risk, nutrition, taste, and cost if a product is to be a commercial success.
“The Food Safety Modernization Act will impact and improve public health by raising the bar for food safety.”

Joseph R. Shebuski,
Director of Global Food Safety Products and Processes, Cargill

“Bühler can serve as a facilitator to get people in the same industry to talk about common problems and find common solutions.”

Gary L. Bollinger, Director of Strategic Engineering, MOM

“Testing new processes and sending resulting products for market testing is something you can’t do unless you have the food sanitation setup that Bühler has.”

Stephanie Decker, Senior Engineer, MOM Brands
“We may be able to work with Bühler on pioneering new technologies that we can both use in food and industrial applications.”

Ted Van Egdom, Vice President of Manufacturing, EcoSynthetix

“We take a comprehensive approach so that we can prioritize the most important needs and opportunities.”

Thomas DeBoom, Manager of Process Engineering, General Mills

“Kellogg’s does not want unique equipment. Safe food is an industry issue – not a competitive one.”

Steve Richey, Director of Morning Foods Process Engineering, Kellogg’s
Investing wisely

Panelist Thomas DeBoom, manager of process engineering at General Mills, told the audience that aging equipment and manufacturing plants are opportunities to invest. He warned, however, that opportunities are not all equal and must be addressed inclusively.

“We take a comprehensive approach so that we can prioritize the most important needs and opportunities,” Thomas DeBoom said. “You want to be sure that the steps you take are the right ones, that you can build on them and continue to make progress.”

There are big opportunities for improved sanitation in the re-design of equipment. The knowledge to optimize designs comes from understanding the needs of the customer, said panelist Ian Roberts, Bühler’s chief technology officer. But even the best technological advances can be undone by poor sanitation associated with the plant or by workers who mishandle products. Companies, therefore, must invest in worker training as well as in equipment and infrastructure.

Team effort

Collaboration with equipment suppliers will be crucial, according to panelist Joseph R. Shebuski, director of global food safety products and processes at Cargill. Enhancing processes and then turning them into industry-wide best practices would raise the standard for food safety if the necessary technologies were commonly available.

Steve Richey, Kellogg’s director of morning foods process engineering, agreed, saying after the panel discussion that Kellogg’s does not want unique equipment. Safe food, he said, is an industry issue – not a competitive one.

“When we don’t provide safe food as an industry, it affects all of us as individual manufacturers,” he said. “So for us to have a common set of standards that everyone could count on would not only provide everyone with safe food, but it would provide an attitude that the consumer can expect safe food from all of us.”

Validating kill steps

Sanitation will help keep food safe, but when the raw material is contaminated before processing, inactivation is needed “regardless of the hygienic measures you take,” said Stefan Toepfl. Threats today are typically handled by kill steps proven over decades of use. But when the Food Safety Modernization Act takes full effect, US regulators will want to be convinced with scientific data that inactivation methods really work.

“We cannot avoid the fact that this is going to cost money,” Joseph Shebuski said, “but it is the right thing to do because it is going to impact and continue to improve public health by raising the bar for food safety.”

Teamwork within the industry may be critical when validating and then documenting the effects of methods to inactivate disease-causing bacteria. By working together, industry might gain the necessary knowledge more quickly and cost-effectively.

Commenting on the need to work together, Gary L. Bollinger, director of strategic engineering at MOM, cautioned after the panel discussion that companies must be careful not to cross the lines of ethical behavior in terms of fair trade. Equipment suppliers have a key role in preventing this from happening.

“I think a company like Bühler can serve as a facilitator to get people in the same industry in the same room to talk about common problems,” said Gary Bollinger, “and to find common solutions.”
A TEST LAB FOR NEW IDEAS

With 66 percent of the world’s flour going through its equipment, Bühler must innovate to make food processing safer and more efficient. The new Food Innovation Center is a test lab for new ideas, foods, and machinery. Here, equipment can be demonstrated and customer-strained in their use.

By Greg Freiherr  Photos by Tim Davis

Innovation is the cornerstone of success, yet many of the tools and techniques underlying food processing are as old as food processing itself. Ideas for improved hygiene, safety, and better taste and consistency of food are making themselves felt in the food industry and academia. The problem is finding a home for these ideas to settle, to be studied, and to take form.

Bühler’s Food Innovation Center, unveiled in early May at the company’s North American headquarters in Plymouth, Minnesota, is one solution. At this center, Bühler’s first to operate at food-grade level, raw materials are cleaned, extruded, dried, and finished. New approaches to quality and food safety will be proven; formulations will be developed; new food products will be created; and batches will be produced for consumers to try.

Built by Bühler, this center demonstrates the company’s commitment to food safety, said Joseph Shebuski, Director of Global Food Safety Products and Processes at Cargill, who toured the plant on the first day of its opening. “It gives companies in the industry a chance to work through real-world issues and problems together with Bühler in a hands-on way,” he said.

A nexus of innovation

“This lab is a showcase of everything that Bühler can do,” said Jenni Harrington, the center manager leading the tour of dozens of food industry executives. “We design the plant controls. We design the electrical installation. We can do the whole package for you. We are a complete solution provider.”

BÜHLER FOOD INNOVATION CENTER

Room uses:
- Raw material preparation
- Extrusion
- Drying/Finished products

New equipment showcase:
- Sanimix batch mixer
- AeroDry™ high sanitation conveyor dryer

Other equipment:
- POLYtherm™ preconditioner
- POLYtwin™ twin-screw extruder
- Hammer mill
- Bulk packaging
Each visitor exited with new ideas on how Bühler’s Innovation Center might benefit their companies and the industry. Ted Van Egdom, Vice President of Manufacturing at EcoSynthetix of Burlington, Ontario, noted that his company had begun operating a new extrusion research facility in October 2011 similar to the one just opened by Bühler. He hopes that Bühler and EcoSynthetix staff might collaborate on R&D at both facilities. “We may be able to work together on pioneering new technologies that we can both use in food and industrial applications,” he said.

Because the Bühler Food Innovation Center is sanitary, customers can try new processes and send resulting products for market testing, said Stephanie Decker, Senior Engineer at MOM Brands. “This is something you can’t do unless you have the food sanitation setup that Bühler has,” Decker said. To Ian Roberts, Bühler Chief Technology Officer, the new center represents a sea change in the role that Bühler will play in the future of the food industry.

Personifying this is Beatrice Conde, a senior expert at Bühler in food science and technology and the director of the company’s analytical laboratory. Conde is charged with bringing together the different aspects of food science and industry, exploiting synergies in food safety, raw material processing, and nutrition. “We can apply our strong know-how in food material transformation to tune the end product properties though processing,” she said.

Test lab – tailored for training

Bühler is making food safer by designing machines that, because they are easy to clean, reduce the risk of contamination, as well as cross-contamination when lines are switched to process different foods. Automation design in Bühler machines makes food processing more efficient while further boosting safety by decreasing safety risks associated with worker error. The Food Innovation Center is where such advances will be developed and tested. This center allows Bühler to test technologies for the company’s product portfolio. Some may come from collaborative customer interactions at the center. Some corporate customers might even work on their own, renting space and time at the facility to develop, test, and prove new ideas on Bühler equipment or produce limited test runs of foods that can then be test-marketed.

The Food Innovation Center will also host workshops to train customers on Bühler equipment and in food processes and safety. The company has long trained workers at external locations, said Ian Roberts, but now they can be trained at a Bühler facility tailored to the company’s own purposes – and those of its customers.
Hagoromo Foods, one of Japan’s premier food products companies, invests in Bühler equipment to meet the growing demand for premium pasta products among Japanese consumers.

By Charles T. Whipple  Photos by Hans Sautter
Shimizu on the coast of Japan’s main island, home to Honshu one of Japan’s best-known food products companies, Hagoromo Foods.

Hagoromo Foods’ original products were from the sea, and even today, its Sea Chicken brand means premium canned tuna and other seafood. Founded as Goto Canning in 1931, the company enlarged its product range with macaroni and spaghetti in 1962, choosing Bühler machinery for the plant from the start. Its Poporo brand of spaghetti made inroads into the very competitive domestic market, especially after Hagoromo Foods adapted the single-portion wrap used with Japanese noodles for individually banded 100-gram portions.

Hagoromo Foods’ original Bühler machines remained in service for a remarkable 50 years. The pasta plant was expanded in 1990, as demand for pasta products continued to grow and the company installed new long pasta and short pasta lines in order to gain efficiency, optimize production costs, and prepare for future requirements regarding safe and hygienic production.

“Before starting construction of the new production plant, a project team decided which equipment and technology to use,” said Managing Director Akiyoshi Ishigami. “Of course, we knew Bühler very well, but we did not assume that Bühler would automatically be the manufacturer of the pasta lines in our new facility.”
Hagoromo Foods’ new pasta plant
As the pasta plant project team began its search for suitable suppliers, Bühler, of course, was a prime contender, given the years of close cooperation with Hagoromo Foods. Nevertheless, the team vowed to leave no high-end production system out of consideration. An Italian competitor stood high in their estimation in the beginning. After all, Italy is the birthplace of pasta, and Italians eat on average at least ten times more pasta per year than the Japanese.

The team flew to places where the latest pasta lines were in operation and showered the plant owners with questions. How much down time is necessary when the lines are in full production? How often must the dough mixing troughs be cleaned, and how long does it take? How many people must man the line? How long does it take to extrude pasta from semolina and water?

Gradually, the team narrowed down its range of choices, and Bühler remained near the top. “We took bags of the actual durum semolina that we use here in Japan all the way to Europe to test pasta machines,” said Ishigami. “Cleaning the conventional mixing troughs was back-breaking and time-consuming, and we wanted to get away from that.”

The decision to go with Bühler’s newest and best
Why did Hagoromo Foods decide on the Bühler Poly-matik® system? Ishigami said: “With our old system, it took 20 minutes to mix semolina and water into dough for pasta. When we took our own semolina to Bühler to run

“We have a long history of noodle culture in Japan, so it is no surprise spaghetti caught on in the 1950s.”
Akiyoshi Ishigami
tests, the twin-screw mixer had dough ready for extrusion in 20 seconds! Really. And the quality was superior to our old 20-minute dough.”

Of course, the speed of the machine was not the only consideration. Hagoromo Foods discovered that the pasta press didn’t need to be taken apart once a month for tedious cleaning. The system was placed in a clean room, and contamination could be held to virtually zero. What’s more, Polymatik® always maintains a first-in, first-out principle, again guaranteeing hygiene. Hagoromo Foods’ new pasta plant team recommended Bühler, and the project moved to the next stage. On 23 January 2012, the new Hagoromo Foods plant officially started production. Fourteen-ton trucks deliver the durum semolina in a continuous stream. For example, the short goods line can produce one ton of macaroni per hour. The pasta product is mixed, extruded, dried, bunched, packaged, and shipped without anyone ever touching it. The long goods line has a nominal capacity of two point five tones of packaged spaghetti per hour. “We’re not at full production yet,” Ishigami said. “The long product line for spaghetti is close to full capacity, but short goods have yet to reach their real potential.”
Pasta masterclass
Hagoromo Foods’ Fujisan plant in Shimizu not only produces extremely high-quality pasta in a clean room environment, but it also offers consumers a chance to see the plant at work. From the observation room, visitors can overlook the production line and watch samples being taken. In a kitchen specially set up for teaching, big-name chefs hold cooking classes and teach delicious ways to use spaghetti and macaroni.

Hagoromo Foods’ entry into the pasta market in 1962 marked the beginning of the pasta growth era in our country, said Ishigami. “Between 1962 and 1965, domestic production jumped from 30,000 to nearly 60,000 tons. And growth continued. Even now Japan’s pasta market grows at about 2 percent per year.”

Ishigami smiled. “With our new Bühler equipment, even though we are still learning how to get the absolute best from the equipment, we can market pasta that is markedly improved. Its texture fits the Japanese palate very well, and its quality is impeccable.”

2012 will be the first year of production at the Hagoromo Foods Fujisan pasta plant. As the operators of the system gain experience and minute adjustments are made, the company expects the quality of its pasta to improve even more.

As Hagoromo Foods moves into the forefront of the Japanese pasta industry, it relies confidently on the continued support of Bühler to provide the very best.

Charles T. Whipple is fluent in Japanese, and his articles on Japan have appeared in such publications as Time, Newsweek and The Herald Tribune.

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HAGOROMO FOODS (pasta business related)

1931
Starts canning tuna and other seafood as Goto Canning

1962
First pasta plant fitted with Bühler equipment

1987
Company adopts the name of Hagoromo Foods Corporation

2009
Hagoromo Foods makes the decision to build a new pasta plant

2010
Bühler signs agreement with Hagoromo Foods to provide production lines for both long and short goods, with Polymatik® pasta press units

2011
Installation complete and test runs begin in November

2012
Long and short product lines in full operation
FROM STEEL TOWN TO BREAD CITY

With its new, Bühler-equipped factory, the Canadian city of Hamilton boasts the country’s largest, most innovative bakery.

By Marjo Johne  Photos by Raffael Waldner

Canadians have a nickname for the city of Hamilton, an hour’s drive west of Toronto. With a 160-year history of producing steel and iron, this community of about 505,000 residents is referred to frequently as the steel capital of Canada.

But last year, when Canada Bread Company Limited opened a CAN$100-million, 385,000-square foot (35,800-m²) facility in Hamilton, the city acquired a new reputation; it became known as the home of the country’s largest and most technologically advanced bakery. “It’s a state-of-the-art facility – from the recovery of raw material to the management of waste,” says Richard Lan, chief operating officer at Maple Leaf Foods Inc., which owns Canada Bread.

It all starts with Bühler
The new factory’s highly efficient baking process begins with innovative Bühler technology. To eliminate inaccuracies in the critical batching stage at the start of the baking process, Canada Bread installed Bühler’s advanced material handling technology – a turnkey solution that automatically measures and dispenses all ingredients into the mixer.

A key feature of the system is Bühler’s WinCos process control system that manages, monitors, and records every step of the batching process, eliminating the need to create paper records and ensuring traceability of the whole process. “Everything is automatically monitored and logged,” says Brian Rossi, Maple Leaf Foods’ director of engineering. “So we can ensure the process is repeatable, which means we can achieve high quality products consistently.”

Sanitation and worker safety comply with highest industrial standards. With all ingredients stored and handled through an automated system, handling and feeding are performed accurately and reliably according to recipe – a benefit for product quality and for the operation.

A proven solution supported by strong service
“The decision to install Bühler technology in the new facility was the result of months of extensive research,” says Brian Rossi. Canada Bread, which consolidated
three aging bakeries in Toronto into its new mega-facility, wanted a proven solution delivered by a company that could provide solid implementation and customer support services, he says. The technology also needed to integrate seamlessly with other systems in the company’s baking process.

Bühler’s material handling system for industrial bakeries met all of Canada Bread’s criteria, says Brian Rossi. “We did a pretty robust technology scan around the world to see what a best-in-class system looks like,” he says. “We found what we were looking for at Bühler.”

Expertise and efficiency to overcome challenges

From the start of installation to commissioning of the system, Bühler had about seven months to get the job done. “We were integrating the Bühler system with the rest of the plant and other systems at a time when the physical structure of the facility itself was still being built,” recalls Dominique Kull, Bühler’s manager of bakery supply systems in Minneapolis, Minnesota. Therefore, professional project management and coordination of all suppliers is essential.

“Bühler’s technical expertise and efficient project management definitely eased implementation,” says Brian Rossi, even with the glitches one would expect from such a major undertaking. Today, Canada Bread bakes about 240,000 loaves of bread each day in its new facility. Thanks in large part to Bühler technology, the company’s production lines are moving faster, and its baking process is more efficient, accurate and safe. “We rely quite heavily on Bühler technology and engineering,” says Mr. Rossi. “It’s an important part of our operations.”

Marjo Johne lives in Toronto. She has worked for national dailies and magazines including The Globe and Mail, National Post, and CMA Management magazine.

Top left: Enclosed bulk truck receiving. Top right: Bag tipping station including control sieve. Bottom left: Field mounted operator station for process control. Bottom right: Bread conveyor after oven.

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BAKING INNOVATION

Canada Bread’s Bühler solution includes:

– Bulk ingredient storage
– Fully automated handling system for main and micro ingredients
– Sieving machines for white and whole wheat flour
– Discharge unit with precise liquids metering
– Pneumatic conveying system
– WinCos process control program with recipe and batch control and data management
"MORE THAN FLOUR"

The philosophy of Meyerhans Mühlen AG is “More than Flour”. In order to continue to offer its customers “More than Flour” in the future, Meyerhans constructed a new state-of-the-art 100 t/24 h mill based on the Bühler principle of the “New Art of Milling”. The new flour mill satisfies the most rigorous requirements in terms of sanitation, yield, performance, and flexibility.

By Herbert Bosshart  Photos by Raffael Waldner

With its grinding capacity of 380 t/24 h, Meyerhans Mühlen AG is a small company on an international scale. But the family-owned business, which has evolved over the generations, is the third-largest in the Swiss flour market. Meyerhans Mühlen AG owes this position to its pronounced market- and customer-oriented business model. “Our strengths are high quality and the wide variety of our products,” explains Diego Della Cà, CEO of the Meyerhans Milling Group. “We are known in the Swiss flour market for our specialty flours.”

“The Swiss flour market is something special,” says Della Cà. “Artisanal and industrial bakeries produce a large number of different loaves and bakery products. We therefore offer our customers a range of high-quality flours. They can also order customized flour mixes from our company.” In its in-house product development department, which is headed by Dominic Meyerhans, specialists and test bakers provide additional services to Meyerhans customers. At the request of customers, they develop new flours and flour mixes as well as their own end products.

Special mill

“Special flours call for a special mill,” says Della Cà, summarizing the considerations that prompted the company management of Meyerhans Mühlen AG to start planning a new mill in 2009. The requirement profile was clear. Della Cà: “We had exact ideas of the criteria that our new mill was to satisfy. For example, it was expected to produce all basic flours as well as extremely bright flours – and this with the highest possible yield. The new facility was also to be based on an uncompromisingly stringent sanitation standard while requiring minimum cleaning. Lastly, we wanted a fully automated and recipe-controlled mill that would also ensure retraceability and documentation of the products made.”
MEYERHANS MÜHLEN AG

1784  Community flour mill in Weinfelden goes into service
1890  Acquisition by the Meyerhans family
2012  Meyerhans Mühlen AG
      Family-operated business owned by the Meyerhans and Hotz families

Four mills:

- **Weinfelden**: 100 t / 24 h
  - Flour mill
  - Headquarters / administration

- **Malters**: 110 t / 24 h
  - Flour mill
  - Development / laboratory

- **Villmergen**: 65 t / 24 h
  - Wheat and durum mill
  - Specialty mill / flake production (oats / barley / wheat / spelt)

- **Rheineck**: 30 t / 24 h
  - Corn (maize) mill

Total storage capacity: 72,000 metric tons

Products:

- Main flours, specialty flours, flour blends for bakery products
- Durum semolina for pasta
- Corn (maize) semolina for polenta
- Oat flakes

Customers:

- Artisanal and industrial bakeries
- Small food businesses and food industry
- Retailers

Employees: 120 full-time employees
“We knew right from the outset that Bühler would build our new mill,” says Della Cà. “We never gave consideration to any other partner. We believe that Bühler is the only company in the world capable of building the mill we imagine. In addition, Bühler’s track record has been outstanding for decades. We speak the same language – verbally and technically.”

The new mill of Meyerhans Mühlen AG at its headquarters in Weinfelden in northeastern Switzerland went into service in early 2012 and was officially inaugurated at the end of April 2012.

New Art of Milling
The new Meyerhans mill achieves a daily grinding capacity of 100 metric tons of bread grain. It has been entirely designed and constructed on the basis of the Bühler principle of the “New Art of Milling.” In order to satisfy the high sanitation requirements, all the components in contact with the product are made of stainless steel. Moreover, all the corners in the new mill building are rounded, which facilitates cleaning. Controlled air management inside the building – with controlled air supply and heat recovery – ensures a consistent climate throughout the mill building.

The flow chart of the new Meyerhans mill is based on several break, grading, and reduction stages separated by quality grades. This guarantees a top flour extraction rate. The heart of the plant, the grinding section, incorporates the three Bühler stars – Antares roller mill, Sirius sifter, and Polaris purifier.

Recipe-compliant blending
One of the key plant sections contributing to fulfilling the customer’s individual needs is blending. Della Cà: “We must be in a position to blend the required flours within a short time from the different base flours and ingredients, both for bulk deliveries and for bagged products. It was therefore very important to us to have a high-capacity and flexible blending system as well as large intermediate storage capacities.” Thus, the new mill has no less than 49 storage bins for the different base flours, each capable of holding 5 to 80 tons. The actual blending section features

Components of the new Meyerhans mill (from left to right): Feed hopper of the Sanimix mixer; roller floor with Antares roller mills; gravity spouting floor with Polaris purifiers; inlet sight glass of the first break pass.
a newest-generation Sanimix batch mixer and several differential batching scales for recipe-compliant blending and mixing. In this, the WinCos control system plays an important part. It primarily monitors the different process operations and controls them in a highly efficient manner. This Bühler-designed control system also ensures product retraceability, process logging, and recipe management. Last, not least, WinCos monitors the energy consumption of the entire plant and automatically fine-tunes it as required.

“Our new mill has been running smoothly and to our full satisfaction since it was started up, which we cannot take for granted with such a complex plant.”

Diego Della Cà

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REINVENTING WHEAT

The Future Group is using Bühler machines to sell premium quality wheat at its Big Bazaar stores, reviving the age-old Indian practice of knowing your wheat before it is milled into flour.

Not so long ago, the courtyards of many Indian homes were adorned by old saris spread over cots in open where cleaned wheat was left to have fresh air. It was then taken to the neighborhood mill – known as a chakki – where it was stone-ground into flour, known as atta, and used to make chapatti bread. The quality of the chapatti largely depends on the quality of the atta and thus on the quality and variety of wheat. Most householders therefore preferred to choose the wheat rather than buy readymade atta.

With the launch of readymade atta brands, the practice of choosing the wheat is dying out, at least in the big cities. Supermarkets in most towns and cities of India sell branded atta, rice, and pulses. Though the supermarkets offer convenience, customers still want to know what goes into their atta. That’s where the Big Bazaar supermarket chain saw an opportunity.

Closing the quality gap

Big Bazaar, part of the US$2.67 billion Future Group, is a chain of 214 stores in 90 cities and towns in India. It is designed as an agglomeration of bazaars (Indian markets) offering a wide range of affordable merchandise. For the last three years, Big Bazaar had been selling loose wheat that customers could scrutinize before it turns into atta. But the quality of the wheat was not up to the mark.

“The Indian consumer was not being served satisfactorily insofar as wheat was concerned,” says Narendra Baheti, managing director of Premium Harvest, one of the back-end companies of the Future Group that supplies wheat to the Big Bazaar stores. “There was a huge gap between the quality on offer and the customer’s expectations,” he adds. And the traders were not willing to invest in processes to supply better quality wheat.

That’s when Premium Harvest approached Bühler India. “We knew of Bühler’s reputation. But we were not sure how the Bühler machines would perform on wheat,” says Baheti. No other plant in India is using Bühler machines only for wheat.
Outstanding results
To try out the machines, Premium Harvest sent out about six different product commodities such as Dals, Pulses, Wheat stock to the Bühler application center in Bengaluru. “The results were outstanding,” says Madhav Bokil, chief of operations and projects at Premium Harvest. “Usually, the machines like destoner also take away some good wheat during the process of cleaning. But in this case, only the bad wheat and impurities were removed.”

The company then chose a site at Nimrani in Khargone District, an industrial area in Madhya Pradesh, to set up an 18,000-square feet (1,672 m²) plant that would clean, grade, colour sort, and pack wheat procured from the nearby trading hubs for agricultural produce. “Madhya Pradesh is the wheat bowl of India. The best quality Sharbati wheat is also grown in this region,” says Baheti.

Wheat received from farm contains a broad variety of contaminants. The Bühler machines are used for cleaning, removing impurities and substandard grains, and also for separating the low-grade wheat from the premium grain. The Sortex machine sorts out all kinds of impurities like mud balls, defective grains, including those with color defects.

Fresh-ground wheat while you wait
“If pre-cleaned wheat comes to our plant, we can send it straight to the Sortex machine without sending the wheat through classifiers and destoners,” says Bokil. The plant is operated by only two to three persons.

Only the good-quality wheat finds its way to the Big Bazaar stores, where the wheat is ground right in front of the customer for free. “This way, our customers are 100 percent sure of the wheat they are consuming,” says Baheti. Premium Harvest introduced wheat from its Nimrani plant at the Big Bazaar outlets around February this year. Since then, “the Big Bazaar outlets have witnessed a tenfold increase in the sale of wheat,” Baheti adds.

The company now wants to take this project to the next level. As a first step, it will increase the throughput of the Nimrani plant from 48 to 50 tons of wheat a day to 80 tons a day by September 2012. Baheti also wants to set up an Atta Mill at the same site and get into branded atta.
The next step is to integrate the value chain in order to offer complete traceability of wheat. This would be achieved through contract farming. Premium Harvest is waiting for Bühler to launch its new technology Atta Milling Plants.

The company also plans to sell its own brand of atta not just at Big Bazaar, but in other shops as well. “Once customers know of our premium quality, they are willing to pay a premium for our brand,” adds Baheti. With the help of Bühler, Big Bazaar has made a beginning in that direction.

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PREMIUM HARVEST,
A FUTURE GROUP COMPANY

– Business: Cleaning, grading, sorting, and packaging of wheat
– Location: Madhya Pradesh, India
– Plant commissioning: November 2011
– Daily throughput: 48–50 tons of wheat

The Sortex Z+ optical sorter is known for its accuracy for a best yield.
HEAVY-DUTY MACHINE FOR LIGHTWEIGHT DARTS

Automobile producer Chrysler Group LLC wanted to increase fuel efficiency by incorporating more light-weight components. The solution was a Bühler Carat 320L Compact die casting system that can produce structural parts out of aluminum.

By Ron French  Photos by Brian Peters
When most people see a new 2013 Dart rolling down the highway, they see a sporty new car from Dodge. What Andreas Bahr sees is a new era in die casting. Inside every Dart is a suspension cross support produced at the Chrysler Etobicoke Casting Plant—a component that helps save energy. The cross support is made of lightweight aluminum instead of stamped, welded steel. That part is produced at only one plant in North America, on die cast machines manufactured by Bühler.

The 300 workers at the 286,000 square-foot (26,570 m²) casting plant in Etobicoke, Canada, make high-pressure die casts of transmission components, engine mounts, and other automotive parts. In 2011, Chrysler sought ways to decrease the weight of its new model, the Dart. The automaker needed to increase fuel efficiency, both to save consumers money at the gas pump and lower CO₂ emissions. The facility needed to produce aluminum suspension cross members for vehicles at a Chrysler assembly plant in Belvidere, Illinois. By making them from aluminum instead of heavy steel, the vehicle would weigh less without losing strength. European automakers had produced aluminum structural components before, but it had never been done in North America.

Power in a small footprint
The biggest machine in the plant had a clamping force of 1,400 metric tons; casting cross members required 3,200 tons of force. Most casting machines capable of producing the cross members were too large to fit into the building. The Bühler Carat 320L Compact was a perfect solution. Five meters shorter than other machines with the same tonnage, it allowed complex structural components to be cast from aluminum within the existing building. Built at the BühlerPrince facility in Holland, Michigan, the first Carat 320L Compact was operational in early December.

“The very first shot looked amazing,” said Bahr, senior manufacturing engineering manager at the Chrysler Etobicoke Casting Plant. “It looked a lot better than we had anticipated.” Flashing is inherent in high-pressure die casting and costs time and money to remove from components. Sharp, thin edges of flashing can be safety hazards for employees. The Carat minimizes flashing by featuring hydraulic locks which spreads pressure more evenly across the die. Project manager Haroon Ramjohn summed it up: “For dimensional tolerances, it performs a lot better. There is less scrap and less re-work.”

Helping “future-proof” the plant
Two of the machines are now running at the plant. A third machine is being installed, and two more are on order. The cutting-edge technology featured in the Carats will likely be the new standard for the automotive industry, which is under increased pressure to increase vehicle fuel efficiency.
Repsentatives of Bühler supervised the installation of the machines and have been at the plant almost daily ever since. One plant manager compared it to buying a new car and having a mechanic set up shop in your garage, constantly checking the oil level and the pressure in the tires. “That support allowed us to launch weeks ahead of our schedule,” Ramjohn said. “We have not had any issues with the machines, for something this complicated, you can’t complain.”

Exploring the capabilities
Etobicoke managers are still learning the full capabilities of the Carat 320Ls. Managers expect to use the machines for other auto parts in the near future, as Chrysler uses more aluminum components. For now, every Dodge Dart is evidence of Chrysler’s commitment to decreasing CO2 emissions, and Bühler’s leadership in the die cast industry. “It’s really a perfect partnership,” Bahr said.

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BÜHLER CARAT 320L COMPACT

Injection force (dynamic): 814 kN
Injection force (intensified): 2,076 kN
Max. locking force: 32,000 kN
Die height: 988–2,000 mm
Weight: 209 t
Dimensions incl. safety gates: 14.2 x 5.3 x 5.0 meters

“What drove the decision to go with the Carat was the programming capability and the virtually unlimited modification capability of the shot profile. Other machines have a very limited amount of adjustability.”

Andreas Bahr, Senior Manufacturing Engineering Manager, Chrysler Etobicoke Casting Plant
VEGA – THE NEW STAR OF THE “NEW ART OF MILLING”

The new VEGA MTVA high-capacity grain cleaner is characterized by its accurate grading action and its consistent sorting capacity. Other outstanding features include top reliability thanks to excellent processing quality and shorter downtimes thanks to its systematic service-friendly design – and all this on one third less space and with up to 50% less energy input.

VEGA, the new star of the Bühler “New Art of Milling,” has convinced the grain processing industry since it was presented at the Ipack-Ima in Milan in March 2012. The VEGA is suitable for cleaning or grading wheat, durum, rye, oats, rice, corn (maize), or barley – with or without an upstream gravity separator for removing low-density particles. Thanks to its extreme flexibility, its high separating efficiency, its low energy consumption, and its ease of operation, the VEGA MTVA high-capacity grain cleaner fulfills the high requirements of today’s grain milling industry. The new VEGA is available in three sizes with variable throughput capacities ranging from 15 to 200 t/h.

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SANIMIX – FOR FAST AND SANITARY MIXING

The new Sanimix MRMA developed by Bühler is distinguished by its homogeneous mixing action, its unrivaled level of sanitation, its sturdy and user-friendly design, and its extremely short mixing and discharge times – be it as a paddle-type mixer for producing dry mixes or as a chopper mixer used for processing liquid or pasty ingredients.

The mixing trough of the Sanimix is welded so as to be completely without gaps, which rules out product cross-contamination. Its design guarantees consistent and reproducible mixes. Thanks to its large service doors, the new Bühler mixer is easy to clean. The horizontal mixing process – combined with the large discharge gate extending across the entire mixer width – significantly reduces the mixing and discharge times and allows top throughput capacities to be achieved. The Sanimix MRMA is available as a paddle-type or chopper mixer in four sizes and can optionally be adapted to a wide range of needs.

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Transporting grain by barge is an ecological and cost-efficient alternative to railway and truck haulage. Bühler’s low-maintenance Bargolink unloading system makes this mode of transport even more competitive.

By Christopher Findlay  Photos by Raffael Waldner

Since time immemorial, ships have been used to deliver bulk goods over long distances, using the river current as a natural force to carry them downstream or yoking draft animals for upstream transport. Although trucks and trains have taken up a large part of this task in the modern age, barges are still a viable alternative for many goods.

Another plus is the ability to use an existing network of rivers, canals, and locks, which decongests the overland highway system. Continental Europe is crisscrossed by waterways. From the gateway ports on the English Channel and along the northern Mediterranean, grain is distributed to the inland markets of Western and Central Europe by barges. Bargolink serves the needs of customers all along this system of waterways – mainly grain handlers and processors whose business model depends on short berthing times and reliable high-volume unloading capacities.

This mechanical process is not only easier on the wheat, causing less wastage and defects and keeping the grain in a higher grading; it is also more cost- and energy-efficient than pneumatic unloading. Furthermore, Bargolink is less susceptible to breakdowns. A pneumatic system’s fan is easily degraded by the fine particles it conveys; Bargolink’s mechanical process means longer uptime, lower operating costs, less expenses on maintenance and spares, and half the energy usage.

More economical, more ecological
This makes the whole unloading process more economical and environmentally sustainable, especially considering the added demurrage costs to vessels if a pneumatic system breaks down. Lastly, Bargolink operates at lower noise levels and does not generate lower frequencies than pneumatic systems whose loud droning and changing volumes may constitute a health hazard.

With all these features, Bargolink enhances the viability of inland shipping, a competitive mode of transport that has been a mainstay of international trade since its very beginnings.

Straddling dry land and water
Here is how it works: A marine leg is positioned amidships in the material to be unloaded, where the marine leg moves through the product. A feeding screw digs into the grain in the ship’s hold and lifts it up onto a horizontal chain conveyor that carries 150 to 300 tons of cargo per hour to the port’s storage units.
A ship carrying 3,000 tons of goods is equivalent to 50 railway cars or 100 trucks.

"HUGE POTENTIAL"

Bargolink’s advantages are low operating costs, efficiency, careful cargo handling, and compliance with safety regulations, says Product Manager Vincent van der Wijk.

diagram: What is new about the Bargolink system?
V. v. d. W.: The use of mechanical unloading was previously only feasible with larger ships. Bargolink’s feeding screw brings the advantages of that approach – low energy use and less wear and tear – to barges.

diagram: Do you think more goods will be transported by inland barges in the future?
V. v. d. W.: I am sure they will. In the past decade, the EU has invested enormous sums in its inland waterways, reducing bottlenecks such as sharp turns, locks, and low bridges. The infrastructure is now modern and highly competitive.

diagram: What prospects do you see for markets outside of Europe?
V. v. d. W.: There is huge market potential all over the world. China for instance has been expanding its shipping infrastructure. A Bargolink system will be shipped to Yihai later this summer. In Russia and also on the Mississippi in the US, river barges deliver most of the grain exports to port.
NEW HORIZONS FOR DIE CASTING

The new Bühler Lost-Core technology now enables components with complex cavities to be manufactured by the die casting process. This trims up to 20 percent off the cost of conventional casting processes.

If you want to manufacture cast components in large volumes, you will preferably choose the die casting process. “For producing large volumes, die casting is the best solution due to its high productivity and its cost efficiency,” says Marcello Fabbroni, Head of Product Management and Marketing of the Bühler Die Casting business unit.

But at present, it is not possible to map components with complex cavities in die casting. Such parts include, for example, closed-deck engine blocks, manifolds, or dashboards of cars. Such components are currently made by other casting processes. There, the cavities are recessed by means of sand cores, which must subsequently be removed from the components at high cost. This process is therefore called the “Lost-Core” process.

Salt cores instead of sand cores

However, sand cores are usually unsuitable for die casting purposes. “They must be made so stable for the die casting process that they are hard to remove later on,” explains

PROCESS WINS INNOVATION AWARD

The new Lost-Core technology developed by Bühler has won the renowned METEF Innovation Award 2012 in Verona in the category “Technology & Processes.” According to the jury, the new process strengthens the competitiveness of the die casting industry by expanding its range of products.
Hermann Roos, Process Engineer in the Bühler Die Casting business unit. For this reason, salt cores were chosen as a substitute which can be washed out with the aid of high pressure. The benefit of salt cores is that they do not leave over any sand grains, which might cause engine damage. This eliminates the need for costly quality checks which are required today in sand casting. Moreover, Bühler’s Lost-Core technology allows components to be made with complex geometries in a single casting which up to now had to be assembled from several components.

Optimized process

Over the past two years, the Applications Team of the Die Casting business unit has optimized the composition of the salt as well as the melting and processing conditions. Today, it produces the salt cores themselves by die casting:

A test facility in Uzwil allows preproduction runs to be cast for customers.

Though the process is still undergoing continuous refinement, the application is now within reach: The team around Hermann Roos is developing different parts together with European customers, mainly from the automotive industry. But Marcello Fabbroni stresses the fact that the new Bühler Lost-Core technology is promising not only for carmakers: “In the future, it will generate entirely new die casting markets with a large growth potential.”
“PERHAPS WE’LL COME UP WITH ANOTHER COOL IDEA”

Searching for interesting projects for shaping the future, the people in charge at Bühler discovered Felix Finkbeiner. This young German, who is 14 years old today, is one of Europe’s most innovative teenagers and has accomplished a lot with his Plant-for-the-Planet project. Together with Bühler, Felix develops promising projects. He tells us more about them in this interview.

In February 2011, Felix Finkbeiner delivered a talk during the opening of the International Year of the Forests which was announced in the course of the 9th meeting of the United Nations Forum on Forests (UNFF) in New York.
Felix, together with a number of friends, you launched a global initiative called Plant-for-the-Planet. How did you manage to do all this?
Felix: I set out with a vision and the knowledge that we children and youths do not have to wait until we have grown up. We can move things even if we are not yet adults if we only team up as a big global family! This vision inspired a lot of people to join us. I myself actually did not do that much.

Together with grown-ups, you planted 12.6 billion trees, developed your own chocolate, and launched the Future Fee project. In this project, chocolate producers commit themselves to paying one euro for each ton of chocolate that they make. How did you hit upon the idea of Future Fee?
Felix: Together with Bühler. The idea behind Future Fee is that a whole industrial sector joins forces to help. But when we presented the idea for the first time, responses were very reserved. It took a second attempt before twelve companies decided to get involved.

How many companies have you so far inspired to participate in Future Fee, and about how much money is now coming in?
Felix: Twelve companies. But we are currently talking with another 60 confectionary producers. As yet, we don’t know how much money will be raised.

Bühler helped find the suitable producer for making your chocolate and launch Future Fee with you. Do you have any additional joint projects up your sleeve?
Felix: Not yet. But after all, Bühler is also the world’s leading supplier of plant and equipment for processing rice, wheat, and corn. Bühler cocoa customers have already understood that sustainability is not a mere buzzword, but the only viable concept for our survival. And who knows, we may come up with a cool idea also for the rice, wheat, and corn segments.

MAKING THEIR OWN CHOCOLATE WITH THE HELP OF BÜHLER

When Felix Finkbeiner approached the competent people at Bühler with his idea of making their own chocolate, the team of Thomas Bischof, Product Marketing Manager Cocoa & Chocolate at Bühler, did not hesitate for a minute and helped Felix find a suitable producer. For some months now, the chocolate has been made in collaboration with the Swiss chocolate producer Chocolats Halba and is available in Germany and Austria. In Switzerland, Plant-for-the-Planet is currently looking for a sales and distribution partner.

The special thing about the chocolate is that Chocolats Halba plants a tree for every thousandth bar of chocolate that they make. This means that production of the chocolate is carbon-neutral.

PLANT-FOR-THE-PLANET

- Plant-for-the-Planet was launched in January 2007 by a children’s group around Felix Finkbeiner who was nine at that time.
- The goal: to plant trees in order to compensate for carbon emissions.
- Today, Plant-for-the-Planet is a global movement with 100,000 children and youths.
- Since March 2011, Plant-for-the-Planet has been based on a democratic structure and is headed by a 14-member executive committee whose seats are split up by population.
- To date, as many as 12.6 billion trees have been planted in 193 countries

For more information, go to www.plant-for-the-planet.org
More Than Machines
US customers appreciate Bühler’s full-service approach to Grinding & Dispersion.

American buyers want a package; an entire process technology that starts with raw materials coming in and ends with finished products going out. So Bühler’s US Grinding & Dispersing (GD) business supplies just this. Besides individual machines, it often delivers start-to-finish manufacturing plants to industries specialising in goods as diverse as batteries, electronics, printing inks, coatings and technical ceramics. But there is more. As Customer Service Manager Patrik Mäder points out, Bühler offers a full service before, during and after installation – all provided by GD technology specialists.

Then there are rebuilds, revamps, retrofits and upgrades. Area Sales Manager Korkmaz Oz observes that in super-competitive American markets, customers often prefer to modify and upgrade their existing machinery.

Area Sales Manager René Eisenring is keen to point out that Bühler also supports customers in optimizing production processes in areas as diverse as electrode slurries for lithium ion batteries or novel printed electronics. Fast throughput and maximum utilization of raw materials are preconditions for better efficiency. Bühler offers production process-optimization tailor-made to the requirements of the customer. At the heart of this is a state-of-the-art research and development complex in New Jersey, which offers a comprehensive range of GD technologies and analytics. Since opening in March 2012, its laboratories have been booked solid by customers eager to test new ideas. Although relations with headquarters in Switzerland are warm and close, the sales team is keen to emphasise that the US GD business is run for the US from the US: most of their customers even think of Bühler as a US company.
The one-week course “From Wheat to Bread” is held at Bühler’s own Grain Processing Training Center und Bakery Innovation Center in Uzwil, Switzerland. It focuses on the entire value chain from wheat reception (intake) to the finished bakery goods.

In brief theory blocks, the most important aspects of equipment and process technology are treated. The main section of the course is made up of exciting hands-on work. The goal is to cycle through each process operation from grain cleaning and dampening to grinding of the grain into different flours and finally the baking process.

Course dates: October 15–19, 2012 (German)
October 22–26, 2012 (English)
Target group: Production managers, head millers, experienced shift managers

The following link will take you to the detailed course program: www.buhlergroup.com/from-wheat-to-bread. You will find our complete course offerings from all units at: www.buhlergroup.com/training-courses.

OVERVIEW OF TRADE SHOWS FROM AUGUST TO NOVEMBER 2012

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You will find more information at www.buhlergroup.com/events.