

WORLD GRAIN®

The International Business Magazine for Grain, Flour and Feed

November 2012

Global Grain Trade Review

Extreme weather causes
prices to surge in 2012

E.U. flour milling
Industry report

Focus on
Romania

'New' CWB
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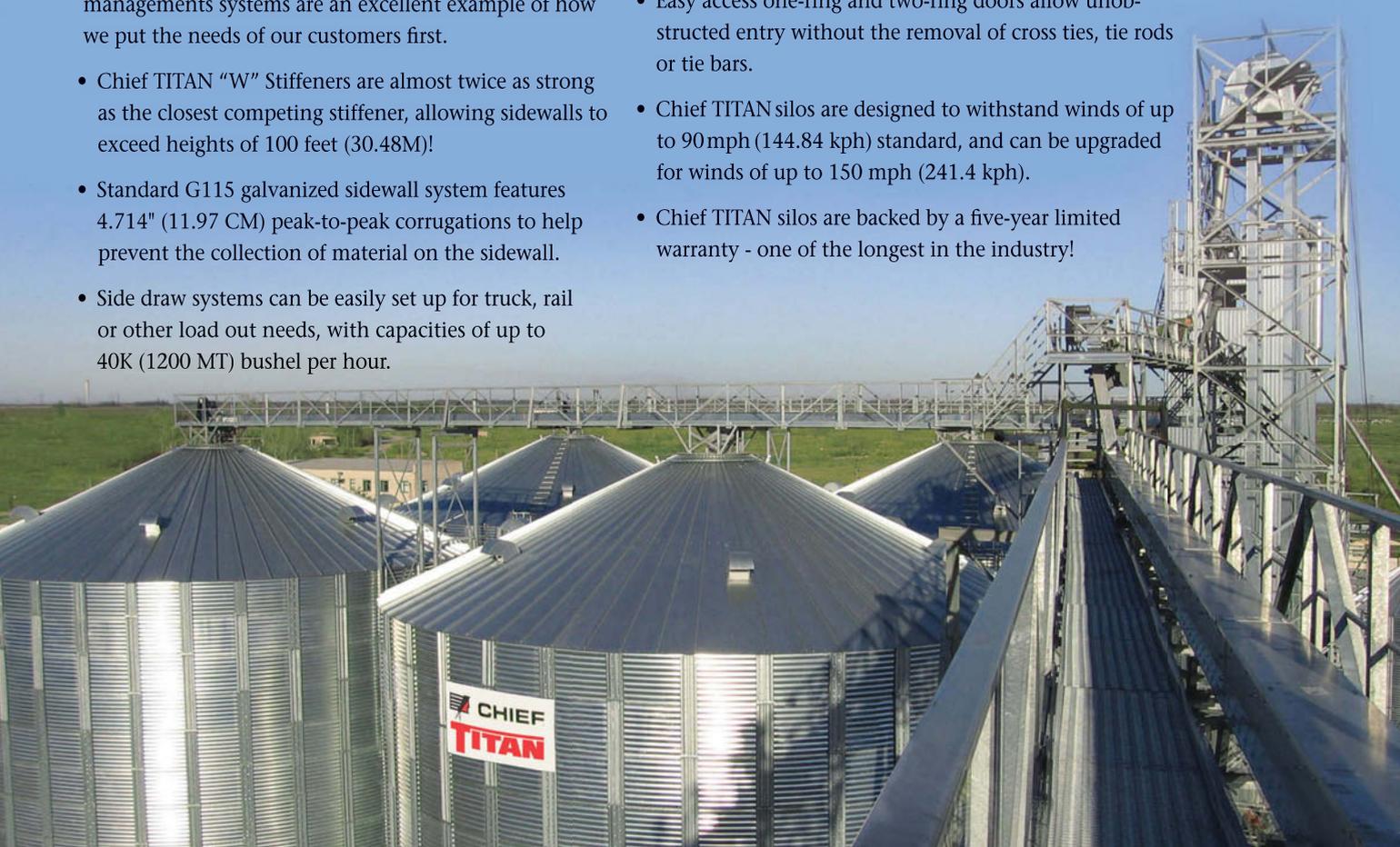
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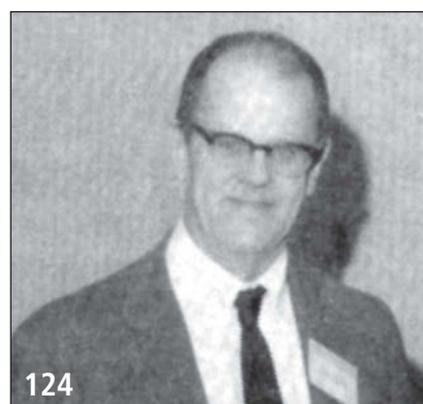
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ON THE COVER: Several large cargo ships on the Mississippi River. Photo courtesy of Ed Metz/ Shutterstock.com.

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Grains freed from macroeconomic forces

In a world that had become used to attributing commodity price moves to macroeconomic forces, developments this crop year in wheat and other grains have provided support for those who see fundamental supply-demand changes as the main drivers of commodity prices. This year's dramatic climb in wheat, corn and soybean prices, it is universally agreed, came about because disastrous drought and heat curtailed yield prospects, turning what had been a bright promise at the season's start into a calamity as weather-related damage unfolded. Few, if any, commentators have blamed the Eurozone financial crisis, fluctuations in foreign exchange or interest rates, even erratic shifts in consumer spending for what happened in the record-setting grain price moves that defined 2011-12 and may define 2012-13.

Ruling out these broad economic forces as having little, if any, effect on grain prices is significant change from views that had been gaining force in recent years. At one point, before this season's explosion produced its astounding price moves, the viewpoint was being heard from numerous respected market students that supply-demand hardly mattered in determining where grain prices may be heading. All too often it became easy to make adjustments in either the supply or demand side that made these of scant consequence, that instead it was insisted, focus should be on the broad economic currents

that for the most part were not previously considered in grain analysis.

This thrust in analyzing price moves was reinforced by what was happening in global equity markets, most notably the amazing rise in correlation among stocks. Rather than relying on how each company was doing from a profit and loss point of view, attention centered on macroeconomic factors that affect overall market trends. This resulted in the time when the correlation between the S&P 500 stocks approached 90%, which was three times the average of the prior 50 years. Even the pronounced difference between the performance of equities in developed countries and emerging markets nearly vanished to reach 80%. These moves both explained and accounted for the rising importance of passive, or index, trading. Stock selection gave way in the same way commodity moves were seen as unrelated to what was happening in individual markets.

How this change came about initially and how it has been reversed this season provides helpful insights into how markets are driven. Not too long ago, grain price moves in any direction were blamed on actions by the funds established in fairly recent periods to allow investors to take positions in commodities. These multi-billion-dollar funds were established to offer investors the chance to own commodities as a new asset class like equities and fixed income. Owner-

ship in a fund invested in commodities was promoted as a way of diversifying.

Even as experienced commodity traders looked askance at the idea of the public buying commodities through these entities with the same goals as equity purchases, these funds were hugely successful as measured by their massive size. The long and short patterns of these funds, largely a reflection of how individual investors were buying or selling the funds, became powerful forces. Since investor attitudes mainly reflected moves in equities and assessments of the general economy, the results reinforced the overriding influence of macroeconomics.

It has required one of the worst droughts in American history to show how a supply change of this magnitude can bring a radical shift in the forces accounting for price moves. Not only have the grains performed differently from most traditional investor products like securities, but the pattern of commodities tending to move together has also been shattered. At a time when grain prices were soaring, non-grain agricultural markets tended toward weakness. In the same period, world oil prices were falling at the time grains were sharply advancing. This is a price trend divergence that hopefully has halted tendencies to ascribe moves in wheat and crude oil to the same forces.

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Editor-in-chief

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meetings

DECEMBER

Dec. 4-5

AFIA Import/Export Seminar

Location: Renaissance Arlington Capital View, Arlington, Virginia, U.S. **Contact:** American Feed Industry Association **Tel:** 1.703.524.0810
Fax: 1.703.524.1921 **E-mail:** afia@afia.org
Internet: www.afia.org

Dec. 4-6

VI International Conference 'Russian Grain 2012: Central Black Earth Vector'

Location: Voronezh, Russia
Contact: Russian Grain Union
Address: 107139, Moscow, Orlikov lane 1/11
Tel: (495) 607-83-79 **E-mail:** sau@grun.ru or gaa@grun.ru **Internet:** http://grun.ru/en/

Dec. 5-8

IAOM Middle East & Africa District Conference & Expo

Location: Abu Dhabi National Exhibitions Centre (ADNEC), Abu Dhabi, United Arab Emirates
Contact: Ms. Eva Mulyana
Tel: 0096824712338 **Fax:** 0096824711340
E-mail: info@iaom-mea.com
Internet: www.iaom-mea.com

2013

Jan. 27-30

U.S. Wheat Winter Board Meeting/ Joint Meeting with NAWG

Location: Hyatt Regency Washington on Capitol Hill, Washington, D.C., U.S. **Contact:** U.S. Wheat Associates **Tel:** 1.202.463.0999
E-mail: info@uswheat.org
Internet: www.uswheat.org

Jan. 29-31

International Production & Processing Expo (IPPE) — New USPOULTRY, AFIA & AMI Co-Located Tradeshow

Location: Atlanta, Georgia, U.S.
Tel: 1.703.524.0810 **Fax:** 1.703.524.1921
E-mail: afia@afia.org
Internet: www.ipe13.org

FEBRUARY

Feb. 3-8

Practical Short Course on Feeds & Pet Food Extrusion

Location: Texas A&M, College Station, Texas, U.S.
Contact: Dr. Mian N. Riaz
Tel: 1.979.845.2774 **Fax:** 1.979.845.2744
E-mail: mnriaz@tamu.edu
Internet: www.tamu.edu/extrusion

Feb. 11-13

U.S. Grains Council 10th International Marketing Conference and 53rd Annual Membership Meeting

Location: Charleston Marriott, Charleston, South Carolina, U.S. **Contact:** Valerie Smiley, USGC manager of membership **Tel:** 1.202.789.0789
Fax: 1.202.898.0522 **E-mail:** vsmiley@grains.org
Internet: www.grains.org

Feb. 12-14

Grain Tech Middle East

Location: International Fair Ground, Cairo, Egypt
Contact: International Group for Organizing Exhibitions (IGM Fairs) **Tel:** 002 02 23423619
E-mail: info@igmfairs.com
Internet: www.igmfairs.com

Feb. 23-26

GEAPS Exchange 2013

Location: Kentucky International Convention Center, Louisville, Kentucky, U.S.
Contact: Grain Elevator and Processing Society
Tel: 1.952.928.4640 **Fax:** 1.952.929.1318
E-mail: info@geaps.com **Internet:** www.geaps.com

MARCH

March 4-7

II International Agro-technological Conference "Agro-high tech – XXI"

Location: Voronezh, Voronezh Region, Russia
Contact: Anna Gerasimova, Russia Russian Grain Union **Tel:** 1.495 607 83 79 **E-mail:** gaa@grun.ru or sau@grun.ru **Internet:** http://grun.ru/en/

March 11-15

AFIA Purchasing & Ingredient Suppliers Conference

Location: Omni Fort Worth Hotel, Fort Worth, Texas, U.S. **Contact:** American Feed Industry Association **Tel:** 1.703.524.0810
Fax: 1.703.524.1921 **E-mail:** afia@afia.org
Internet: www.afia.org

March 11-13

AFIA Spring Committee Meetings

Location: Omni Fort Worth Hotel, Fort Worth, Texas, U.S. **Contact:** American Feed Industry Association **Tel:** 1.703.524.0810
Fax: 1.703.524.1921
E-mail: afia@afia.org
Internet: www.afia.org

March 17-19

NGFA 117th Annual Convention

Location: Westin St. Francis, San Francisco, California, U.S. **Contact:** National Grain and Feed Association **Tel:** 1.202.289.0873
Fax: 1.202.289.5388
E-mail: ngfa@ngfa.org
Internet: www.ngfa.org

March 18-22

Bühler-KSU Expert Milling Course

Location: Manhattan, Kansas, U.S.
Contact: International Association of Operative Millers **Tel:** 1.913.338.3377
Fax: 1.913.338.3553
E-mail: info@iaom.info
Internet: www.iaom.info

For a 12-month listing of 2013 industry events, see the *2013 International Buyers' Guide* or visit www.World-Grain.com. Send your event details to: worldgrain@sosland.com or fax 1.816.756.0494.

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International Production & Processing Expo

In 2013, the International Production & Processing Expo (IPPE) debuts as a new umbrella event for the American Meat Institute's (AMI) International Meat Expo (IME), the U.S. Poultry & Egg Association's (USPOULTRY) International Poultry Expo (IPE) and International Feed Expo (IFE). The umbrella IPPE event will take place Jan. 29-31 in Atlanta, Georgia, U.S.

The three shows will operate under one structure, creating one of the 50 largest trade shows in the U.S. The entire 2013 trade show is expected to include more than 1,000 exhibitors on close to 400,000 net square feet of exhibit space and host an anticipated 25,000 attendees.

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News review

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ADM ups stake in GrainCorp with aim to acquire business

SYDNEY, AUSTRALIA — Archer Daniels Midland Co. (ADM) announced on Oct. 19 that it has acquired 14.9% of GrainCorp Limited shares. ADM previously held economic interest in 4.9%, and on Oct. 18 ADM acquired an additional 10% economic interest at a price of A\$11.75 per share.

Based in Sydney, GrainCorp has a market capitalization of \$1.8 billion.

ADM, headquartered in Decatur, Illinois, U.S., has approached GrainCorp with the aim of arriving at an agreement under which GrainCorp's board of directors would recommend to its shareholders a cash acquisition by ADM. Any agreement would be subject to

satisfactory due diligence, regulatory approvals and other conditions.

"Our investment in GrainCorp is part of our ongoing portfolio management and is consistent with our strategy of growing our Agricultural Services and Oilseeds businesses by investing in key supply regions outside the U.S.," said ADM Chairman and Chief Executive Officer Patricia Woertz. "GrainCorp is a well-managed company, and together with ADM would be better positioned to connect Australia's farmers with growing global demand for crops and food, particularly in Asia and the Middle East. We anticipate that an ADM acquisition of GrainCorp would meet ADM's key financial hurdles."

CME to acquire Kansas City Board of Trade

CHICAGO, ILLINOIS, U.S. — CME Group on Oct. 17 announced it has signed a definitive agreement under which it will acquire the Kansas City Board of Trade (KCBT).

Under the agreement, CME Group will pay \$126 million for the exchange, and members additionally will receive a special distribution of excess cash, concurrent with the closing.

The KCBT, which is organized as a for-profit corporation, is the leading futures market for hard red winter wheat. Under the agreement, the CME committed to maintain for at least three years a committee of KCBT market participants to advise on hard winter contract terms and conditions. The CME also agreed to "maintain the historic KCBT trading floor in Kansas City" for at least six months.

"Global agricultural market participants continue to depend on liquid, transparent risk management tools for price discovery in both established and emerging economies," said Terry Duffy, CME Group executive chairman and president. "Building on two rich legacies, the combination of KCBT hard red winter wheat products with our deep and liquid CBOT soft red winter wheat futures and

options markets will provide new trading opportunities for market participants around the world — both on the trading floor and on the screen."

Jeffrey Borchardt, president and chief executive officer of the 156-year-old Kansas City exchange, emphasized the degree to which trading in wheat futures and options has changed through its history, most recently technologically.

"CME Group's position as a global leader in electronic trading access and capability makes it an ideal partner for the future of KCBT's hard red winter wheat contract, the global benchmark for bread wheat," Borchardt said.

The KCBT board unanimously approved the transaction, which is expected to close later this year, pending approval by KCBT shareholders and regulators, expiration of the applicable Hart-Scott-Rodino waiting period, and completion of normal closing conditions.

With the completion of the transaction, the Minneapolis Grain Exchange, which trades hard spring wheat, will be the only remaining independent wheat futures exchange in the United States.

Canadian wheat output up 6% from 2011

OTTAWA, ONTARIO, CANADA — Production of all wheat in Canada was estimated up 1% from the August forecast and up 6% from 2011, while canola outturn was expected down 13% from August and down 8% from last year, Statistics Canada announced on Oct. 4 in its September Estimates of Production of Principal Field Crops report.

"Prairie farmers anticipate higher wheat production as well as a decline in canola this year," said Statistics Canada in its report.

Based on data collected from Sept. 4 to Sept. 11, total 2012 Canadian wheat production was estimated at 26,733,000 tonnes, down 1% from 27,013,000 tonnes forecast previously and up 6% from 25,261,000 tonnes in 2011, Statistics Canada said.

By class, production of spring wheat other than durum was estimated at 18,641,000 tonnes, down 2% from August and up 3% from 18,031,000 tonnes in 2011, durum at 4,398,000 tonnes, up 3% from August and up 5% from 4,172,000 tonnes last year, and winter wheat at 3,694,000 tonnes, up slightly from August

and up 21% from 3,058,000 tonnes in 2011.

Statistics Canada estimated 2012 canola production at 13,359,000 tonnes, down 13% from 15,410,000 tonnes forecast earlier and down 8% from a revised 14,493,000 tonnes in 2011.

Oats production was estimated at 2,939,000 tonnes, down slightly from the prior forecast of 2,994,000 tonnes, and down slightly from 2,997,000 tonnes in 2011.

The 2012 barley crop was seen at 8,591,000 tonnes, down 10% from 9,508,000 tonnes forecast earlier and up 11% from 7,756,000 tonnes a year ago.

Corn production was expected to be 11,576,000 tonnes, down 1% from 11,703,000 tonnes in August and up 8% from 10,689,000 tonnes in 2011.

Soybean outturn was estimated at 4,280,000 tonnes, down 3% from 4,405,000 tonnes in August and up slightly from 4,246,000 tonnes last year.



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Australia's wheat export market further deregulated

PERTH, AUSTRALIA — The CBH Group on Nov. 1 welcomed the passage of the Wheat Export Marketing Amendment Bill through Australia's House of Representatives, which included the abolition of Wheat Exports Australia and the Wheat Export Charge and the removal of port access undertakings for bulk handlers who were also accredited exporters.

CBH Group Chief Executive Officer Andrew Crane said the wheat industry would be better off as a result of the new legislation's removal of unnecessary regulation and costs.

"As a grower co-operative, we fully support these measures, because

they are no longer needed and the costs of compliance are ultimately passed back to growers," Crane said. "Importantly, the passage of this legislation will give the industry greater certainty to make decisions on future investments in infrastructure and growth."

However, Crane said he was disappointed by the amendments, which would require a mandatory code of conduct overseen by the Australian Competition and Consumer Commission.

"Representatives from across the industry were progressing on a voluntary code of conduct overseen by an independent Code Administration Committee," Crane said.

Glencore acquires interest in Russian grain terminal

TAMAN PORT, RUSSIA — Glencore International plc, announced on Oct. 2 that it has, through a wholly-owned subsidiary, entered into a 50-50 joint venture agreement with Kernel Holding S.A. through which it has acquired from the EFKO Group an interest in a deep sea grain export terminal at the Port of Taman, Russia.

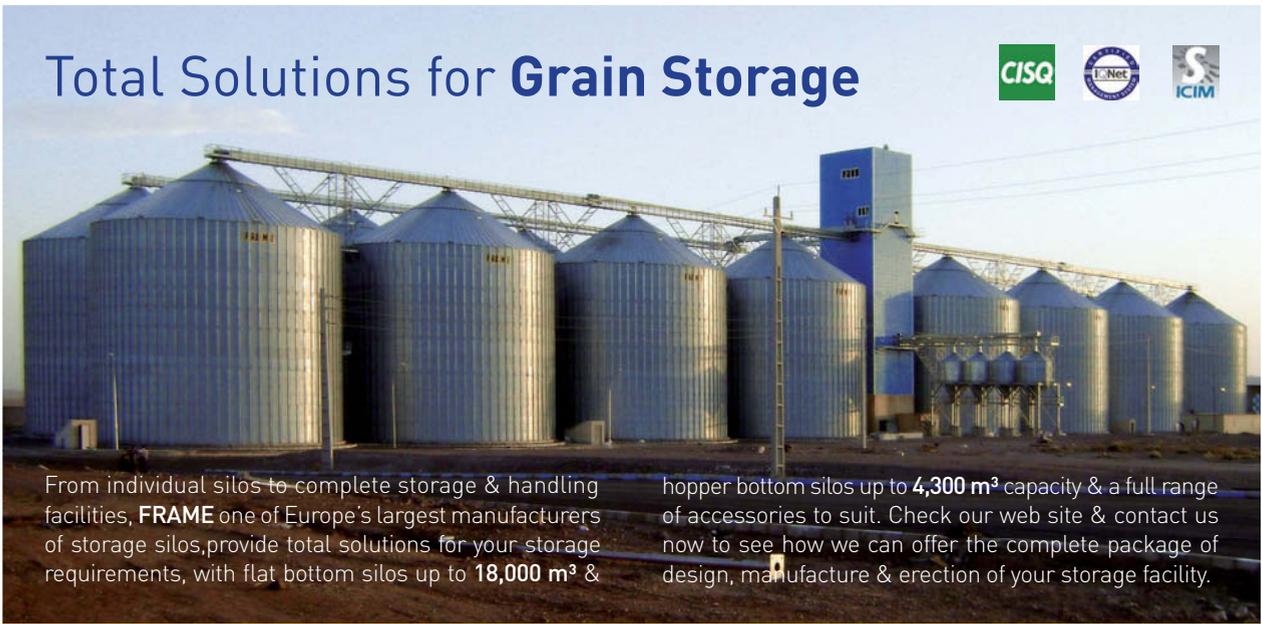
Strategically located on Russia's Black Sea coast, the Port of Taman is in close proximity to Southern Russia's main

grain producing region. The grain export terminal has a throughput capacity of 3 million tonnes per year and will enable Russian grain to be exported throughout the year.

The company noted that not only will this increase the competitiveness of Russian grain on the world market, it will also enable Glencore to further meet the needs of its customers across Europe, the Middle East and Africa.



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ADM, Wilmar receive approval for partnership

ROLLE, SWITZERLAND — Archer Daniels Midland Company (ADM) and Wilmar International Limited announced on Oct. 17 that they have completed regulatory approvals for their partnerships in global fertilizer and European vegetable oil. The two companies have also launched their partnership in global ocean freight.

Through the three partnerships, which will be based in Rolle, Switzerland, ADM and Wilmar will:

- Collaborate on purchasing and distribution in the global fertilizer business.
- Partner in the sale and marketing of vegetable oils and fats in Europe.
- Work together to improve the utilization and management of their oceangoing fleets, with each company initially contributing two ships to the effort.

Collaborations between ADM and Wilmar began in the mid-1990s, when they jointly built a network of soybean processing operations in China. ADM owns a 16% equity stake in Wilmar. The companies have significant supplier relationships with each other.

Prospects for U.S. rice exports to China advance

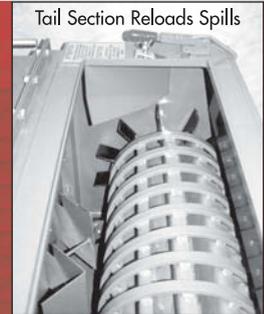
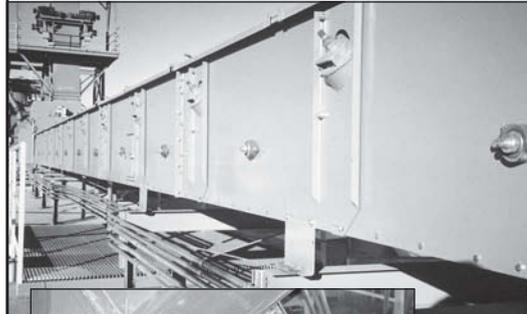
ARLINGTON, VIRGINIA, U.S. — The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) office in Beijing, China received the week of Oct. 8 a draft phytosanitary protocol from Chinese plant health officials covering prospective exports of U.S.-grown rice to China.

The U.S. rice industry has been working toward access for U.S. rice to the China market for nearly seven years.

Chinese officials visited the rice-producing regions of Arkansas, California and Louisiana last fall to review and observe procedures and protocols at the farm- and mill-level to prevent pests in U.S. rice. The visit was considered to be a key step toward the draft protocol.

Rice trade is controlled by the Chinese government through a quota system, half of which is reserved for state-owned enterprises. Should the China market open to U.S. rice, it is the U.S. mills and trading companies that will establish commercial relations with the Chinese state-owned trading company and China's private trading companies. The expectation is that China will purchase milled and brown rice from the U.S.

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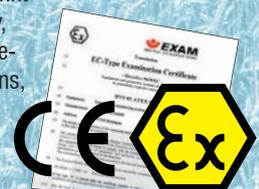
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Ingredion earnings climb 29% in third quarter

WESTCHESTER, ILLINOIS, U.S. — Improvements in volume, coupled with operating efficiencies and price increases, helped drive a 29% increase in third-quarter earnings at Ingredion Inc. Net income at Ingredion in period ended Sept. 30 totaled \$112.7 million, equal to \$1.47 per share on the common stock, up from \$87.7 million, or \$1.15 per share, in the same period a year ago. The most recent quarterly results included 7¢ per share of restructuring and impairment charges.

Net sales during the third quarter of fiscal 2012 totaled \$1.68 billion, up 3% from \$1.63 billion.

“We delivered a strong third quarter in spite of ongoing macroeconomic volatility,” said Ilene Gordon, chairman, president and chief

executive officer. “Our third quarter adjusted earnings per share were the highest quarterly adjusted e.p.s. in our company’s history. Underlying this performance were volume improvement, operating efficiencies and price increases to cover higher raw material costs and foreign exchange headwinds.”

The strong third-quarter results led Ingredion to raise its full-year guidance to between 17% and 19% in fiscal 2012.

Ingredion said its capital expenditures in 2012 are expected to total about \$300 million and should support growth investments across the organization, particularly in North America, South America, Europe, the Middle East and Africa.

Dangote sells stake in flour mills to Tiger Brands

SANDTON, SOUTH AFRICA — Dangote Industries Limited (DIL) announced on Oct. 1 that it has sold 63.35% of its stake in Dangote Flour Mills Plc (DFM), to Tiger Brands Limited.

DIL announced in Lagos the business deal worth \$181.9 million, which included the sale of its 3,167,716,667 ordinary shares out of the Group’s 3,667,716,667 ordinary shares in DFM to Tiger Brands.

The transaction, which has been endorsed by the board and shareholders of DIL as well as regulatory authorities, provides for Alhaji Aliko Dangote, president/chief executive of the Group, to retain his chairmanship of the board of DFM.

“The executed share sales purchase agreement provides that DIL will retain a strategic interest of 10% of the total issued ordinary share capital of DFM for a minimum period of five years after implementation of the transaction during which the Group will have the right to appoint two directors to the board of DFM, with Alhaji Aliko Dangote continuing as chairman of the company,” the Group said.

Tiger Brands, based in Sandton, South Africa, operates primarily in South Africa and selected emerging markets. It has significant presence in over 28 countries on the African continent with business offerings spanning grains and consumer brands.



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Richardson to invest in port terminal facility

WINNIPEG, MANITOBA, CANADA — Richardson International Limited said on Oct. 1 that it plans to invest approximately C\$120 million in its port terminal facility in Vancouver to increase storage capacity for grains and oilseeds to meet growing global demand. Richardson has applied to Port Metro Vancouver for a permit approval for the project, which would take two years to complete.

Richardson's Vancouver terminal is currently operating at maximum capacity, handling approximately 3 million tonnes of grains and oilseeds each year. With growing global demand, Richardson expects to handle in excess of 5 million tonnes of grains and oilseeds annually with additional storage capacity in Vancouver.



Richardson's grain terminal in the Port of Vancouver. Photo courtesy of Vancouver Port Authority.

"Increasing storage capacity at our Vancouver terminal is critical to our business," said Darwin Sobkow, Richardson's vice-president, Agribusiness Operations. "By increasing storage capacity and enhancing our operation, we will be better positioned to serve our farmer customers and meet increasing demand for Canadian grains and oilseeds from end-use markets worldwide."

Richardson plans to build an additional concrete grain storage annex with a total capacity of 80,000 tonnes at its Vancouver terminal. The project includes the installation of distribution equipment and an upgraded dust filtration system. By eliminating existing steel storage bins, Richardson would net an additional 70,000 tonnes of storage, bringing total storage capacity at its Vancouver terminal to 178,000 tonnes.

Richardson recently invested C\$20 million to improve rail receiving capacity and increase operating efficiencies at its Vancouver terminal. By reconfiguring the rail yard and adding a second, fully-functional rail unload pit and railcar indexer, Richardson can double the number of railcars it unloads from 150 cars a day on a single track to 300 cars a day on a double track.

"Vancouver is the major port for exports of Canadian grains and oilseeds and this project is a significant investment in the Pacific Gateway," said Curt Vossen, president of Richardson International. "It supports Port Metro Vancouver's vision to grow the port and increase Canadian trade and it is an investment in the local economy through the creation of hundreds of jobs during construction and another 40 to 50 permanent positions at our facility."

Alltech predicts contraction in feed production

DUNBOYNE, IRELAND — Speaking in Rome at the Food and Agriculture Organization of the United Nations, Alltech Vice-President Aidan Connolly presented the results of the 2011 Alltech Feed Tonnage Survey along with results from previous surveys, showing a steady increase in feed production year-on-year.

The 2011 survey, covering 128 countries, put the total feed at 873 million tonnes. The 2012 survey, due to be published soon and covering more than 130 countries, is expected to show a further increase. For 2013, however, Connolly, presenting at the IFIF-FAO joint meeting, predicted a contraction

in the region of 3% to 5%, driven by the following three factors:

- Continued global recession affecting protein consumption.
- The conversion of large amounts of feed stocks and materials into biofuels.
- Reduced feed supply due to a global drought, specifically in the U.S.

"We are facing a completely new era for the agriculture industry where, for the first time in history, feed production for 2013 will be lower than for 2012, and it is clear that efficiency in converting feed into food will be more critical to food companies than ever," said Connolly.



The living also enjoy the bread of the dead.

The first of November is traditionally the Christian day of remembering the dead. Nowhere is this tradition more alive and colourful than in Mexico. The Día de los Muertos, "day of the dead", is a cheerful time when deceased family members are welcomed back to join the living for a night. Houses are cleaned, and each family puts up a lavished sacrificial altar. The route from the cemetery to the house is marked with yellow cempasúchil flowers so the dead won't lose their way. And what do you offer a visitor from the afterlife when they arrive? Pan de Muertos of course, "bread of the dead". The round loaves are decorated with crossbones and placed on the altar. Once the dead have satiated themselves on the aroma, the living eat the bread, because like traditional baked goods the world over, it's extremely delicious.

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For more information, see Page 126.



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CBH Grain restructures export marketing team

WEST PERTH, AUSTRALIA — CBH Grain announced on Oct. 11 a number of key appointments as part of a restructure of its export marketing team to better align with the significant changes occurring in local and global grain markets.

The restructure will see CBH Grain move to a model based on major geographic regions with each customer area led by a regional manager.

From November, Sean Cowman will become regional manager for the Middle East and Africa. Cowman is currently wheat marketing manager and joined CBH in 2010 after extensive experience in international sales and marketing, including time with Kailis & France Foods and Sumich Group.

Peter Elliott has been appointed regional manager for Europe

and the Americas. Elliott is currently protein and oilseeds marketing manager and joined CBH in 2008 with a strong background in marketing, including experience with several major food companies handling their North Asian markets and in Japan with one of the world's largest trading houses.

Mike Karube will continue in his current role as regional manager for Japan, based in Tokyo, and Wallace Chang will continue as regional manager, North Asia, based in Hong Kong. Leith Teakle also continues as regional manager, South East Asia & Sub Continent.

CBH Grain Head of Marketing Tom Puddy said since the deregulation of the Australian wheat export market began in 2008, CBH Grain had serviced its export customers via a hybrid structure of commodity managers and regional managers.

South Korea removes U.S. rice import, sales suspension

SEOUL, SOUTH KOREA — USA Rice Federation's Korean promotions contractor, Sohn's Market Makers, reported on Oct. 12 that the South Korean government lifted the import and sales suspensions of U.S. rice after determining it contains insignificant levels of arsenic. South Korea suspended sales of U.S. rice on Sept. 21 following the release of a Consumer Reports article on arsenic in U.S.-grown rice.

"The government has concluded the level of arsenic found in U.S. rice imports does not warrant any safety concerns based on an exami-

nation by the Korea Food and Drug Administration," the Ministry of Food, Agriculture, Forestry and Fisheries said in a released statement.

The release went on to say the arsenic levels found in 34 samples ranged from 0.064 milligrams per one kilogram of rice (mg/kg) to 0.132 mg/kg. Although South Korea does not have regulations for arsenic in rice, the ministry stated that arsenic in U.S. rice is lower than the maximum level of 0.15 mg/kg allowed in China, which does have a standard for arsenic in rice.

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Cargill plans Canadian canola crush plant

WINNIPEG, MANITOBA, CANADA — Cargill announced on Oct. 1 plans to build a canola processing facility near Camrose, Alberta, Canada. Subject to receiving all required approvals, construction is expected to be completed in time for the 2014-15 canola harvest.

The new crush facility is projected to have the capacity to process 850,000 tonnes of canola per year and will serve Alberta canola farmers by providing a consistent and competitive point of delivery, Cargill said.

“We are delighted to make this announcement, enabling Cargill to offer new marketing opportunities for canola producers in Alberta. This is our second major Canadian investment in canola crushing and demonstrates our confidence in the continued growth and competitiveness of the canola industry in this country. The facility will

have the capacity to process both conventional and specialty canola seed which will enable us to significantly increase our contracting programs in the area,” said Ken Stone, commercial manager for Cargill’s Canadian canola processing business.

Cargill expects that 50 permanent full-time positions will be created. “Canola continues to be a very competitive crop for the Canadian grower and Camrose is an excellent location for value-added canola processing. In the 2012-13 growing season, canola acres in Canada were over 21 million. We see that as an indication that the industry will continue to grow driven by competitive access to a large North American livestock industry for canola protein meal and continued strong demand for canola oil,” said Mark Stonacek, president of Cargill’s North American grain and oilseed business.

Cargill earnings quadruple on companywide improvement

MINNEAPOLIS, MINNESOTA, U.S. — Cargill reported on Oct. 11 net earnings of \$975 million in the fiscal 2013 first quarter ended Aug. 31, compared with \$236 million in the same period a year ago. First-quarter revenues were \$33.8 billion compared with \$34.6 billion in the year-ago period.

“During the past two years, Cargill has invested \$8.1 billion to better serve our customers all around the world,” said Greg Page, Cargill chairman and chief executive officer. “By investing steadily, we’ve been able to significantly boost the breadth and depth of the products and services we offer our customers. And that has strengthened the balance, diversification and resilience we strive for in our business.”

Three additional factors contributed to Cargill’s performance. Results were balanced, with improved earnings across all five business segments. There were no significant losses in any one business unit,

the latter a factor that affected the year-ago period. The company said it benefited from the considerable time and energy invested during the past 12 months to lower costs, simplify and streamline processes, and ensure capital expenditures were being directed to where they mattered most to customers.

The impact of the U.S. drought and weather events in other crop-growing areas such as the Black Sea region is still unfolding. A key variable is how food and feed demand worldwide will adjust in the coming months if prices remain high, Cargill said.

“Now, more than ever, Cargill is using our knowledge and market insight to help customers manage in this time of tighter supplies, higher prices and more volatile markets,” said Page. “We are reaching out to customers and tapping the full resources of Cargill to create solutions that address their needs.”

Bunge’s earnings rise as it plans for drought impact

WHITE PLAINS, N.Y. — Bunge Ltd. achieved higher income and sales in the third quarter due to the performance of its Agribusiness segment. When giving financial results, Bunge executives also gave an outlook on how industry may react to this summer’s U.S. drought.

For the quarter ended Sept. 30, Bunge had net income of \$297 million, equal to \$1.92 per share on the common stock, which compared with \$140 million, or 89¢ per share, in the previous year’s third quarter. Net sales of \$17.3 billion compared with \$15.6 billion.

“Bunge delivered significantly stronger third-quarter results than in the prior year,” said Alberto Weisser, chairman and chief executive officer of White Plains-based Bunge, when results were given Oct. 25. “Agribusiness operations posted solid results, and Food & Ingredients and Fertilizer showed improved performance from the challenging first half of the year. Results in Sugar & Bioenergy on a comparable basis were higher than last year, but below the potential of this business.”

Looking forward, the drought of 2012 will continue to have an effect.

“The current market environment, shaped most notably by the severe U.S. drought, has been and will continue to be volatile and complex for everyone who participates in our industry,” Weisser said. “Stocks of corn and soybeans are tight, and the world is adjusting typical trade flows. Bunge’s role is to help farmers and customers manage through this environment, by providing market access for crops and delivering the right products when and where they are needed. We are confident that the company’s core strengths — geographic balance, a diverse product portfolio, an experienced team and a strong balance sheet — enable us to fulfill this role effectively and profitably.”

“The world needs record crops to rebuild stocks, and today’s high prices are sending a strong signal to farmers, especially in South America, to plant. Early indications are that soybean production will be at record levels. As new crops are harvested, we should see a more balanced supply-demand situation, which will be good for consumers and the market overall.”

Japan increases feed wheat imports on high corn prices

WASHINGTON, D.C., U.S. — In September 2011, the Japanese Ministry of Agriculture, Forestry and Fisheries increased its quota for feed wheat in fiscal year 2012, from 446,000 tonnes (17.5 million bushels) to 1.21 million tonnes (47.2 million bushels). The U.S. Grains Council (USGC) noted that feed wheat imports have grown since late 2011.

The USGC said high global corn prices will cause reaction in the industry with people trying to mitigate high feed costs. This substitution is a great example of increasingly competitive situation facing U.S. corn, USGC said. Once end-users and feed mixers become accustomed to a new ration, it can become a challenge to win back the market.

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Wheat

Tight supplies send worldwide prices higher

by Chris Lyddon

As the wheat market has digested the results of the northern hemisphere's wheat harvest, in a year where weather-related production problems were widespread, wheat prices have moved up sharply with each piece of bearish news.

For example, in the U.S. Wheat Council's (USW) most recent Wheat Letter, USW Market Analyst Casey Chumrau noted a "bump up" following the release of the U.S. Department of Agriculture's (USDA) World Agricultural Supply and Demand Estimates for October.

"For the second time in two weeks, USDA's production estimates for wheat came in below industry expectations and provided support for futures markets," she noted.

In its Grain Market Report, the International Grains Council (IGC) noted how wheat has been showing more independence in its pricing from other wheat crops.

"Concern about the outlook for Black Sea exports was the key focus of the market, with sustained speculation by traders that dwindling supplies and rising local prices might prompt governments to restrict shipments," IGC said. "Despite some beneficial rains, there was additional support from worries about an overly dry growing season in Australia.

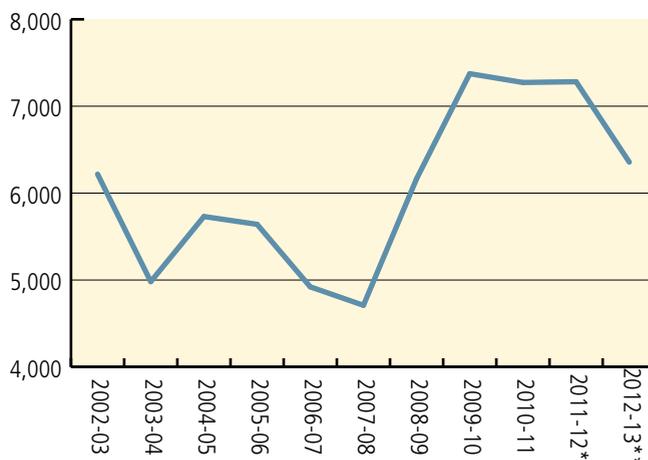
"The IGC GOI wheat sub-Index was up by as much as 6% in mid-September, but amid general weakness in commodity markets, gains were eroded by the end of the month, leaving the index virtually unchanged," it said. "Exporters in Ukraine were reported to have agreed to limit sales to around 4 million tonnes, with commitments already estimated to be close to that level. Despite official statements that no restrictions were planned, there was continued uncertainty about export controls in Russia."

According to the United Nation's Food and Agriculture Organization (FAO), in September, the benchmark U.S. wheat (No.2 Hard Red Winter, f.o.b. Gulf) averaged \$371 per tonne, up 3% from August and 13% higher than in September 2011.

"Lower world production, following this year's drought-reduced outputs in several major wheat exporting countries in the Black Sea region, has contributed to the strengthening of wheat prices while reduced supplies of coarse grains also provided support, especially to export prices of feed wheat," FAO said.

"International traders closely monitored buying activity for signs that Black Sea availabilities were tightening, with results of tenders by Egypt's GASC given particular scrutiny," the IGC said. "These showed higher prices and reduced volumes of Russian wheat for shipment from mid-November, with a tender for early December filled entirely with E.U. supplies. As of Sept. 27,

World wheat ending stocks
(million bushels)



* Projected

** Forecast

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution Database and USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates

nominal Black Sea milling wheat export prices were up \$35 m/m, to \$345 fob."

In an update on the Russian grains sector for October, the USDA attaché in Moscow noted that Russia's traders had "continued to export massive volumes of grain through mid-September, and this despite the smaller crop, rapidly increasing domestic prices and tightening grain stocks in the Southern and North Caucasus Federal Districts."

The report cited customs data showing that Russia had exported 3.88 million tonnes of wheat in July-August, 2012.

"In September, exports have continued at a fast pace," the attaché said, quoting industry analysts who put September wheat exports out of Russia at 2.6 million tonnes. "Due to skyrocketing domestic grain prices, Russian wheat is becoming less competitive in world markets, and this is expected to result in a slowdown in wheat exports in October. The price of 4th Class wheat in the port of Novorossiysk, Russia's major deep water port in the Black Sea, reached 11,200 rubles (\$355) per tonne on Sept. 24, the highest price in the last 20 years."

At those levels, traders would be making a small margin, or even taking a loss, to fulfill previously concluded export contracts, the report cited industry analysts as saying.

It doesn't look like the Southern Hemisphere will come to the market's rescue.

"Below average rainfall in the key wheat-producing regions of Western Australia, Victoria's Mallee region, and the Riverina region of New South Wales has negatively affected yield prospects. Consequently, our estimate for Australia's 2012-13 wheat production was reduced from 26 million tonnes to 24 million tonnes," a recent attaché report said. The same report gave a figure of 27.4 million tonnes for the previous year's crop.

"Australia's 2012 wheat harvest has just begun; a more robust assessment of the crop size will be possible in December after the crop has been fully harvested." WG

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Focus on Romania

Eastern European country's grain production drops due to poor growing conditions

by Chris Lyddon

Romania, in south Eastern Europe, plays a major role in E.U. grains production. But in 2012, it's been affected dramatically by poor growing conditions. With a former Romanian farm minister in charge of piloting through planned reforms to the E.U.'s Common Agricultural Policy, Romania also has assumed a central role in shaping the legislative background to grains production in Europe.

In September, the International Grains Council (IGC) cut its estimate for Romanian grains production in 2012-13 to 12.9 million tonnes from a previous estimate, made a month earlier, of 14.5 million, which was already well below the 19.2 million tonnes produced in 2011-12.

The cut in the IGC's wheat estimate, however, was small, from 5 million tonnes in August to 4.9 million in September. Romanian wheat production was 6.7 million tonnes in 2011-12.

Maize took the big hit, with the IGC's crop estimate reduced to 6.5 million tonnes in September from 8 million in August, down from a 10.5-million-tonne crop in 2011-12.

The IGC left its barley production estimate unchanged at 900,000 tonnes, compared with the previous year's 1.5 million.

According to the U.S. Department of Agriculture (USDA) attaché, wheat harvesting in Romania this year finished nearly a month earlier than normal. In a report published recently, the attaché put wheat production at 4.95 million tonnes, down from 7.1 million in 2011.

"Wheat exports are expected to fall to 1.6 million tonnes, about 25% lower than the previous year," the attaché said. "Romania's price competitiveness remains strong, however, as in September it was awarded contracts for about 300,000 tonnes of wheat for Egypt."

The attaché put the maize crop at 6.1 million tonnes, down 42%, adding that the agriculture ministry has not released any official preliminary figures to avoid creating any local market disturbances.

"The rapeseed crop was drastically affected by the harsh win-



Key Facts

Capital: Bucharest

Population: 21,848,504 (July 2012 est.)

Religions: Eastern Orthodox (including all sub-denominations) 86.8%, Protestant (various denominations including Reformed and Pentecostal) 7.5%, Roman Catholic 4.7%, other (mostly Muslim) and unspecified 0.9%, none 0.1% (2002 census).

Location: Southeastern Europe, bordering the Black Sea, between Bulgaria and Ukraine.

Government: Republic. Chief of state: President Traian Basescu (since Aug. 27, 2012); head of government: Prime minister Victor-Viorel Ponta (since May 7, 2012).

Economy: Romania, which joined the E.U. on Jan. 1, 2007, began the transition from Communism in 1989 with a largely obsolete industrial base and a pattern of output unsuited to the country's needs. The country emerged in 2000 from a punishing three-year recession thanks to strong demand in E.U. export markets. Domestic consumption and investment fueled strong GDP growth but led to large current account imbalances. Romania's macroeconomic gains have only recently started to spur creation of a middle class and to address Romania's widespread poverty. Corruption and red tape continue to permeate its business environment. Inflation rose in 2007-08, driven by strong consumer demand and high wage growth, rising energy costs, a nation-wide drought, and a relaxation of fiscal discipline. As a result of the global financial crisis, Romania's GDP fell more than 7% in 2009, prompting Bucharest to seek a \$26 billion emergency assistance package from the IMF, the E.U., and other international lenders. Drastic austerity measures, as part of Romania's IMF-led agreement, led to a 1.3% GDP contraction in 2010. The economy returned to positive growth in 2011 due to a strong export performance, but in a deflationary environment caused by bountiful crops and weak domestic demand. In March 2011, Romania and the IMF/EC/World Bank signed a 24-month precautionary stand-by agreement, worth \$4.9 billion, to promote compliance with fiscal targets, progress on structural reforms, and financial sector stability.

GDP per capita: \$12,600 (2011 est.); inflation: 5.8% (2011 est.); unemployment: 5.1% (2011 est.).

Currency: lei (RON): 3.527 RON equals 1 U.S. dollar (2011 est.).

Exports: \$62.68 billion (2011 est.): machinery and equipment, metals and metal products, textiles and footwear, chemicals, agricultural products, minerals and fuels.

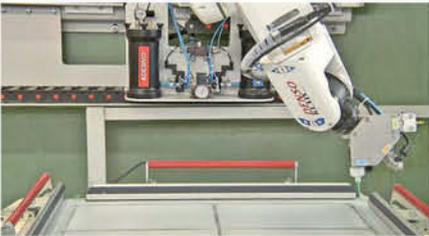
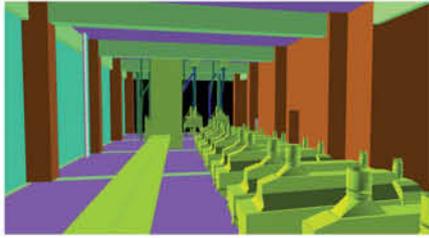
Imports: \$73.12 billion (2011 est.): machinery and equipment, chemicals, fuels and minerals, metals, textile and products, agricultural products.

Major crops/agricultural products: Wheat, corn, barley, sugar beets, sunflower seed, potatoes, grapes; eggs, sheep.

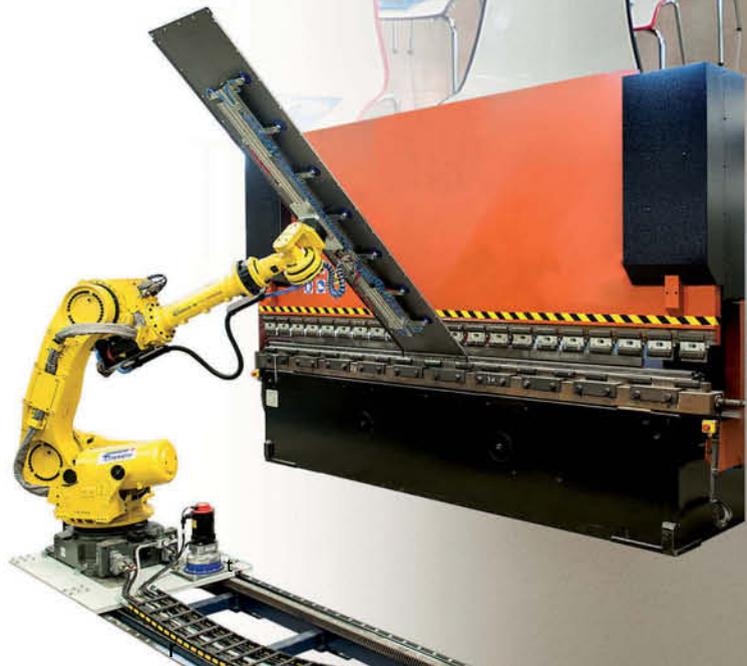
Agriculture: 7.9% of GDP and 30% of the labor force

Internet: Code: .ro; 2.702 million (2010) hosts and 7.787 million (2009) users.

Source: CIA World Factbook



industrialization



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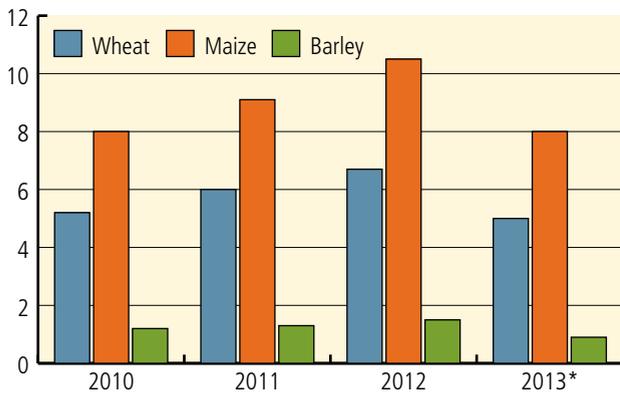
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Romanian production
(in million tonnes)



*Forecast

Source: International Grains Council

ter with almost three quarters of the acreage replanted in the spring,” the attaché report continued. “Total rapeseed acreage plunged from 360,000 hectares planted in the fall to 91,000 hectares by the spring. Production is estimated at 140,000 tonnes, versus 750,000 tonnes last year.”

Average yields are down by 16% on 2011 levels. Exports are unlikely to exceed 15% of last year’s volume of 600,000 tonnes and domestic crush demand will likely require imports in order to be satisfied.

Farmers replanted part of the winter-killed rapeseed area to sunflowers, the attaché said, leading to an expansion in area of around 11% to 1.1 million hectares.

The sunflower crop was less affected by the drought with production estimated down by about 25%. Production is expected at 1.38 million tonnes, which is equivalent to an average yield of 1.23 tonnes per hectare. Last year, the average yield was 1.8 tonnes/hectare.

“While sunflower heads were generally smaller in size, the plant density per hectare compensated for the loss in weight,” the attaché said. “This year’s production is expected to be sufficient to cover both domestic crush requirements and foreign (export) demand.

“Similarly to corn, dryness and heat accelerated the maturation process. Harvesting started in early August, two weeks earlier than normal. Initial harvest results indicated lower oil content, not more than 37% to 38%. But as the harvest advanced, the aggregate crop oil content approached normal levels.”

A KEY ROLE IN E.U. AGRICULTURE

As a member of the E.U. since 2007, Romania’s farm policy comes under the E.U.’s Common Agricultural Policy (CAP). Romania plays a key role in running the CAP, as the European commissioner in charge of its administration is the former Romanian agriculture minister Dacian Cioloș, who has held the role since February 2010. His role includes guiding current negotiations on the CAP after 2013.

A MORE ENTHUSIASTIC APPROACH TO BIOTECH

Romania has reacted more positively to developments in biotechnology than some E.U. countries.

“Romanian farmers continue to remain in the group of E.U. member states utilizing the opportunity to cultivate biotech crops,” said an attaché report published in June. “Currently the only genetically modified (GM) crop under commercial cultivation in Romania is MON 810 insect resistant corn.”

The report put the area cultivated in 2012 at about 300 hectares, most of it for seed production. That is a drop of 48% compared to the previous year, mainly as a result of extensive traceability requirements, minimum isolation distance in the context of corn plantings expansion as well as the difficulties in marketing the harvest, the report said.

“Romanian farmers are eager to regain access to biotech soybeans, considering their positive experience with this crop before E.U. accession,” the report said. “Over the past several years, the soybean acreage has declined drastically, dropping to about 72,000 hectares in 2011, which is 38% of the area registered five years ago. In 2012, a similar area of soybeans is expected to be harvested. Soybeans high production cost and lower productivity influence farmers’ decision.”

Low domestic availability led to increasing imports of biotech soybeans for the livestock and poultry industry. Total soybeans and soy meal imports grew in 2011 by about 5% to reach 490,000 tonnes, with Brazil and Argentina the main suppliers.

IMPORTANCE TO TRANSPORT

Romania is of vital importance to the countries of central and eastern Europe, because of the river Danube, which flows through Romania to the Black Sea. However, in 2012 a lack of rain and high temperatures threatened transport on the river.

“Serbia and Hungary grain exports may be affected when their crops are harvested in the near future and the volume intended for water shipment to Constanta Port on the Black Sea is expected to increase,” the attaché said in a report on the problem issued in August.

“Danube river speed flow at the entry point in Romania was in July about 60% of the multi-year average, due to lower rainfall and heat in the countries upstream,” the report said. “According to the forecast issued by the Romanian Hydrologic Institute for the timeframe August-October 2012, the Danube river speed flow at the entrance in Romania will remain under the multi-year average.”

The attaché reported an improvement in soil moisture following precipitation in the third week of September. However, it was not enough to replace depleted soil moisture levels, so the sub-surface moisture is notably under the level registered last year.

The dryness made it difficult and costly to sow winter crops. Water conservative agriculture practices, with minimum till, are being adopted at an increasing rate among farmers, the report said.

“In case of rapeseed, the optimal timeframe for sowing



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was the end of August. Farmers who were able to prepare the land and sow their rapeseeds benefited by the September rainfall as it created good conditions for seed germination,” according to the report.

However, many farmers have decided to move into spring crops and rapeseed area is expected to fall by 45%. Wheat area is expected to be near last year’s level which was 1.9 million hectares.

“Wheat sowing is ongoing and recent precipitation will help ensure good germination conditions prior to winter’s arrival,” the attaché said.

MINISTRY TO SUPPORT FARMERS

The attaché also reported that Romania’s agriculture ministry has assured farmers they will receive compensation for loss of income during the drought. In September, the min-

istry limited the aid to 100 lei (about \$30) and to small farmers (between one and 10 hectares).

“The agriculture ministry estimates that about 600,000 farms (commer-

Industry sources put total Romanian flour production at 1.6 million tonnes a year.

cial and non-commercial), cultivating 1.9 million hectares (23% of the total arable land), will apply for this form of compensation,” the attaché said. “This measure was strongly criticized by the farmers’ associations, which perceive this subsidy more as a populist message in advance of the December Parliament election, rather than as an incentive for increasing the

producer’s competitiveness.”

Industry sources put total Romanian flour production at 1.6 million tonnes a year. There are some 200 mills with a capacity of over 2,000 tonnes a year and 120 below that level. The industry is concentrated around Constanta, Timisoara and Bacau. Capacity utilization is around 45%.

Big names in the industry include Boromir, which has around 10% of the market, 7 Spice, Seven Spice, Pambac, Dobrogea, Titan, and Galmopan, all companies with a high level of integration in the food chain. **WG**

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E.U.

milling industry analysis

The fragmentation of the European Union (E.U.) flour milling market, in terms of both participants and regions, combined with increased international competition will eventually lead to a tipping point and further consolidation of the industry, according to a report on the European flour milling industry released by Utrecht, Netherlands-based Rabobank in September.

The E.U. plays a dominant role in world wheat production, but it is not a single, uniform market, and the same holds true for wheat flour.

Rabobank notes that there are significant differences amongst countries ranging from wheat production and quality to the level of milling industry consolidation. Some countries, such as France, Germany and the U.K., are net exporters of wheat, while others like the Netherlands, Spain and Italy are net importers.

Milling industry structure and efficiency are quite diverse as well, with a notable difference between northern and southern Europe.

by Arvin Donley

Rabobank: Fragmentation of the market and increased international competition will lead to further consolidation

“We estimate that the more consolidated industry countries in the north (Germany, the Netherlands and the U.K.) run at average capacity utilization rates between 80% and 90%, while this rate is nearer to 50% in the more fragmented southern markets. The E.U. industry average is 65%.”

In Europe, domestic demand for flour has been relatively constant. The E.U. flour milling industry has been in a pseudo-consolidation phase for decades, as over the past 50 years the total number of flour mills decreased from 15,000 to just



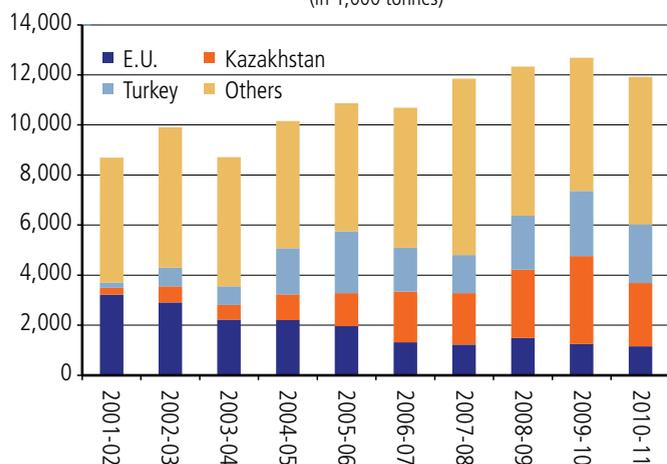
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Global flour exports, 2001-11
(in 1,000 tonnes)



Source: IGC, 2012

over 3,000 today. Rabobank said that although the number of mills has contracted substantially, overall capacity has not. Advances in milling technology and supply chain management have allowed achievements in scale economies to be realized through larger, more automated mills.

FLOUR EXPORTS DECLINE

From 2005-06 to 2011-12, E.U. wheat production grew by 4.3% to 128.7 million tonnes. The E.U. wheat market breaks down into three sectors: human and industrial consumption, feed consumption and exports. Attributed mainly to the ethanol market, human and industrial consumption grew by 6.7% to 59 million tonnes in the past six years.

However, Rabobank noted that E.U. demand for wheat for human and industrial purposes — excluding biofuels and non-E.U. flour exports — was relatively flat, growing 2.9% to 53.3 million tonnes, but as a percent of total consumption, demand actually fell 3%. Also during that six-year period, non-E.U. flour exports declined a stunning 42% to 1.3 million tonnes, while non-E.U. wheat exports grew by 12.5% to 13.2 million tonnes.

Today, industry sources peg total E.U. wheat and rye flour production at roughly 34 million tonnes, down from the estimated 40 million tonnes just six years ago. During this time, household use of flour has fallen from 18% to 12%, displaced by the growth of industrial bakeries.

“Consumer tastes continue to evolve toward more consumption of value-added processed bakery, but with a population that is both aging and teetering on the edge of decline, opportunities for future domestic growth are limited,” Rabobank said.

The report said that it is unlikely that bread will lose its staple food status, and long term, population growth will mean an increased demand for bread products.

“Our analysis of a few key countries in the Middle East and Central Asia shows a population growth of almost 100

million people by 2025,” Rabobank said. “Based on the current consumption patterns of these countries, the potential demand for wheat flour could account for virtually all of the current global flour export market of 12 million tonnes in just 13 years, which in essence is nothing more than a drop in the bucket considering the effects an additional 2 billion people will have in 40 years.”

OPERATIONAL CONCERNS

According to Rabobank, the three key issues facing the E.U. milling industry are counterparty risk, volatility and margin profitability.

The majority of millers in Europe are not integrated upstream, meaning they rely on others for their supplies. In the long term, those in this position who own assets in areas and countries of abundant supply will benefit more than those who do not, as basis risk is less acute in net exporting countries in times of reduced supply.

But as the world’s demand for wheat grows and supply cushions are reduced by ethanol programs — which now consume 5% of the E.U. wheat crop — the importance of the Black Sea Region becomes much more apparent. And given the volatility both in production and politics in these countries, counterparty risk has become an increasingly important variable, which can challenge even the most robust supply chains. In turn, the financial position of suppliers and customers also becomes more relevant, as they may not be able to honor their payment obligations due to financial distress.

“A significant increase or reduction in commodity prices could prevent them from fulfilling their contractual commitments to buy or sell wheat or flour,” Rabobank said.

Long term, Rabobank expects to see new periods of increased scarcity in row crop commodities which will result in structurally higher and more volatile commodity prices.

“We see increased volatility as a structural issue to which companies need to find both operational and strategic responses to secure margins and long-term competitiveness,” Rabobank said. “The operational response entails making use of risk management and hedging programs. Strategically, companies need to have a more defined approach to volatility and ask themselves how they should be positioned in the value chain in order to better manage volatility. Aside from cash flow constraints, millers are often unable to pass higher costs along the value chain.”

FALLING PROFIT MARGINS

Margin profitability has dropped in the last six years in the European milling industry, according to Amadeus figures, and unlike other parts of the value chain, bigger is not always better.

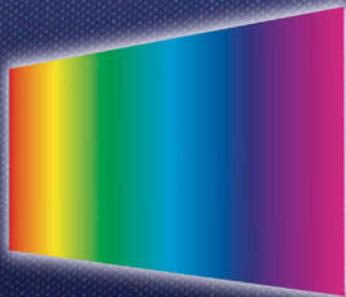
“In our analysis, EBITDA margins decreased after 2006 when price volatility of raw materials increased,” Rabobank said. “EBITDA margins became more volatile in general after that. For larger players, they ranged from 7 percent in 2006

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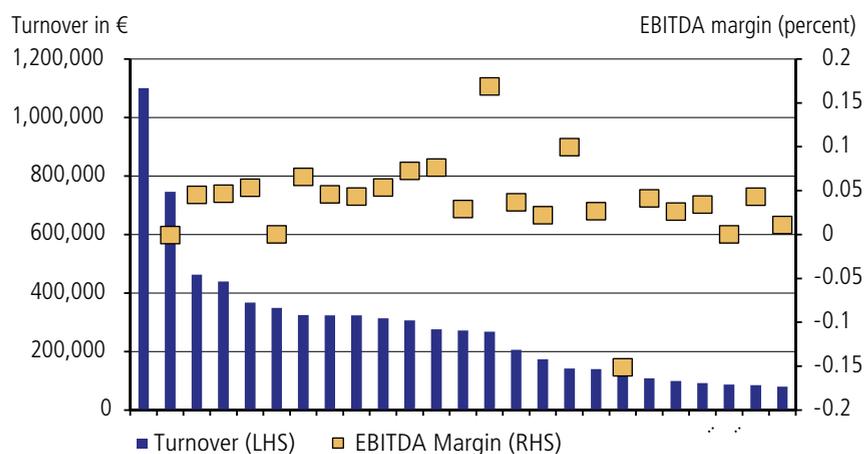
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Turnover and EBITDA margins of key European flour millers, 2011



Source: Amadeus, 2012

to becoming slightly negative in some cases in 2011, with several millers recording losses after taxes.

“Despite this, millers have shown great resilience and continue to operate on thinner margins. For a capital intensive industry that needs to manage higher volatility, counterparty risk and higher energy costs, this reduction in margins comes at an inauspicious moment.”

Rabobank said the low value-to-weight ratio of wheat flour means that logistics costs limit profitability to within a 200-kilometer to 300-kilometer range of production, preventing those without large economies of scale from entering new markets.

“This is not necessarily the case for wheat, however, which is why much of the milling production capacity is where population density — not agricultural production — is highest,” Rabobank said.

INDUSTRY STRUCTURE EVOLUTION

Due to the regional differences within the industry and the varying strategies of the competing players, millers are consolidated at a national level but fragmented at the E.U. level, Rabobank said.

A comparison of developments in key countries in the last decade shows that:

- In France, production facilities contracted by 4% between 2006 and 2012, with overall capacity slightly increasing.
- German production facilities have experienced a larger contraction of 15%,

but flour output has remained mostly unchanged. Larger mills run at a much higher capacity utilization rate than their smaller counterparts, so 10% of German mills have a 67% market share, while 6% of French mills have almost half of the market.

The E.U. flour milling industry has been in a pseudo-consolidation phase for decades, as over the past 50 years the total number of flour mills decreased from 15,000 to just over 3,000.

- The Italian milling industry restructured and consolidated capacity in the last decade but lost its export market to lower cost exporters. It mainly profits now from the very fragmented domestic artisanal bakery sector where millers can pass on incremental raw material costs.
- The U.K. milling market and its customer base is relatively consolidated, with the main players vertically integrated from origination to bakery. A strong drive for further consolidation is unlikely and the industry will focus on sourcing and diversifying its sales network outside the U.K. to manage dependence on the major retail accounts.

Rabobank also noted that a comparison of the different players reveals that the role of the agricultural cooperative is creating a new dynamic.

“In key European wheat produc-

ing countries, cooperatives dominate sourcing and have a strong presence in processing,” Rabobank said. “Their objective is to maximize the value of the wheat they buy from their members. Some co-ops, like Champagne Cereales, do this via full integration, investing in milling, bakery and even their own foodservice outlets. This commits the farmers to the food markets, which means they need to grow milling wheat. The Lantmanen Group of Sweden is another cooperative based on this model.

“In contrast, the French cooperative Tereos’ strategy is diversification through establishing a presence in all potential wheat outlets, ranging from food to feed to fuel. This gives them the opportunity to arbitrage the various outlets and maximize the return on all wheat for its members.”

Rabobank said global traders with global sourcing networks, such as Archer Daniels Midland, also has a size-

able presence in wheat processing. On the other hand, the private Austrian group LLI Euromills (VK Muhlen) “is a clear example of a company that is trying to consolidate the flour market in multiple countries, particularly in eastern and central Europe, with plants in Germany, Poland, the Czech Republic, Romania, Hungary and Australia.”

CONSOLIDATION

While European flour millers have historically had differing strategic outlooks based on local or regional factors, the future will be driven by how they manage the myriad new challenges ahead of them, Rabobank said.

“The fragmentation of the market in terms of both participants and regions, combined with increased international competition, will eventually lead to a



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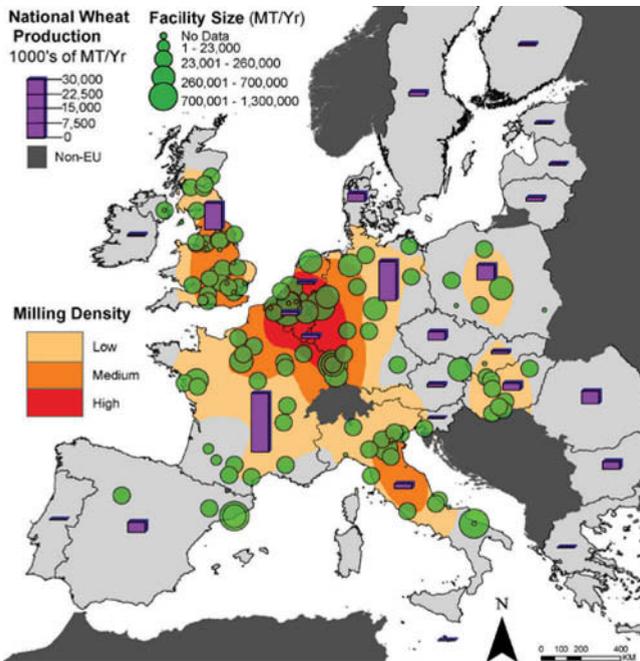
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European wheat production and key millers, 2012



Source: Rabobank, 2012 Grains, Stratégie

tipping point, and we believe, consolidation,” Rabobank said. “That said, for those who are willing and able to adapt, the long-term outlook is substantially better.”

Rabobank noted that the recent alleged antitrust violations by a number of milling companies in the E.U. may accelerate consolidation in the industry. In separate anticompetitive actions, Belgian, Dutch, French and German flour millers were fined a total of €242.4 million for a spate of offenses, including price fixing, limiting competition, production agreements and export quotas. The Dutch, French and German governments fined the millers by degree of participation and the level of offense, though many companies are still trying to appeal the original decisions.

“Without knowing how the fines will ultimately be settled, it is hard to assess the impact on the fiscal health of the implicated companies,” Rabobank said. “These fines could evoke the law of unintended consequences and become the catalyst for a long-anticipated industry contraction. Considering the fact that flour milling is a low-margin business, the sheer size of the penalties may force on or more of these companies into consolidation or closure depending on prevailing market conditions.” **WG**

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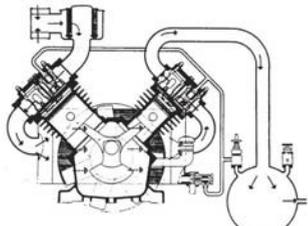
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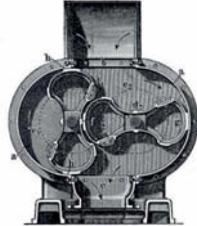


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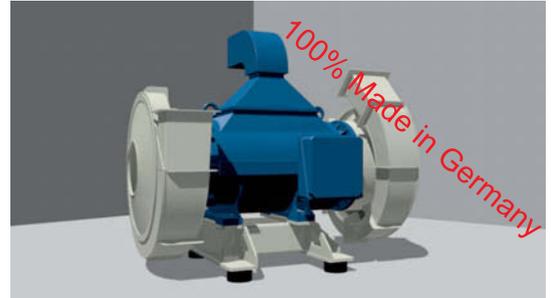
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'New' CWB forges ahead

"The reports of my death have been greatly exaggerated," Mark Twain once said.

It's a quote that could have just as easily been uttered by Ian White, president of the Canadian Wheat Board (CWB) now that the board — once the most powerful grain marketing agency in the world — has been stripped of its monopolistic powers by the Canadian government.

Since the beginning of the crop year (Aug. 1), wheat and barley can now be freely traded by Canadian producers and corporations, both within Canada and internationally. The board's powers as a single desk selling agency for wheat and barley are now history; part of an era in which the CWB was either loved by Canadian farmers as an independent broker working solely for the benefit of Canadian farmers or hated as a government agency that kept farmers from selling their own grain.

Today, without a monopoly, the board has less power and influence in Western Canada. Under the Canadian Wheat Board Act, it was never allowed to purchase "stationary" storage or

by Leo Quigley

White says board, stripped of its monopolistic powers, still has several tools in its possession that should appeal to Canadian farmers

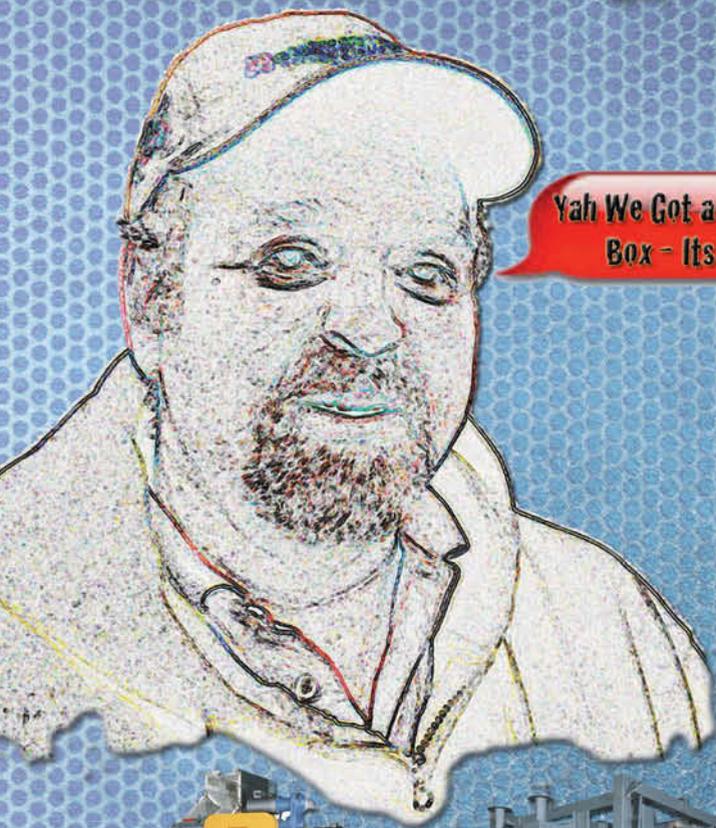
grain handling facilities and could only purchase moveable equipment such as railway cars or grain ships (Lakers) used to move wheat and barley on the Great Lakes, two of which are under construction for use by the CWB and are expected to begin moving grain in 2013.

Since the change, the board's capital assets consist of C\$200 million, a government guarantee on borrowings and a government commitment to contribute C\$350 million to

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The Canadian Wheat Board is headquartered in Winnipeg, Manitoba, Canada. Photo courtesy of the CWB.

ensure the organization in its new business model does not carry the liabilities of the old model.

What remains for White to work with is a smaller group of people who understand wheat and barley farming and global marketing as well, or better, than anyone else in the business, the ability to “pool” farmers grain revenues, nearly C\$350 million in federal funding to help the board adjust to the new environment and, most importantly, the loyalty of many farmers in Western Canada.

Even White, who was at the CWB helm before, during and after the politi-

cal storm, admits that the long-term survival of the present board is something that “remains to be seen.”

STILL LOYAL TO THE BOARD

Loyalty to the CWB was something that was as much a part of farming on the Canadian Prairies as spring rain. It was born through a mistrust of the private grain trade brought by an agrarian revolution that convinced many Prairie farmers that private corporations skimmed off profits from the grain that came from producers’ fields, leaving farm families with barely enough to live on.

For them, the alternative of having an independent government agency, backed by the Canadian government, was a reasonable alternative to a loss of their ability to find buyers and spend valuable time trading wheat, barley and (at that time) oats.

While some of this mistrust has disappeared over the years, much remains, handed down from father to son.

To a large extent it is this historical feeling of loyalty to the board and the feeling that the board can provide solid business and risk-management options, such as grain “pooling,” that should attract a large portion of Prairie farmers to use the services of the “new” CWB.

It will be up to board management to prove to grain farmers that they can provide better prices, more financial security and a sense that they are working solely on behalf of farmers and not corporate investors that will bring either success or failure to this new experiment north of the Canada/U.S. border.

Asked about the CWB’s chances for survival, White said he believes the board has several tools still in its possession that should appeal to Prairie farmers.

“I think farmers now need to understand the risks of marketing their wheat in Canada,” he said. “Before, the pooling system that was there for all of the participants took care of all of levels of risk, from grade spread risk to protein risk to payment risk to all sorts of basis risks. Now the farmer needs to make his own price, just as he does in the U.S.”

White said the pooling process now available to farmers will be similar to what existed prior to the change, but with a different quantity of grain and with commercial arrangements.

While it’s true that not all farmers will want to enter into a pooling arrangement for their grain and will prefer to market it themselves at what they believe is a reasonable spot price, the volume of grain in the pools will drop. However, the CWB has prepared for this eventuality by opening its doors to canola contracts for the first time.

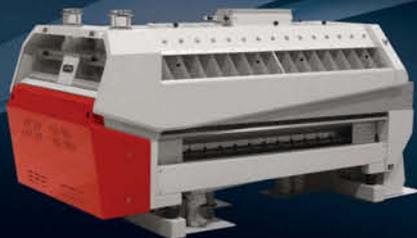
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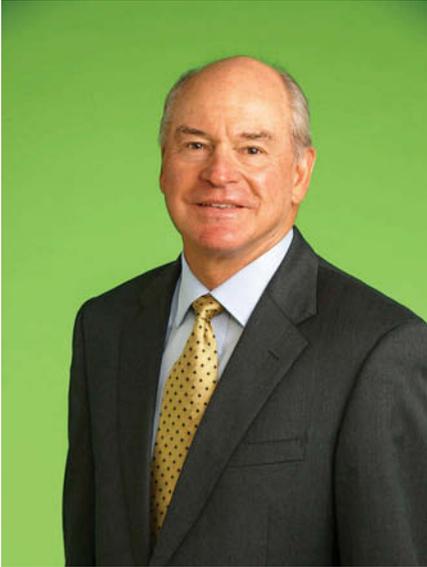


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Ian White, CWB president.

the seeded acreage in Canada. This spring Statistics Canada estimated seeded canola acreage at 21.27 million acres — more than expected — and wheat acreage at 23.81 million acres.

For those farmers who are not interested in pooling their wheat, barley or canola, the board also offers cash contracts just as any other company provides to producers.

Will the CWB eventually offer contracts for other crops, such as pulse crops, to its list of products? Probably.

White told *World Grain* the new board is considering adding field peas to the crops it will handle in the future, but it is moving carefully in the new environment.

“If we think we can be successful in a particular market, then we would certainly look into it. We don’t need to enter those markets on a pooling basis. We could enter them on a cash price basis.

The other factor that is providing the board with a feeling of optimism is its success in entering into agreements with existing grain handling companies with elevators to handle CWB grains and oilseeds.

As in the past, the elevator company becomes “an agent of the board” and moves the grain — or a like quantity and quality of grain — to export as the property of the board.

Earlier this year the board announced that it had reached handling agreements with all elevator companies in Western Canada.

The CWB has also retained its core of experts that provide advice on every-

Will the CWB eventually offer contracts for other crops, such as pulse crops, to its list of products? Probably.

thing from weather patterns worldwide to crop conditions and markets, and is providing that information to farmers and other companies on a fee-for-service basis. As well, CWB has retained its offices in Beijing and Tokyo, but it will be assessing their effectiveness as time goes on.

SHIFT IN FOCUS

What it is not involved in, at least to the same extent, is international forums such as the WTO. As Maureen Fitzhenry, spokesperson for the board, said: “The CWB will no longer be able to take on the same scope of international advocacy activities on behalf of Western Canadian farmers due to its more narrowly focused new role.”

“We used to cover the whole industry,” White said. “Now the industry in Canada has to think about how it configures itself to have everybody at the table, including the CWB (to consider trade and market access issues).”

As well, it is no longer involved in overseeing transportation issues or the planning necessary for the movement of grain and oilseeds to export position.

“Nowadays what we have is a relationship with the railways, just like any other company,” he said.

In general, White sees the revamped CWB operating much as co-operative grain companies operate in the U.S.

“The fact that the CWB has the ability to take the grain and market it for them (farmers) is another competitive option

for them that I think many farmers will realize is very useful in the whole competitive landscape, given that we’ll be acting as much as possible in the farmer’s behalf,” he said.

Now that the dust is starting to settle on the landmark shift to what the government has called “marketing freedom,” most progressive farmers seem to be taking a wait-and-see attitude toward the morphed version of the CWB.

Kevin Bender, president of the Western Canadian Wheat Growers, based in Regina, Saskatchewan, rides herd over the largest group of wheat farmers in Canada and is very pragmatic about the new board’s role in the grain business.

Asked about the CWB’s offer of pooling grain and canola, Bender said: “I think it’s a good option for those who want it. I personally don’t care for it. I try to pick the spikes in the market, which is not easy to do, and I’m not always successful. But I like having the opportunity to do that.”

“I want to know what I’m going to get at a certain time and know what that’s going to give me in my pocket, whereas with pooling you don’t know that until the end of the year.”

However, Bender does agree that there are wheat farmers who “haven’t embraced the technologies that are available” and are reluctant to try marketing their own grain on the open market.

He also agrees that the CWB has retained considerable expertise and could benefit farmers by offering information and advice. But he also recognizes that there is a lot of competition in Western Canada for that type of service.

“Do they have something unique to offer farmers? There are other marketing agencies that offer certain things, some of them at no cost,” he said.

Since the majority of grain is grown at a considerable distance from tidewater, just as it is in the Dakotas, transportation has always been a major issue for farmers in Western Canada, and Bender said he hasn’t decided whether transportation, particularly rail transportation, will be better or worse without the hands-on

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“For wheat and barley, that would be part of the solution to railway issues. If there’s a flour mill, or pasta plant or ethanol plant right here on the Prairies, we don’t have to rely on the railways as much.”

Bender thinks the CWB will become a more efficient organization in its new environment. Some of the services that farmers feel aren’t necessary will be cut and others that farmers feel would be useful will be made optional.

“There could also come a time when somebody comes along and buys up the CWB,” he said. **WG**

Based in Vancouver, British Columbia, Canada, Leo Quigley writes for a variety of national and international publications specializing in agriculture and transportation. He can be reached at Quigley@dccnet.com.

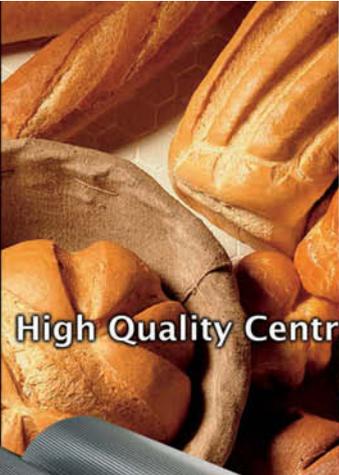
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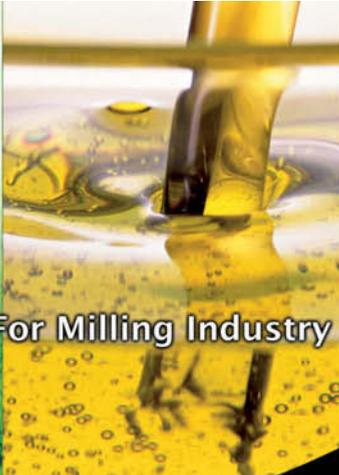
Since the beginning of the crop year, wheat and barley can now be freely traded by Canadian producers and corporations, both in Canada and internationally.

involvement of the CWB.

“Part of the solution, or direction, would be to do more value-added processing on the Prairies,” he said. “We see a lot more of this with canola (as

compared to wheat) with the crushers that have been built now. I think we’re close to 50 percent of our canola production being processed on the Prairies,” he said.





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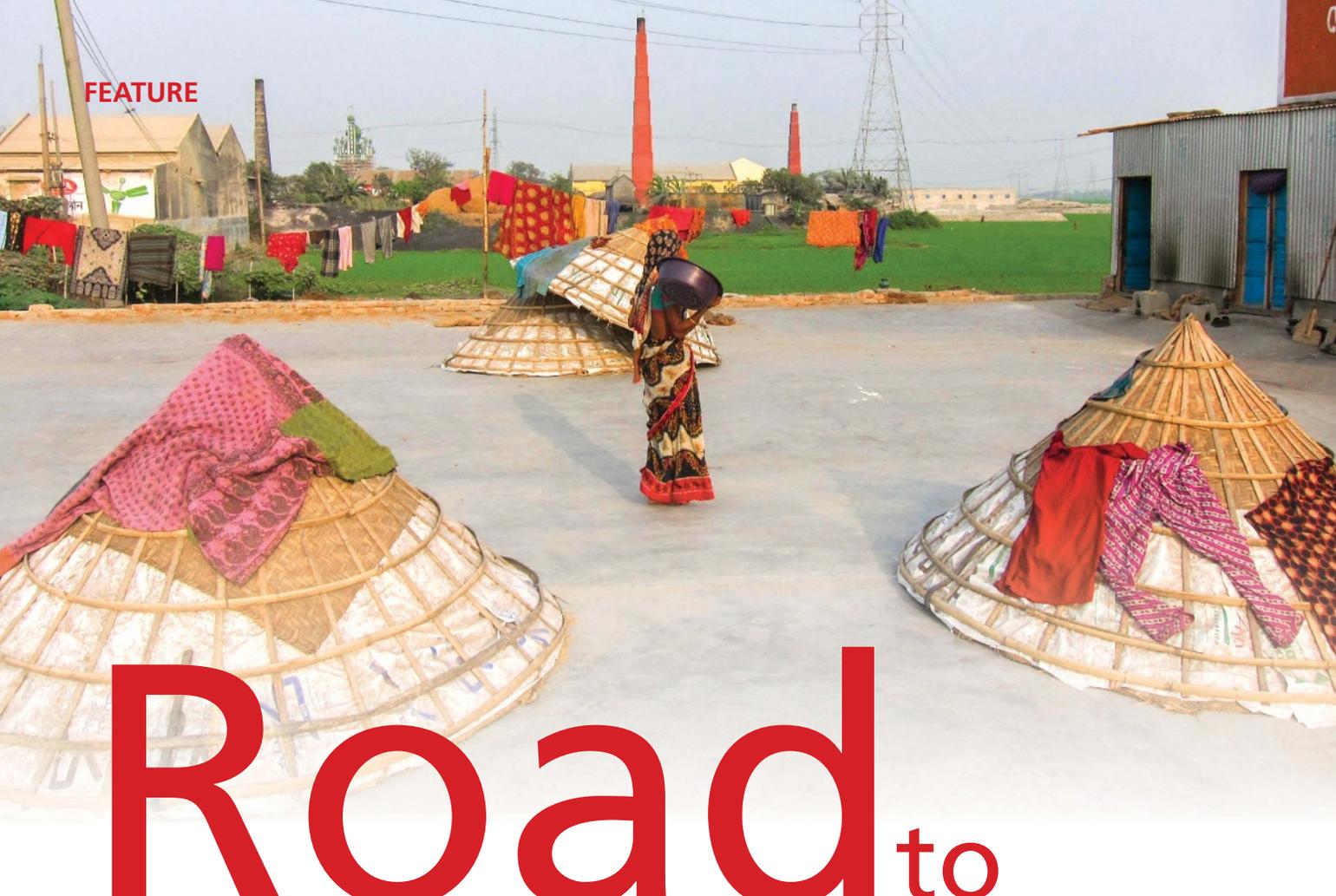
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Road to self-sufficiency

by David McKee

Once heavily dependent on international assistance, Bangladesh is now in position to help other countries with rice exports

When Bangladesh won its independence from Pakistan in 1971, its prospects for development were viewed dimly by many in the global community. A severe famine in 1974 reinforced its unfortunate image as a destitute country. A long period of socialist policies that began to be reversed only in 1988 did little to lower poverty rates.

Thanks in part to gradual market-based reforms and heavy doses of international assistance, but mainly owing to the initiative of the Bangladeshi people, the country can now boast of many accomplishments on the road to economic self-sufficiency.

- At \$20 billion per year, it is the world's number two garment exporter after China.
- Numerous other export sectors from pharmaceuticals to plastics to ship building are on the verge of taking off.
- About 8 million overseas workers send home over \$1 billion per month in remittances.

(Above) At a traditional husking mill, parboiled paddy rice is pushed into piles and covered with cones in the drying yard in the evening before being spread under the sun again the next morning. Scores of village women perform these tasks at each mill. The smokestacks of the boilers of other husking mills are in the background. Photos courtesy of David McKee.

- Population growth is well under control as fertility rates have dropped from 6.9 children in the 1970s to less than three per woman.
- Micro-lending, a phenomenon that was first successful on a large scale in Bangladesh, has improved countless livelihoods in rural society.

FOOD SECURITY SUCCESSES

The above notwithstanding, advancement in food security is one of the biggest feathers in the nation's collective cap,

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FEATURE: ROAD TO SELF-SUFFICIENCY



Workers gather up and fill jute bags with parboiled paddy (rough) rice after drying for milling at a husking mill. New automatic mills now accounting for over 20% of production eliminate these labor intensive steps.

particularly given population density, the highest of any large country (160 million people in an area the size of Iowa or Greece), lack of natural resources and vulnerability to more and more frequent climate change-related natural disasters like drought, cyclones and flooding.

With 33.5 million tonnes of milled rice production from three annual crops, Bangladesh has maintained self-sufficiency in rice production. Twenty years ago production levels were less than half this amount. Population has increased by 40% to 50% in the same period such that per capita food availability and intake has increased significantly.

Like other countries in the region, ranging from India to Myanmar to Thailand to Vietnam, today policy makers in Bangladesh fret more about the risks inherent in surplus rice production and the need to help farmers make ends meet. Wholesale prices of milled rice have declined by 30% since October 2011. Retail prices have fallen more slowly but are now about 25¢ to 30¢ per kg for the most common varieties.

If farmers begin major plantings of other crops in place of rice, reduced area and sudden drought could bring a crop shortfall and domestic price spikes. Some Bangladeshi politicians have even suggested allowing large-scale exports of common varieties for the first time to raise domestic prices closer to international levels and boost incomes of rice growers.

Bangladesh ranks fourth in rice production and consumption after China, India and Indonesia, so any radical policy moves could impact world markets.

LIMITED GOVERNMENT ROLE

In the past, the government has imported rice to make up for perceived shortfalls in domestic supply. In the 2010-11 marketing year (May-June), a record 1.3 million tonnes of imported rice filled Food Department warehouses, with the

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inward flow slowing to 445,000 tonnes the following year. This constituted a sudden policy shift, as the next largest year for government rice imports was 477,000 tonnes in 1996-97.

Successive bumper crops occurred in the last two years as the import contracts were executed reducing the government's ability to make domestic purchases and boost the slumping rice market.

These activities aside, the direct role played by the government in the rice sector is relatively small compared to other rice dependent countries. Procurement for public food distribution schemes in most years ranges from 1 million to 1.5 million tonnes. This amounts to just 3% to 5% of total production.

By comparison, Indian federal and state government agencies procure about one-third of all rice production, and Thailand's government is seeking approval to buy 19 million tonnes, or nearly two-thirds of annual rice production next year to support farmer incomes. Bangladesh government rice stocks are about 1.5 million tonnes versus 12 to 13 million tonnes in Thailand as of September 2012 and 25 million tonnes in India.

FARM INVESTMENT

It can be argued that public sector withdrawal from the rice market is largely what triggered the surge of investment in production and milling capacity. Up until the early 1990s, the government exercised monopoly powers over the rice market as the sole buyer of surplus from commercial mills in an attempt to control both producer and consumer prices. Such a policy was a disincentive for private sector risk-taking to invest in production and processing of the key food staple accounting for over 60% of caloric intake.

Since the late 1990s there has been a huge shift in the zone of surplus rice production from southern areas during the wet monsoon Aman season to the northeastern districts during the dry winter months of the Boro crop. Investment by farmers in over 200,000 electrically driven irrigation pumps and tube

wells is at the base of this transition.

For the sake of greater food security, the pumps run without interruption in the hot dry months of April and May, even while Dhaka's residents suffer repeated daily power cuts, euphemistically known as "load-shedding," due to the country's chronic undersupply of electricity.

The Boro crop now accounts for 60% of annual production, diminishing the Aman season share to 30%. Increased imports, production and distribution of subsidized mineral fertilizers by a government monopoly also have boosted output.

NEW MILLS BEING CONSTRUCTED

As production has expanded, the efficiency of the rice milling sector has gained through the construction of hundreds of automatic rice mills in the last 15 years. Ninety percent of rice is parboiled in Bangladesh. There are just a few small, peripheral, hilly regions where raw white rice is preferred.

"Auto mills" soak, steam and dry the paddy in a continuous automated process before milling, polishing and color sorting.

Traditional "husking mills" in Bangladesh soak the paddy in open outdoor vats before a few minutes of steaming or boiling followed by labor-intensive spreading and turning of the wet grain in a concrete yard to dry under the sun. Such mills still number from 10,000 to 20,000. Capacity of most is just 1 or 2 tph.

Industry insiders estimate that already over 20% of all rice in Bangladesh is processed by "auto mills." The largest numbers are found in clusters in the surplus zones of the north Bengal region. For example, around Dinajpur there may be 100 such auto mills built just in the last five years. Capacity ranges from 2 to 14 tph.

Most milling and parboiling equipment is imported from neighboring India. However, many of the major mills ranging from 8 to 14 tph, are now being built with state-of-the-art equipment from the most well-known international manufacturers.

These mills compete to sell their brands to urban consumers throughout the country but primarily in greater Dhaka, a rapidly expanding urban conglomeration of 15 million where purchasing power is highest. Color sorters are a key piece of equipment for the new generation of mills in Bangladesh as middle-class buyers happily pay a premium for the product with fewest impurities.

FINE RICE AND MINIKET

While the food security policy emphasis has been on getting increased yields of common varieties of rice, there has been a pronounced shift in market demand to fine varieties, many of them similar to the aromatic jasmine and basmati varieties of Thailand and India. These varieties now make up about 15% of production but command a much higher price due to lower yields and high demand.

Responding to the market, innovative owners of auto mills have come up with their own fabricated version of fine rice, locally known as "miniket." Low price coarse varieties are ground down in a final step in the milling process to make the kernels thinner and appear longer, giving them the visual appeal of fine rice. From 5% to 10% of the milled kernel is removed as flour in the process, which is sold for extrusion of rice noodles or for chicken feed.

One 2011 study estimates the miniket sales at an annual 5.4 million tonnes, nearly 20% of total domestic consumption, and still gaining market share. Miniket commands a price about one-third higher than the coarse varieties from which it is ground, so the incentives for millers are clear. True fine varieties on the other hand sell for about three times the retail price of coarse rice and twice the price of miniket. Miniket allows aspiring housewives to serve up rice having the appearance of expensive fine rice but with the flavor Bangladeshis are accustomed to from childhood.

FURTHER INVESTMENT

Entrepreneurial rice millers are beginning to explore opportunities in

production of rice bran oil. One major miller with such plans estimates that 150 truckloads of rice bran are taken daily to India, even though Bangladesh imports up to 1 million tonnes of vegetable oil per year. Reportedly, four rice bran oil plants have been started up in recent years and many more are likely to follow.

Today, farmers dry paddy themselves in order to store it on farm and to sell to millers at 14% moisture content. As farm economics change due to higher labor rates, it will be attractive for farmers to sell wet paddy to large millers with big, efficient dryers. Already a few are exploring investment in large paddy drying centers auto fueled by rice husk furnaces consuming only a fraction of the husks from milling.

WHEAT RISING

Per capita rice consumption may have already peaked as rising incomes allow for dietary diversification to wheat-based products, particularly for the burgeoning urban population. Large food groups with highly-efficient procurement, logistics and processing operations now account for two-thirds to three-quarters of wheat imports. Bushandhara Group has recently completed one of South Asia's largest wheat mills at 1,200 tonnes per day and 60,000 tonnes of steel silo storage. It awaits only an electrical hook up from the government to start up. At the same time, truckloads of wheat arriving from India in cross-border trade assure adequate wheat supply to dozens of smaller wheat millers spread throughout the country.

Because of its lower cost compared to rice, the government usually favors wheat imports for distribution to the poor under a myriad of food welfare schemes.

Domestic wheat production has decreased from a peak of almost 2 million tonnes to 1 million as farmers plant maize instead to supply feed production for an increasingly industrialized poultry sector and growth in aquaculture. More protein intake in the form of chicken and fish has contributed to major reductions in the rate of childhood stunting.

CONCLUSION

With rice consumption soon peaking but rice yields still rising by over 3% annually, Bangladesh has the potential to add millions of tonnes to the international market within a five-year period if the export gate is opened and farm prices are allowed to climb.

Ironically in the process, once chronically food insecure Bangladesh would thereby help stabilize world rice prices and contribute to the food security of sub-Saharan African countries for which low-price imported rice can be a safety valve. **WG**

David McKee is a grain industry specialist providing market research and analysis, and project guidance to companies and organizations with an emphasis on new markets. He can be reached at davidmckee59@msn.com.

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Global grain trade review



2012 has been the year in which grain farmers all over the world got a stark reminder of the impact weather has on what they do. From drought in North America to weeks of extreme wetness in parts of Western Europe, weather asserted itself and dragged production down and prices up.

The increase has been sustained but remains below the levels of the first grain price spike four years ago. The United Nations Food and Agriculture Organization, in its Crop Prospects and Food Situation report for October, characterized prices as high but still off the August 2008 highs.

“The FAO Cereal Price Index averaged 262 points in September, up 2 points (1%) from August as small gains in wheat and rice offset a decline in maize,” the report said.

“At this level, the FAO Cereal Price Index is up 7% from the corresponding period last year but still 4% below the peak

by Chris Lyddon

Drought in some areas, extreme wetness in others drag down production and raise prices in 2012

of 274 points registered in April 2008. While shrinking maize export availabilities and high maize prices have been leading the cereal markets in recent months, tightening wheat supplies have also become a concern, although international wheat prices fell under downward pressure toward the latter half of the month following the announcement by the Russian

Federation that it would not impose restrictions on exports.”

The FAO also noted a rise in international rice prices, “sustained by growing evidence that the pledging program in Thailand will remain in place in the coming season and also shrinking availabilities in other major export locations.”

In its September Grain Market Report, issued on Sept. 28, the International

Grains Council (IGC) cut its forecast for 2012-13 world wheat and coarse grains production by a further 9 million tonnes to 1.767 billion in September, “mainly due to downward revisions for Russian and Australian wheat, together with E.U. wheat and maize,” it said. “The total is now forecast to be down 4% year on year.”

The previous year’s figure was 1.85

billion tonnes. It also cut its figure for grain stocks by a further 6 million tonnes to 332 million, down 40 million tonnes on the year and the lowest level in five years. “Maize inventories are projected down by 17 million tonnes year on year to a six-year low,” it said. “The barley market is also particularly tight as stocks have declined

(Continued on page 56)

Global Grain Trade Activity

Marketing years as indicated (in 1,000 tonnes)

WHEAT

2011-12

Top exporters:

1. United States.....	28,563
2. Australia.....	24,000
3. Russia.....	21,627
4. Canada.....	17,500
5. Argentina.....	12,100
World Total:.....	154,641 (+18%)

Top importers:

1. Egypt.....	11,650
2. Brazil.....	7,300
3. E.U.-27.....	7,200
4. Indonesia.....	6,400
5. Japan.....	6,354

FLOUR

2011-12 (estimated)

(1,000 tonnes, wheat equivalent)

Top exporters:

1. Kazakhstan.....	3,500
2. Turkey.....	3,000
3. E.U.-27.....	1,300
3. Argentina.....	1,300
5. United Arab Emirates.....	950
World Total:.....	13,550 (+14%)

Top importers:

1. Uzbekistan.....	1,900
2. Iraq.....	1,400
3. Afghanistan.....	1,100
4. Indonesia.....	900
4. Brazil.....	900

MAIZE

2011-12

Top exporters:

1. United States.....	39,118
2. Argentina.....	16,000
3. Brazil.....	14,500
3. Ukraine.....	14,500
5. India.....	3,800
World Total:.....	102,273 (+14%)

Top importers:

1. Japan.....	15,000
2. Mexico.....	11,200
3. Egypt.....	6,500
4. E.U.-27.....	6,300
5. China.....	5,300

SOYBEANS

2011-12

Top exporters:

1. United States.....	37,013
2. Brazil.....	35,800
3. Argentina.....	7,800
4. Paraguay.....	3,100
5. Canada.....	2,875
World Total:.....	90,070 (-1%)

Top importers:

1. China.....	58,000
2. E.U.-27.....	11,000
3. Mexico.....	3,400
4. Japan.....	2,700
5. Taiwan.....	2,250

SOYBEAN MEAL

2011-12

Top exporters:

1. Argentina.....	26,920
2. Brazil.....	14,500
3. United States.....	8,618
4. India.....	4,600
5. Bolivia.....	1,480
World Total:.....	59,122 (unchanged)

Top importers:

1. E.U.-27.....	21,200
2. Indonesia.....	3,070
3. Thailand.....	2,720
4. Vietnam.....	2,425
5. Japan.....	2,250

RICE

2011-12

Top exporters:

1. India.....	8,000
2. Vietnam.....	7,000
3. Thailand.....	6,500
4. Pakistan.....	3,750
5. United States.....	3,224
World Total:.....	35,458 (+17%)

Top importers:

1. Nigeria.....	2,500
2. Iran.....	1,900
3. Indonesia.....	1,500
3. Philippines.....	1,500
5. China.....	1,300

BARLEY

2011-12

Top exporters:

1. Australia.....	5,000
2. Argentina.....	3,400
3. Russia.....	2,794
4. E.U.-27.....	3,000
5. Ukraine.....	2,462
World Total:.....	19,843 (+27%)

Top importers:

1. Saudi Arabia.....	8,000
2. China.....	2,400
3. Japan.....	1,300
4. Iran.....	1,200
5. Algeria.....	650

SORGHUM

2011-12

Top exporters:

1. Argentina.....	1,800
2. United States.....	1,651
3. Australia.....	1,200
World Total:.....	4,956 (-30%)

Top importers:

1. Japan.....	1,400
2. Mexico.....	1,200
3. Chile.....	600
4. Colombia.....	550

RAPSEED

2011-12

Top exporters:

1. Canada.....	8,725
2. Australia.....	2,350
3. Ukraine.....	1,208
World Total:.....	12,745 (+22%)

Top importers:

1. E.U.-27.....	3,518
2. China.....	2,600
3. Japan.....	2,400
4. Mexico.....	1,550
5. United Arab Emirates.....	825

Source: International Grains Council, London; United States Department of Agriculture's Foreign Agricultural Service, Washington, D.C.

Grain exports and imports by major seaports

(in tonnes, calendar year 2011)

U.S.¹

- 1 Brunswick, Georgia
230,326 (-66%)*
- 2 Duluth, Minnesota
796,650 (-43%)
- 3 Portland, Oregon
4,299,755 (-.02%)
- 4 Corpus Christi, Texas
4,214,821 (2.4%)
- 5 Tacoma, Washington
5,352,389 (4.9%)
- 6 South Louisiana
37,528,372 (4.9%)

Canada¹

- 1 Prince Rupert
5,042,165 (17.6%)
- 2 Vancouver
15,512,268 (-4.7%)
- 3 Thunder Bay
6,267,457 (19.6%)

Brazil¹

- 1 Paranagua
18,800,000 (3.2%)
- 2 Santos
16,635,138 (8.8%)

Brazil¹

- 2 Santos
1,288,892 (-15.6%)

Argentina¹

- 1 San Martin/San Lorenzo:
34,302,278 (-6.4%)
- 2 Rosario
15,153,841 (1%)
- 3 Quequen
5,506,432 (10.1%)
- 4 Bahia Blanca
7,651,255 (4.8%)
- 5 Ramallo
1,235,976 (-18.2%)

Map Legend

Exporting ports

Importing ports

¹ "Grain" totals include any cereal grain, oilseed, feedstuff or agrifood and may include any of the following: wheat, maize, soybeans, rice, oats, barley, rapeseed/canola or feedstuffs. Percentage designates the increase or decrease in the port's grain traffic from the previous year, if known.

² Totals include wheat, maize and soybeans.

³ Totals include maize, soybeans, soybean meal, sorghum and barley.

⁴ Totals include wheat, maize, barley and sorghum.

* This massive drop was due to weather issues that caused most grain to be shipped out of the Port of Louisiana.

** Massive gains seen in 2011 after drought depressed numbers in 2010.

Europe¹

- 1 Amsterdam, Netherlands
1,148,914 (-11.3%)
- 3 Ghent, Belgium
557,953(-4.7%)
- 4 Rouen, France
7,524,074 (-16.8%)
- 5 Hamburg, Germany
1,500,000 (-36.7%)
- 6 Rostock, Germany
2,700,000 (42%)
- 7 Novorossiysk, Russia
5,776,100 (.3%)

Europe¹

- 1 Amsterdam, Netherlands
5,523,146 (-11.3%)
- 2 Rotterdam, Netherlands
8,516,000 (24.5%)
- 3 Ghent, Belgium
3,292,997 (18.2%)
- 5 Hamburg, Germany
448,000 (-29.1%)
- 8 Antwerp, Belgium
732,490 (-5.3%)

South Korea¹

- 1 Incheon
8,334,482 (-22%)
- 2 Ulsan
1,440,497 (-1%)
- 3 Pusan
2,556,422 (+1%)
- 4 Kunsan
3,187,412 (-14%)

Japan¹

- 1 Chiba
2,328,655 (+2%)
- 2 Kashima
6,512,325 (+29%)
- 3 Nagoya
4,830,605 (+20%)
- 4 Port of Kinuura
2,850,012 (na)
- 5 Kobe
3,541,882 (+8%)
- 6 Mizushima
2,734,177 (na)
- 7 Shibushi
3,599,173 (na)

China⁴

- 1 Dalian
153,248 (na)
- 2 Huangpu
1,806,043(na)
- 3 Qingdao
462,302 (na)
- 4 Shijiazhuang
253,019 (na)
- 5 Shanghai
328,695 (na)
- 6 Nanjing
268,963 (na)
- 7 Shenzhen
519,454 (na)

Egypt³

- 1 Damietta
4,576,928 (na)
- 2 Alexandria/Dakheila
6,578,639 (na)

Taiwan⁴

- 1 Taichung
2,800,399 (na)
- 2 Kaohsiung
2,336,926 (na)

Australia^{1 **}

- | | |
|--|------------------------------------|
| 1 Mackay
351,000 (56.6%) | 10 Port Lincoln
2,714,971 (40%) |
| 2 Gladstone
231,000 (44.3%) | 11 Adelaide
2,900,449 (55.5%) |
| 3 Fisherman Islands
947,000 (67.6%) | 12 Giles
1,002,006 (92.3%) |
| 4 Carrington
1,408,000 (26.9%) | 13 Thevenard
420,710 (1.8%) |
| 5 Port of Kembla
2,673,000 (308%) | 14 Wallaroo
812,365 (23.5%) |
| 6 Geelong
2,477,000 (214%) | 15 Albany
1,319,902 (-28.2%) |
| 7 Portland
715,000 (660%) | 16 Newcastle
1,862,691 (40%) |
| 8 Geraldton
1,828,777 (-14.2%) | 17 Melbourne
2,615,002 (45%) |
| 9 Fremantle
2,972,206 (-36.9%) | |

Sources: World Grain extends many thanks to all of the individual ports that supplied this data, as well as each of the following agencies that helped gather this information: U.S. Grains Council (Washington, D.C., Beijing, Cairo and Seoul offices); U.S. Wheat Associates; the Japan External Trade Organization (JETRO), Chicago, Illinois, U.S. office; and Bolas de Comercio de Rosario (Rosario Stock Exchange) with assistance from APOSGRAN.

(Continued from page 53)
for three consecutive years.”

The IGC is thinking in terms of a rise in production next year.

“Planting of northern hemisphere winter grain is well under way and the wheat area is tentatively forecast 2% higher for 2013-14, driven by both firm prices and a projected recovery from the weather-related damage to crops in 2012-13,” it said.

BAD YEAR FOR U.S. MAIZE

The IGC reported that maize (corn) harvesting in the U.S. was progressing faster than the normal schedule, with 39% completed by Sept. 23 because of early crop maturity.

“Earlier in the year, high prices and good planting conditions boosted the sown area by 5%, to 39 million hectares, the highest since 1937,” it said.

(Continued on page 74)

2011-12* global grain supply-demand summary (in million tonnes and hectares)		
WHEAT		
Supply 2011-12	Demand 2011-12	2011-12
Beginning stocks ... 197.9 (-1%)	FSI use**542.1 (+1%)	Ending stocks.....198.6 (+3%)
Production..... 695.0 (+7%)	Feed use..... 144.7 (+25%)	Area harvested.....221.7 (-1%)
Total Supply 1040.2 (+6%)	Total.....686.8 (+5%)	
Total Traded..... 154.6 (+27%)		
MAIZE		
Supply 2011-12	Demand 2011-12	2011-12
Beginning stocks ... 127.5 (-11%)	FSI use**354.8 (+1%)	Ending stocks.....139.5 (+12%)
Production..... 876.6 (+6%)	Feed use..... 504.4 (+2%)	Area harvested.....168.4 (+3%)
Total Supply 1101.1 (+4%)	Total.....859.2 (+1%)	
Total Traded..... 102.2 (+14%)		
SOYBEANS		
Supply 2011-12	Demand 2011-12	2011-12
Beginning stocks 70.2 (+18%)	Crush225.5 (+1%)	Ending stocks.....53.6 (-22%)
Production..... 237.0 (-10%)	Other.....28.9 (-4%)	Area harvested.....102.1 (-1%)
Total Supply 398.1 (-35%)	Total.....254.4 (+1%)	
Total Traded..... 90.0 (-1%)		
* All totals estimated		
** FSI = Food, Seed and Industrial		
Source: U.S. Department of Agriculture's Foreign Agricultural Service, Washington, D.C.		
() percentage change from 2010-11		

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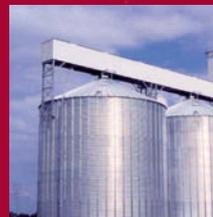
(* choose from over 60 calibrations available)



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CHOPIN
TECHNOLOGIES

Future of Flour

Economic, functional & nutritional aspects

The magazine for the 4th International Mühlenchemie Symposium in Hamburg, 2011



Mühlenchemie

makes good flours even better

**Meeting the future
with Flour Power**

**Impressions
of the
flour museum**

**Climate change
and flour treatment**

***"Talk to each other,
learn from each other"***

Three days of excellent lectures,
practical discussions
and evening get-togethers

Meeting the future with Flour Power

Never stand still. Rise to challenges. Solve problems! At the fourth International Mühlenchemie Symposium "Future of Flour. Economic, functional & nutritional aspects", over 300 guests from 60 countries outlined perspectives for the future of the international milling industry.

"What will be the most important thing during the next three days?" This was the rhetorical question with which Mühlenchemie's partner Volkmar Wywiol greeted the 310 symposium participants in the auditorium of the Bucerius Law School, a private university in Hamburg. "Talk to each other, learn from each other!", Wywiol continued in his speech. "If we do that, we shall have achieved our objective."

Forum for the Milling Family

The fourth Mühlenchemie Symposium from 8 to 10 September 2011 more than met this objective.



Nicolas Tschiklakis, Modern Flour Mills, Jordan;
Paris Fratzeskakis, Jofran, Greece



Dr. Lutz Popper, Dr. Guillermo KackKinney, Innoval 360, Mexico

During the three-day event the network that links the international Milling Family drew its members together even more closely. Besides lectures, discussions and debate there were celebrations, laughter and dancing. As in the past, Mühlenchemie again succeeded in organizing an event that was in a class of its own. The excellent series of lectures and the exquisite surroundings were made even more perfect by the warm, friendly and personal atmosphere. The team of organizers led by Managing Director Lennart Kutschinski and the head of R&D, Dr. Lutz Popper, had arranged a programme that was just right in every respect and linked the participants' professional and personal interests ideally. "We feel it's important to offer the industry a forum for exchanging knowledge and experience, where the members of the Milling Family can learn from each other. That is the only way to meet the challenges of the future together", said Kutschinski, summarizing the theme of the event.



James Ogunyemi, Flour Mills of Nigeria, Nigeria; Lennart Kutschinski; T. C. Orajaku, Vitachem, Nigeria

Flour is life

The modern auditorium of the elite university Bucerius Law School was an ideal setting for a transfer of knowledge of this kind. For two days, 27 professors, economists, practitioners and representatives of public institutions presented the latest developments in the fields of flour improvement, fortification with nutrients, dough rheology, analysis and milling technology. But before the prominent experts went into their specialist topics in depth, Volkmar Wywiol reminded the audience urgently of the binding theme of this exchange of knowledge: "Flour is life. No other basic food has such crucial significance for man as flour. So we must do all we can to ensure that this essential food is still available in sufficient quantities and good quality for coming generations."

Mühlenchemie shares its knowledge

CEO Torsten Wywiol explained the contribution Mühlenchemie and the Stern-Wywiol Gruppe as a whole can make to meeting this challenge: "Our group consists of eleven firms which all operate in the field of ingredients. We are not only experts on flour treatment; we also know our way around in stabilizing systems, enzymes, micronutrients and flavourings. The team spirit that unites us across the limits of the individual specialist companies enables us to be just that much quicker, more innovative and better than the rest. So I invite you to make use of our competence! As an enterprise independent of the major organizations we have only one objective: to develop tailor-made solutions in response to your needs."

Lennart Kutschinski gave a brief summary of the nearly 100-year history of the company and Mühlenchemie's global growth strategy: "We export 85 percent of our products. We know how important it is to be present on the spot, to give our customers optimal advice. That is why we are systematically extending our distribution network and are already represented in eleven locations around the globe. And we consider it important to offer training, because our aim is to share our knowledge with the whole international Milling Family."



Kristof Dossche,
Dossche Mills NV, Belgium



Robert Esseveld,
E&R B. V., Netherlands

Spotlight on Africa

Plenty of knowledge was exchanged during the two-day conference: the impact of climate change on grain growing; new analytical methods for determining the quality of wheat and flour; probiotic additives for bakery products; special features of the Chinese, Brazilian and Indian wheat markets – the spectrum was broad indeed. But the main topic of this year's symposium was the African continent. Research scientists and representatives of NGOs and the milling industry spoke on the current situation of milling in Africa and sketched the challenges to be expected in the future, in the fields of raw materials and markets, technical developments, and progress in the battle against malnutrition.

Since the topics had close practical relevance, the lectures were usually followed by interesting discus-

sions with an exchange of views and experience. Folaranmi Babatunde Odunayo, Vice-Chairman of Honeywell Flour Mills in Nigeria, raised a chuckle in the audience when he started his paper by remarking that living conditions in Nigeria certainly had potential for improvement but that the Nigerians were the happiest people on earth nevertheless. The following speaker, Dr. Guillermo Arteaga MacKinney, was unwilling to accept this assertion without comment and assured his listeners mischievously that this attribute fitted his people, the Mexicans, just as well. And finally Torsten Wywiol took up the thread and applied the quotation to his own enterprise: "We Germans may not be the happiest nation on earth, but the Stern-Wywiol Gruppe is without doubt the happiest group of companies ..."

Folaranmi Babatunde Odunayo, Honeywell Flour Mills Ltd., Nigeria





The first evening was crowned by a maritime get-together on the Louisiana Star. Before the order to "cast off", most of the speakers gathered in front of the impressive paddle steamer for a photo shooting.

First-rate supporting programme

Certainly all the guests were happy where the supporting programme was concerned. On the first evening the motto was "Welcome aboard the Louisiana Star", a luxurious paddle steamer in historic Mississippi style, which set off on an impressive trip along the Elbe river and offered fascinating views of night-time Hamburg and its harbour. Between a champagne reception, the buffet meal and acrobatic show numbers the guests found plenty of time to talk together informally and meet new members of the Milling Family from every corner of the earth.

The grand finale of the event was a gala evening in the party hall of the Hamburg hotel Grand Elysee. After a stylish candlelight dinner the live band "Steam" and a performance by the American singer Sydney Youngblood created a lively party atmosphere. The Milling Family cheerfully joined in the mood of the rousing show and used the final evening to celebrate and dance into the night.



Sydney Youngblood



Volkmar Wywiol with Glória Parente (left) and Adriana Souza, Globalfood, Brazil

A pendant in memory of the world's first millers

Mühlenchemie issues a commemorative coin, a reminder of the world's first millers, to mark the symposium "Future of Flour".



Grain, flour and bread are inseparably bound up with human civilization. In those regions where enough grain could be harvested, ground and baked, civilization developed and the economy flourished. The cradle of bread culture was Egypt. As early as 2600 B.C. the Egyptians started baking leavened bread and cultivating baker's yeast. But bread was more than just a food; it was sacrificed to the gods and buried with the dead as nourishment for their journey into the next world.

No bread, no pyramids

Bread played a crucial role in the building of the pyramids, too. Since thousands of workers had to be fed for years on end, industrial-scale bakeries were set up around the construction sites in which some 10,000

women laboured as corn grinders. These women knelt over their grinding stones for 7 to 8 hours a day, a heavy and arduous task, and produced 2 or 2 ½ kg of flour.

Statuettes of these corn-grinding women were often used as burial objects. The woman's task was to relieve the deceased person of hard work in the realm of the dead. Mühlenchemie owns a valuable copy of such an Egyptian statuette in its original size (27 x 40 cm) at the *flour art museum* in Wittenburg.

The "Corn Grinder" in a limited edition

To mark the 4th milling symposium, Mühlenchemie had a bronze key-ring pendant cast by the artist Yves Rasch with this figure as its motif. Mühlenchemie presented each participant in the symposium with one of these bronze pendants of the "Corn Grinder" from a limited edition of 500. With this gift Mühlenchemie wished to build a bridge between past and present, Managing Director Lennart Kutschinski explained. "On the one hand it's intended as a reminder of the world's first millers; and on the other we wish to thank today's milling industry for its daily work of producing flour: a food that never ceases to fascinate."



Servant-girl grinding corn

Egypt, around 2450 B.C., replica
Staatliche Museen zu Berlin, Preußischer Kulturbesitz

Servant-girl grinding corn, Egypt, around 2450 B.C (replica)
National Museums of Berlin, Prussian Cultural Heritage Foundation

Flour and fine art

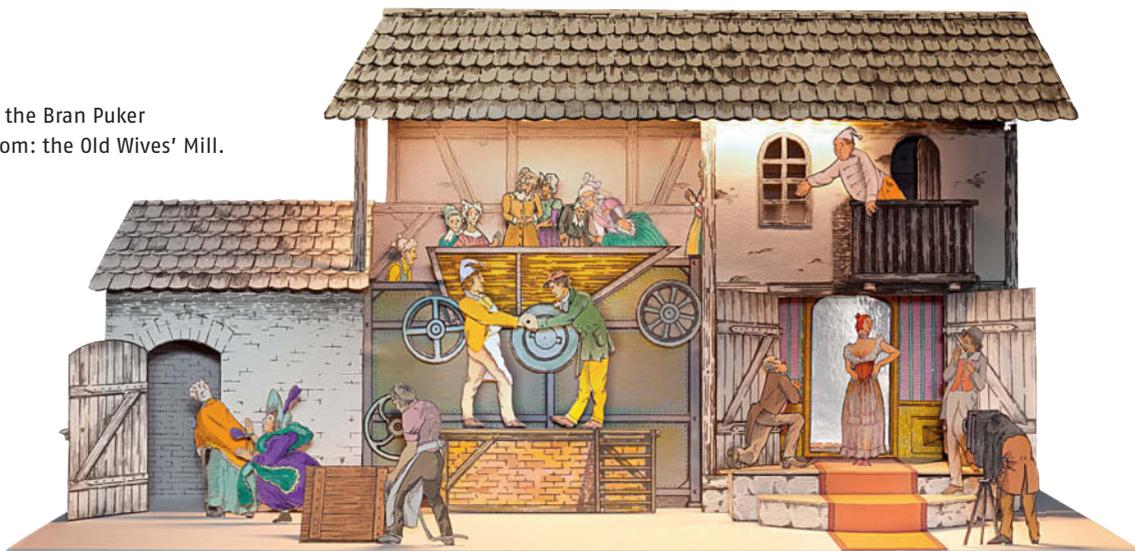
Dipping into the fascinating world of flour



Very much in contrast to the technical part of the tour was the visit to the *flour art museum* in Wittenburg, where the emphasis was on fine art. The museum's founder, Volkmar Wywiol, himself welcomed the individual groups to the rooms of the former District Court building, now a listed monument. "Allow yourselves to be infected with our enthusiasm for the cultural history of flour, and hear about the different cultures and epochs of milling! The museum brings myths and legends surrounding the 'white gold' to life", Wywiol promised his listeners. And so during the tour the visitors heard the story of the Old Wives' Mill, were told why "bran pukers" once served as guardian spirits and learned the significance of the Mexican 'bread of the dead'. They encountered talking flour sacks and admired a hand-knotted picture of the Greek goddess Demeter and numerous other exhibits reflecting, each in its own way, the significance of flour over thousands of years. In the last room, the Sackotheque, they were able to spend time searching among the 2,400 framed flour sacks arranged systematically according to the names of the countries from which they came.



Fig. top: the Bran Puker
Fig. bottom: the Old Wives' Mill.





Incredible flour sacks

By the end of the tour, many a visitor was staring in astonishment. "As so often in the past, the exhibition came as a surprise", said Melanie Nickschat, Volkmar Wywiol's personal assistant, who conducted part of the tour. "If you haven't seen the museum you can scarcely imagine how such a fascinating art collection can be made with flour sacks. But those who have seen it are usually delighted beyond words."



Adriana Souza, Golbalfood, Brazil, posing in front of the string-on-nylon image of the goddess Demeter

New products ... to make your flour even better

Mühlenchemie is one of the internationally best known companies in the field of flour standardization and flour improvement. The secret of its success is systematic orientation of product development to the needs of the market. The following is a brief overview of recent new products and further developments:

Alphamalt EFX Swift

- Booster for standard enzyme treatments; use on top of the usual additives
- Maximum volume: increased volume yield for sandwich bread and small baked products
- Enhanced crumb structure in conjunction with lighter-coloured crumb
- Maximum stability, even with over-fermentation
- Reduced use of emulsifiers

Powerzym S

- For use in weak flours for yeast-raised products, e.g. sandwich bread, baguettes or rolls
- Complete flour treatment with a single product
- Effects:
 - *Strengthens the gluten network, even in long dough processes*
 - *Good balance between stability and elasticity*
 - *High volume yield*
 - *Good machinability*
 - *Fine, even crumb structure*
 - *Prolonged shelf-life*



EMCEgluten Plus

- Gluten substitute
 - *In low-gluten flours*
 - *In applications that benefit from very large amounts of gluten*
- Greater efficacy of the gluten: gluten booster; makes it possible to do without the addition of expensive vital gluten wholly or partly
- Effects:
 - *Rheology: greater water absorption, longer dough stability*
 - *Baking: larger baked volume, better machinability*
 - *Economy: through less addition of gluten and use of cheaper lots of wheat*



Mühlenchemie's core competence lies in standardizing and optimizing flour.

EMCEbest WA Plus

- Increases the water absorption capacity of wheat flours without impairing the properties of the dough
 - *Increased yield of the baked products*
 - *Longer shelf-life*
- Complex of active substances, consisting of functional fibres, hydrocolloids and enzymes
- Doughs with less surface moisture
- Optimum machinability of the doughs
- Greater dough yield

Pastazym Plus

- Pasta upgrade for the production of quality noodles from soft wheat
- Complete replacement of durum or hard wheat is possible
- Qualitative benefits:
 - *Enhanced colour*
 - *Greater firmness*
 - *Reduced stickiness*
- Financial benefits:
 - *Use of cheaper wheat varieties, e.g. soft wheat*

TOP Bake Rice Bread

- Baking improver for the production of bread from gluten-free flour
- Available as an integrated compound or an improver concentrate
- Machinable doughs for hearth bread
- Products with good sensory properties
- Longer shelf-life



In our laboratories we determine the most important quality parameters.



Creative enzyme designer:
Dr. Lutz Popper

The fine art of enzyme composition

With creativity, know-how and a good measure of pioneering spirit, Mühlenchemie has for years been setting the trend in the enzymatic treatment of flours. Individual, specific compounds of active ingredients are developed for practically any application and any wish on the part of the customer.

The applications for enzymes in the food industry are incredibly diverse, and their composition and production is correspondingly complex. Mühlenchemie has been investigating the uses of these "magic proteins" for over 20 years, and the company is known throughout the world as a pioneer of enzymatic flour treatment. What matters is the "right mix", as the head of R&D, Dr. Lutz Popper, explains: "At our enzyme laboratory we have created an infrastructure that enables us to choose suitable elements from hundreds of different enzymes; these we modify and combine to make up

individual solutions. In this way we create multi-enzyme compounds with biochemical effects that complement each other and fit our customers' specific requirements perfectly."

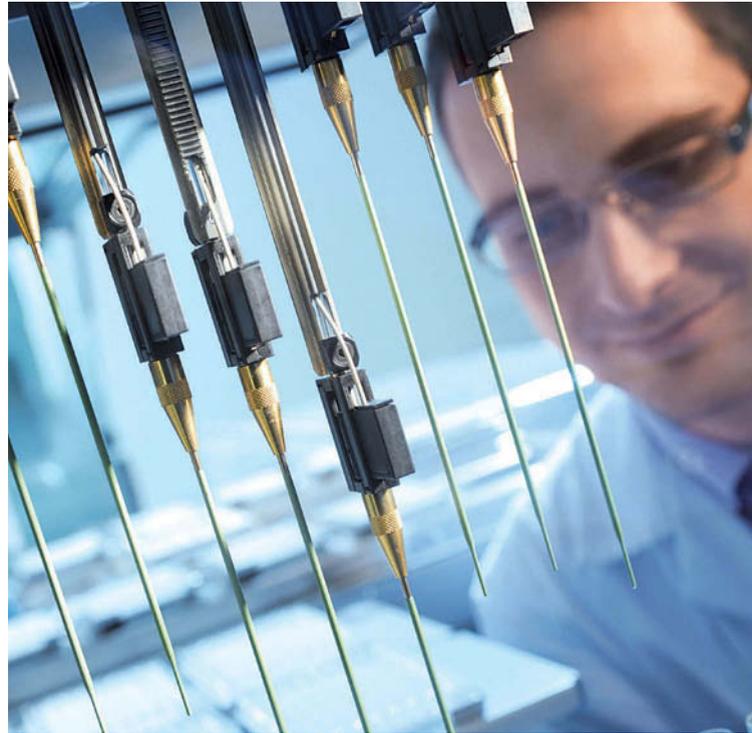
Enzyme design as a core competence

"Composing" enzymes is a creative process that can only succeed through collaboration between research scientists, applications technologists and users of the products. In order to know the exact needs and

wishes of its customers, Mühlenchemie includes a scientist or applications technologist in the initial meeting with the customer as well as a member of the sales department. "This tandem principle has proved very useful, because it sets us a specific objective from the start. Enzyme design is precision work, but it's teamwork too", Managing Director Lennart Kutschinski explains.

Dovetailing of research and practical tests

Mühlenchemie also collaborates with universities and young biotech enterprises in a close network. When developing new bacteria strains, for example, the Ahrensburg company cooperates with the Technical University of Hamburg, the University of Greifswald or the University of Alcalá in Spain. Practical testing of the products is always carried out in the company itself, since the Technology Centre with its area of 2,000 m² offers ideal conditions for testing and adjusting new enzyme systems in the end product.



Production of tailor-made compounds in Mühlenchemie's enzyme laboratory

Milestones in milling

Again and again Mühlenchemie sets international standards in flour treatment. Here are some of the classic products and newcomers from Mühlenchemie's "enzyme think tank":

Alphamalt BX. After potassium bromate was banned in the European Union and some other countries, Mühlenchemie created a suitable alternative based on enzymes. Alphamalt BX is the most successful bromate substitute worldwide to this day.

Alphamalt SOX. With this innovative sulfhydryl oxidase, Mühlenchemie has found an answer to the question of how to achieve rapid maturation of flour in a low-oxygen environment.

Tigerzym is a trendsetter in the Asian region. The sophisticated compound of active ingredients greatly improves the stability of fermented, non-baked products. The most popular application for Tigerzym is Chinese steamed bread.

Asparaginase. In 2002 the substance acrylamide hit the headlines. Swedish researchers discovered the health-damaging compound in certain heat-treated foods. Mühlenchemie reacted with a special asparaginase compound that effectively reduces the formation of this critical substance in bakery products.

Pastazym. Even before lipolytic enzymes became established for baking applications we realized the significance of this class of enzymes for pasta production. In particular, Pastazym improves the cooking tolerance of pasta and its appearance. Pastazym helps to save costs by reducing the use of special wheat for the production of pasta flour or making it unnecessary altogether.

Climate change and flour treatment

Climate change and its impact on the milling and baking industry was a controversial and much discussed topic at the "Future of Flour" symposium. For a long time Mühlenchemie, too, has been investigating the complex relationship between climate-related crop damage and flour quality, and the company is developing innovative solutions for treatment that result in bakeable flours even from troublesome lots of wheat. But what does this development work involve in practice? Here are two examples that give an insight into the world of research at Mühlenchemie.

More and more often, global warming is causing extreme weather conditions around the globe. Long periods of drought or massive floods ... freak weather phenomena of this kind are symptomatic of a fundamental climate change to which the international milling industry will have to adjust. Both too much and too little rain can have disastrous effects on the baking properties of grain. It is not unusual for bread wheat to be on the verge of classification as animal feed if weather conditions are bad during the growing season.

Drought encourages bug damage

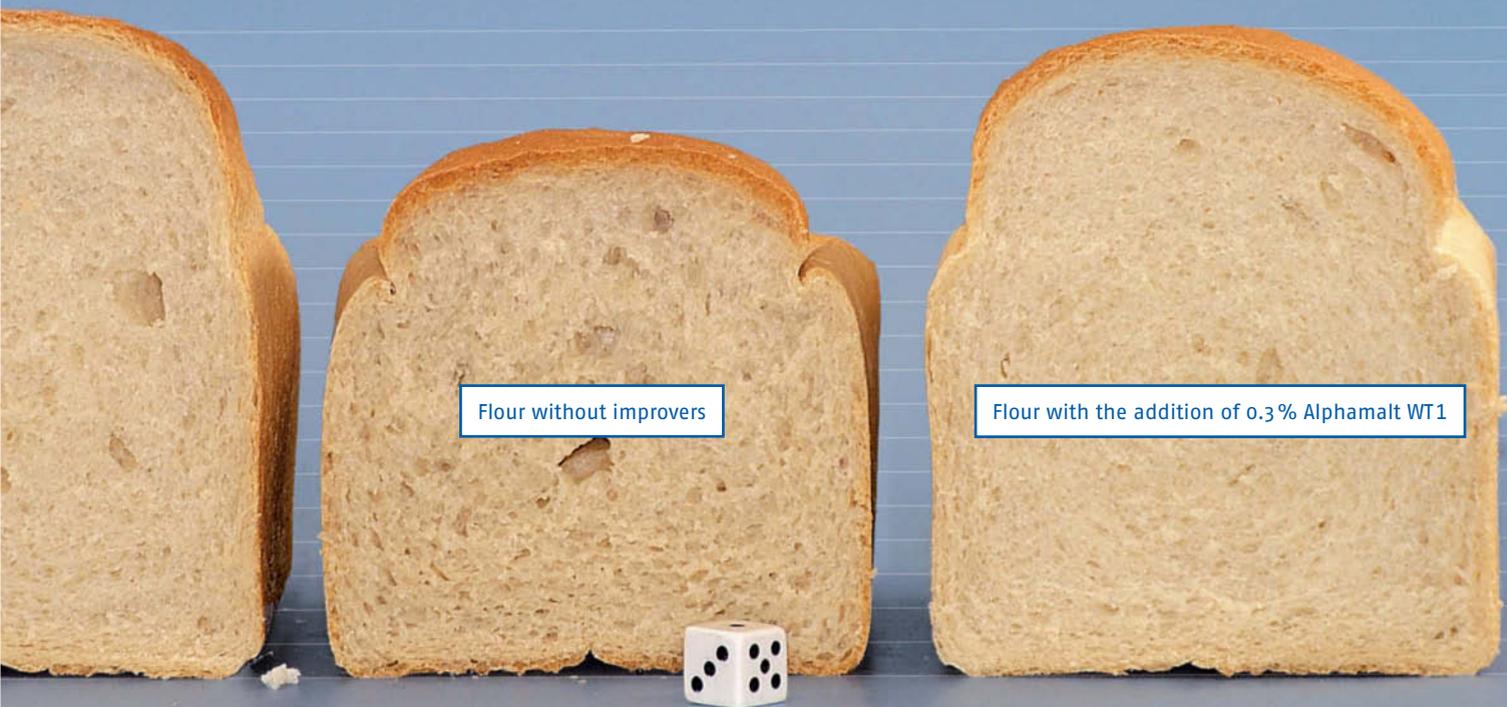
One direct consequence of climate change is an increase in bug damage to grain. During unusually long periods of dry weather – as in Russia in the summer of 2010 – the insects attack unripe, green wheat grains. In doing so they exude a protein-degrading enzyme and thus damage the gluten. The consumption of products baked from bug-damaged flour involves no danger to health whatever. From the nutritional point of view it is no problem to use such flour in food, but the dough is often difficult to process. Depending on the extent of the damage, the doughs lose their elasticity and become soft and malleable.

Limiting losses through bug damage

The latest research and baking trials at the Mühlenchemie Technology Centre show how these problems with the raw material can be overcome: "You have to strengthen the gluten with the aid of special compounds of active ingredients, reduce the activity of the protein-degrading enzymes as far as possible and improve the baking properties of the dough in general", says Dr. Lutz Popper, head of Research and Development. Following enquiries from customers in South-Eastern Europe, tests were carried out with infested Romanian



Adult Eurygaster integriceps on an ear of wheat



Flour without improvers

Flour with the addition of 0.3% Alphamalt WT1

Impressive results: With the aid of suitable additives, Mühlenchemie's R&D department succeeded in producing marketable wheat bread consisting of 50 percent bug-damaged flour.

and Bulgarian flour from the harvests of 2010 and 2009, in which the additives *Alphamalt BE 19124* and *Alphamalt WT 1*, especially, produced excellent results in respect of volume enlargement and crumb enhancement. "The balanced combination of enzymes, ascorbic acid and acidity regulators made it possible to mix a large percentage of bug-damaged flour with undamaged starting material and thus produce marketable baked goods" says Dr. Popper, explaining the concrete benefits of the project work.

Maintaining bakeability

But too much rain, as well as too little, can spoil the quality of the crop; one example of that is the historic floods in Australia at the beginning of 2011. The masses of water caused the grains to start germinating in the fields, which in turn gave rise to large amounts of starch-degrading enzymes. The water-absorption capacity of the flour is then reduced; the doughs become soft and sticky. The shape and volume of the loaves suffer from the poor stability of the dough.

Flour improvers can compensate for crop damage of this kind, too, but their use requires a sure instinct, as Dr. Popper emphasizes. Whereas twice to four times

the normal amount of flour maturing and oxidizing agents such as ascorbic acid can be added to sprout-damaged flour, xylanase must be dosed with caution. Emulsifiers like DATEM, lecithin or mono- and diglycerides are helpful, as is the addition of vital gluten, and acidity regulators are extremely effective in stabilizing the dough.

Rowelit saves rain-damaged crops

Mühlenchemie has taken these complex interactions into account in its flour improver *Rowelit* – an acid and mineral complex with a buffer effect; the addition of as little as 0.1 percent has a significant effect on the water absorption capacity and stability of sprout-damaged flours. "Rowelit is certainly an effective means of compensating for the negative effects of the rain-damaged crops that will become increasingly common in the course of climate change. And that applies to rye flours as well as wheat", Dr. Popper concludes from the extensive tests.

Mühlenchemie – *the* brand for the milling industry

There was something Mühlenchemie wanted to know. How well established is the trademark “Mühlenchemie” in the market? How do customers and experts perceive this brand? What can Mühlenchemie do to achieve even more customer loyalty and satisfaction with the brand? And finally: what must be done to promote the future development of the company with the “good name”?

To answer these questions the consultancy firm Biesalski & Company in Munich carried out a comprehensive survey in which nearly 100 decision-makers from mills and distributors around the globe were asked their opinion on Mühlenchemie as a brand.

The result surprised even Mühlenchemie's management: the brand is more firmly established in the market than many well-known suppliers of consumer goods. In the criteria “affinity”, “trust” and “loyalty” – those criteria that stand for the strength of a brand – Mühlenchemie achieved values as high as 90 percent.

But why is Mühlenchemie so firmly established? It has a high level of competence in the field of flour treatment and flour fortification, certainly – but you might expect that of a leading specialist company. The difference is that Mühlenchemie is unusually successful in meeting its customers' needs. The brand stands above all for outstanding competence in R&D and problem-solving, and for excellent product quality. What is more, Mühlenchemie is perceived as innovative, reliable and very strongly oriented towards service to its customers. That puts the brand well ahead of its competitors in the market in terms of trust, which in turn results in unusually strong loyalty on the part of customers. For a large number of respondents in the survey, Mühlenchemie was therefore the “brand of choice” for solving problems of flour treatment.

Loyalty to Mühlenchemie as a brand			
		 Customers	 Non-Customers
Affinity		90 %	90 %
Trust		90 %	75 %
Loyalty		70 %	54 %

External analyses confirm that the brand “Mühlenchemie” holds one of the top positions in the market

But Volkmar Wywiol and Lennart Kutschinski do not look upon this convincing result as an excuse for the company to rest on its laurels. On the contrary: the aim is to extend its competence in important areas like innovativeness and the speed of its processes. And in doing so Mühlenchemie has a clear objective in mind: best solutions for excellent flour quality!

(Alexander Biesalski, Managing Partner, Biesalski & Company)

What next?

Mühlenchemie intends to go on and on investing. New pilot plant. Enlargement of the baking laboratory to twice its size. More offers of training. Ahrensburg is all set for expansion and growth.

New milling laboratory

Mühlenchemie is investing in a milling laboratory of its own in order to optimize the whole chain of raw materials – starting with grain instead of flour. The high-tech pilot plant will permit milling trials with grain which will yield representative samples for subsequent laboratory tests and baking trials. In this way all the steps in the process of milling and baking can be included in the development of customized product solutions – from grinding of the corn through dough preparation to baking.

Enlargement of the baking laboratory and training centre

The capacity of the baking laboratory will be greatly enlarged. The total area for rheology and the trial bakery will be doubled and numerous analytical devices acquired. The enlarged premises will also create the necessary conditions for a more comprehensive offer of training and workshops for customers. One example: the new building will include a multimedia classroom.

New pasta laboratory

For several years Mühlenchemie's clientele in the pasta and noodle industry has been growing, and the

company is responding to this development by commissioning a pilot pasta plant. The focus of the trials will be on optimizing production methods and flour improvers in such a way that the attributes and quality of noodles made from soft wheat become more and more similar to those of hard-wheat noodles.

Starting up with fluid-bed processing

In 2012 Mühlenchemie will be entering the realm of fluid-bed technology. This gentle and versatile drying process makes it possible to produce food ingredients and adjuvants with precisely defined structures and properties. Mühlenchemie will use the six-million-euro plant installed with its sister company SternMaid to launch ingredients with totally new functional systems in the next few years.

Enlargement of the *flour art museum*

The enlargement of the *flour art museum* in Wittenburg is progressing by leaps and bounds too. On the upper floor of the listed building an exhibition with the title "CornWorlds" is being prepared in which original exhibits, films, photographs, models and media stations will make the fundamental significance of grain as a basic food real to the visitors.

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Mühlenchemie
makes good flours even better

(Continued from page 56)

“However, the severe drought has since dashed hopes of a record crop, with yields expected to fall sharply to about 8 tonnes per hectare (9.2 tonne per hectare), the lowest level in 10 years, and abandonment put at 12% (9% last year), the highest in 10 years.”

Quality is also a concern given the higher risk of aflatoxin contamination in drought years, the IGC said. It left its U.S. crop production forecast unchanged at 275 million tonnes, down 12% on the year and well down on the five-year average of 320.2 million tonnes.

Dry weather also hit maize yields in Canada, as well as in the E.U., where lower yield prospects for Romania, Bulgaria and Hungary are one reason for a year-on-year decline by 10.5 million tonnes to 55 million. Ukraine has also suffered and its crop is forecast to fall to 20 million tonnes from 22.8 million the year before,

2011-12* global grain supply-demand summary (in million tonnes and hectares)		
RICE		
Supply 2011-12	Demand 2011-12	2011-12
Beginning stocks 98.7 (+4%)	All uses 456.6 (+2%)	Ending stocks.....96.2 (+2%)
Production..... 465.2 (+3%)		Area harvested..... 105.7 (+9%)
Total Supply 597.8 (+3%)		
Total Traded..... 35.4 (+7%)		
SORGHUM		
Supply 2011-12	Demand 2011-12	2011-12
Beginning stocks 5.7 (+39%)	FSI use** 32.5 (-14%)	Ending stocks.....4.2 (-16%)
Production..... 54.5 (-16%)	Feed use..... 23.0 (-10%)	Area harvested..... 37.8 (-7%)
Total Supply 64.8 (-14%)	Total..... 55.5 (-8%)	
Total Traded..... 4.9 (-32%)		

* All totals estimated
 ** FSI = Food, Seed and Industrial
 Source: U.S. Department of Agriculture's Foreign Agricultural Service, Washington, D.C.
 () percentage change from 2010-11

despite a 20% rise in plantings.

For China, the IGC described overall weather conditions as favorable, even if rains across the North China Plain and in

the Yangtze Valley slowed harvesting. Its crop is forecast up 1% on the year at 195 million tonnes with increased plantings almost entirely offset by lower yields.



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India was another country where maize growers suffered from a lack of rain.

“In India, where only around one-quarter of the crop is irrigated, lower monsoon rainfall has reduced the area planted to maize,” it said. “Production is forecast at 20 million tonnes (21.3 million last year).”

WHEAT PRODUCTION DROPS

The IGC has 2012-13 world wheat production at 657 million tonnes, a figure revised down by 5 million tonnes on the previous month’s estimate and well off the record 696-million-tonne crop produced the year before. The IGC also pointed out that it is 7 million tonnes below the five-year average.

“The 4.4% year-on-year decline is due to both reduced plantings and lower-than-average yields,” it said. “Harvesting in Scandinavia and the U.K. was delayed by rains in late August/early September with implications for quality and suggesting higher quantities of feed wheat.”

In Russia, dry weather has helped and damaged the crop.

“Mostly dry weather east of the Urals Mountains has promoted spring wheat harvesting in Western Siberia,” the IGC said. “However, the crop estimate for Russia has been further reduced by 2 million tonnes, to 39 million (56.2 million last year), as drought conditions have lowered yields.”

It also said that quality had been affected with the proportion of milling wheat in the crop put at around five percentage points down at 60% to 65%.

Ukraine has also had what the IGC described as “adverse weather conditions throughout the season,” resulting in a production estimate of 13.5 million tonnes, down from 22.3 million last year and the lowest level in nine years.

North America has done better. Mostly dry weather across the Prairies accelerated harvesting in Western Canada.

“Total wheat plantings are estimated 9.5% higher than last season, with production placed at 27 million tonnes, up 7% year on year,” the IGC said. “Quality is expected to be good

given the dry harvest conditions.”

It put the U.S. crop at 61.7 million tonnes, up 13% on increased plantings and yields.

“Within this total, the winter wheat crop is 13% higher year on year, at 45.8 million tonnes, the largest crop since 2008,” it said.

China has a record 120-million-tonne

wheat crop after above-average yields and a slightly increased area produced a winter wheat crop of 114 million tonnes. India also has a record crop of 93.9 million tonnes.

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2011-12* global grain supply-demand summary
(in million tonnes and hectares)

BARLEY

Supply 2011-12	Demand 2011-12	2011-12
Beginning stocks 24.3 (-34%)	FSI use** 44.0 (+1%)	Ending stocks.....21.9 (-15%)
Production..... 133.9 (+7%)	Feed use.....91.7 (+1%)	Area harvested.....49.9 (-1%)
Total Supply 177.6 (+1%)	Total..... 135.7 (+1%)	
Total Traded..... 19.8 (+27%)		

RAPSEED

Supply 2011-12	Demand 2011-12	2011-12
Beginning stocks 6.9 (-12%)	Crush 60.7 (+4%)	Ending stocks.....4.5 (-30%)
Production..... 60.9 (+1%)	Other..... 2.5 (+0.1%)	Area harvested.....33.1 (+1%)
Total Supply 80.5 (+3%)	Total..... 63.2 (+3%)	
Total Traded..... 12.7 (+22%)		

* All totals estimated
 ** FSI = Food, Seed and Industrial
 Source: U.S. Department of Agriculture's Foreign Agricultural Service, Washington, D.C.
 () percentage change from 2010-11

southern hemisphere in place such as Argentina.

“Following a brief period of dry weather, heavy rains returned to central parts of Argentina in mid-Septem-

ber, stretching from Entre Rios and northern Buenos Aires westward to Mendoza. Planting is nearly complete, but excessive moisture levels, including flooding in places, could affect

crop establishment,” the IGC said. Competition for land from more profitable crops and dry weather conditions during planting, especially in the north, meant an 18% cut in area to 3.7 million hectares, and the IGC projects the wheat crop at 11.5 million tonnes, down from last year’s 14.5 million.

There’s a better weather story from Australia.

“In Australia, rains have improved soil moisture and provided relief to the wheat crop in the west. Scattered showers also fell in South Australia, Victoria, and southern New South Wales, maintaining the generally favorable conditions in those regions,” the IGC said. “However, dry weather has persisted across northern New South Wales and southern Queensland, reducing yield potential as the crop approaches the reproductive stage of development.”

Its Australian wheat crop forecast is



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22.5 million tonnes, down 24% from the record produced in 2011-12, due to both reduced plantings, given the dry start to the season, and lower yields, projected at the five-year average level of 1.7 tonnes per hectare.

RICE SETS A RECORD

World rice production in 2012-13 is heading for a record at 466 million tonnes, up from the previous year's 464 million. But the IGC pointed out that the rate of growth is slow compared to previous years "on account of limited growth prospects in Asia, notably in South Asia."

China has raised government support prices for intermediate and late-season crops by 17% and larger plantings could support a 2-million-tonne rise in production to 142.5 million tonnes, in 2012-13.

"While modest increases in output are expected in other countries, including Indonesia, the Philippines and Thailand, production in India is likely to register its first year-on-year decline since 2009-10," it said. "In recent weeks, a marked pickup in precipitation from the southwest monsoon has enabled kharif rice plantings to progress well. By mid-September, sowings were just 5% lower than in the previous year."

Its projection for India's 2012-13 rice crop is 99.8 million tonnes.

"However, while this would be the second largest ever, it would still be almost 5 million below the 2011-12 record," the IGC said.

SOYBEANS SET FOR STRONG RECOVERY

Expected record crops in South America will mean a recovery in world soybean production in 2012-13, up 8% on the year to 256 million, despite a U.S. crop which is likely to be the smallest in a decade.

"Despite having eased somewhat more recently, global soybean prices remain exceptionally high and are expected to encourage a 7% expansion in plantings in South America for 2012-13 crops," the IGC said. "Under the assumption that yields will show a marked improvement to broadly match those achieved in 2009-10 and 2010-11, production in the region is tentatively projected to reach a record 144.4 million tonnes (114.7 million last year).

The picture in the U.S. is less optimistic.

"While crop condition ratings have shown a marginal improvement in recent weeks, with just 35% rated good/excellent they are the worst since 1988, owing to the impact of adverse weather during the crucial pod-filling stage," the IGC said. "The crop forecast for 2012-13 is placed at 71.7 million tonnes, the smallest since 2003-04 and representing a 14% drop year on year." **WG**

Chris Lyddon is *World Grain's* European editor.
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FEATURE



Market volatility new normal

Everywhere you look in the grain and oilseeds world of 2012 there are dramatic challenges. Decreased production levels and quality issues mean that traders face problems getting the right product to the right market. High prices will hit the livestock sector particularly hard.

Delegates at the recent Grain Market Outlook, organized in London, England by British industry body the HGCA, got to hear some uncomfortable messages.

“Is abnormal the new normal? What a year,” said conference chairman Richard Whitlock, a member of the HGCA’s board.

“We have to expect volatility to remain for the foreseeable future,” said HGCA Senior Analyst Jack Watts. “We haven’t got the stock levels to back up lower production.”

Whitlock explained that the poor crop had created additional problems by making a mess of pre-harvest marketing plans.

“The percentage sold was much higher due to lower yields,” he said. “The proactive logistics for marketing the wheat crop have stalled. The markets are overwhelmed with too much poor wheat chasing too few markets. Processors are trying to use as much of this crop as possible, but there are limits.”

(Above) Delegates look on as a panel of experts discuss the current grain market. Photos courtesy of the HGCA.

by Chris Lyddon

HGCA conference examines worldwide grain, oilseed industry challenges

He also reminded the audience that the market in the U.K. is changing as a big ethanol plant starts to use wheat. Ensus, which operates an ethanol plant in Teesside, has decided that it will contract wheat down to 60 kg per hectoliter, he said.

“We could see a million tonnes of wheat going to a U.K. ethanol plant,” Whitlock said.

Watts looked at the market in detail. “We have become very used to growth in global grain demand,” he said. “2012-13 is unlikely to break that trend.”

He suggested that wheat is breaking away from maize in price terms. “The global wheat market is having to become more assertive,” he said. “It can no longer afford to be a passenger of maize. We really cannot afford to ignore some of the



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From left: Richard Whitlock, Mike O'Dea and Jack Watts provide analysis of the state of global grains to attendees of the HGCA's Grain Market Outlook conference.

drivers coming from external factors.”

He noted the upcoming elections in the U.S. and Germany, and the impact that the Eurozone's problems were likely to have on economic growth.

“Prices have had to rise to ration demand,” Watts said. “More of the world demand is for a Western meat-based diet.”

However, the effect of demand rationing is difficult to forecast.

“It is not an exact science. Expect this to be a source of further volatility,” he said. “The relationship between prices is changing, and it is all being driven by supply and demand fundamentals. 2012 is marking a new era. We still have maize issues from the U.S. drought, but we also have wheat issues emerging.”

High prices were already having an effect on demand. Livestock herds in the U.S. are starting to be rationalized, Watts said. He also noted projections for reduced demand for ethanol.

The U.S. isn't alone in having lost maize production. Europe is also having maize issues, with the crop expected to be 10 million tonnes lower.

“The market now looks to the Southern Hemisphere for some supply mid-season,” Watts said, but the region is a much smaller supplier of maize as compared to soybeans. “The U.S. drought is a big issue here. It made a tight situation even tighter. We can't just run down stocks, because they're not there.”

DISAPPOINTING WHEAT PRODUCTION

For wheat production, 2012 had been a “relatively disappointing” year, with the only year-on-year increases in output in North America. “The wheat markets need to respond to regulate the amount of wheat that's used in animal feed rations,” he said. “The stock-to-use ratio is approximately 25%. Stock-to-use levels of the major exporters is of concern. The key feature further ahead is what happens in Australia and Argentina. We shouldn't expect to see the close-to-record, 30-million-tonne crop we saw last year in Australia. About 20 to 23 million is the ballpark figure.”

Argentina is different, with the key issue being that the area is in decline. The dominant soybean area is almost turning wheat into a niche crop, he said.

In Europe, there have been several seasons of what Watts called “below par” grain production.

“We are getting to a point where stock levels can't really be drawn any lower,” he said. “The European grain situation is relatively tight.”

The U.K., in particular, has a problem. The region started the season with relatively low stocks and had to cover a much wider period. Average yields of 6.68 tonnes a hectare are at the lowest level since 1988. However, the lower yields are mitigated to some extent by increased area, Watts said.

“Availability is estimated to be about 1.2 million tonnes down year-on-year,” he said. “Demand is expected higher.”

“The supply and demand balance is almost cut in half. The U.K. wheat market is looking at being in a net import situation. This is a function of the fact that the wheat crop has underperformed. Anecdotally, this poor summer has cost the U.K. 4 million tonnes of wheat.”

Quality also is a major concern. Variability is large and that is having a bigger impact than lower averages, Watts said.

“The percentage of samples reaching nabim specification in 2011 was 40% of Group 1. In 2012, it was just 3%. Specific weight is pulling it down,” he said. “Markets have had to respond. In 2011, there was no need to see growth in imports. In 2012, milling wheat prices have just become a function of the imported German ‘A’ wheat price.”

“The draw down in stock levels is forcing wheat to think about putting a bit of a premium in over maize. India could become useful.”

BARLEY DEFICIT

Watts noted that barley is in its third consecutive season of supply deficit. “The Black Sea is the biggest deficit area,” he said, adding that it is a key supplier to the big importer Saudi Arabia.

There's a mixed picture for oats.

“The decline in demand for oats is coming from the feed side,” he said. “The milling side is a success story.”

The key message is that farmers need a pre-planting price signal to actually grow the crop, Watts said.

PALM OIL AT A DISCOUNT

In the oilseeds sector, Watt noted the developing discount in palm oil. This is likely to encourage a change in demand away from other commodities, such as soybeans.

Soybean production is driven by the U.S. and South America. He described 2011-12 as very unusual in that there were crop downturns in both regions. The U.S. crop is forecast lower, while in South America there are early hopes

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of a record crop as farmers respond to record prices.

Still, there is a very long way to go, and a lot will depend on weather, Watts said.

“Palm oil has really been a restricting factor for soy oil and other vegetable oil price rises. Soy meal is the dominant protein meal,” he said. “The demand has recovered strongly. That’s the big driver

in the margin at the moment. All eyes are on South America now and what the weather patterns will do over the next few months.”

U.S. MAIZE

Because of the vital role of the U.S. maize crop, the HGCA brought in U.S.-based analyst Michael O’Dea, senior

risk management consultant at INTL FCStone LLC, to consider the crop and its market.

“You really have to take a long hard view of the market,” O’Dea said.

He stressed the importance of the drought in the United States.

“This is what has been driving the market. We need a wet winter this year. We are seeing some moisture now in the Corn Belt. We need more moisture to get ready for the corn crop next year.”

The U.S. went from record planting to tight supplies.

“We have got high prices,” he said. “We have to ration the usage of U.S. corn. Our exports are way down. I still think we’re going to feed a lot of wheat this year.”

O’Dea explained that because the crop is smaller, the percentage that has been used for ethanol has actually risen, from 40.6% of last year’s crop, to a predicted 41.6% of this year’s.

“Ethanol is so integral to gasoline supply. Economics is the issue that will drive it. We need to use ethanol in our gasoline,” he said. “Big oil owns a lot of the ethanol production now. It is not going to go away.”

There is also a big market for the by-product, dried distillers grains with solubles (DDGS). More and more exports of DDGS are expected to China, he said.

High feed prices are going to make meat expensive, while the U.S. is forced to import.

“There is a big amount of corn that is going to come into the U.S. market out of Brazil and Argentina,” he explained. “Worldwide supply is tight. We have got about a 20 to 21 days’ supply of corn that is left at the end of the year. That’s very tight. That is basically pipeline.

“We are pulling stocks around the world down very tight. If we see any problems, what will the politicians do?” **WG**

Chris Lyddon is *World Grain’s* European editor. He may be contacted at: chris.lyddon@ntlworld.com.

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The Brazilian transportation dilemma



and freight transport challenges continue to have a major impact in Brazil. However, the government of President Dilma Vana Rousseff has made progress in this area by making large investments to decompress roadways and make waterway and railway logistics more fluid.

“The main challenge Brazil is facing in relation to its transport system is the long distance that exists between the main grain-producing regions and the big cities where consumers live and operate exporting ports,” the Brazilian Transportation Ministry told *World Grain*. In addition, the ministry said Brazil is increasing its levels of agricultural production that, concomitantly, demand higher and constant investment for more appropriate transportation methods for grain.

Because these investments have not shown good returns in recent decades, the country does not have a large, consolidated method to transport grain by railroad or water.

The spokesperson for the Minister de Transportation said

(Above) Truck on a scale with a load of soybeans in Brazil. Photo by Frontpage/Shutterstock.com.

by Cristina Kroll

Despite major increases in grain production, the country still faces major challenges in moving grain efficiently by road, rail and water

“the large concentrations in the ports of Southeast Brazil overload the structures of these ports, increasing the waiting time for the ships and trucks. In the same way, this impacts other logistics in different productive segments that also make use of this infrastructure.”

It is in this setting that Brazil is making great efforts to structure specific corridors for grain and minerals by using the railroads and waterways more intensely. And according to



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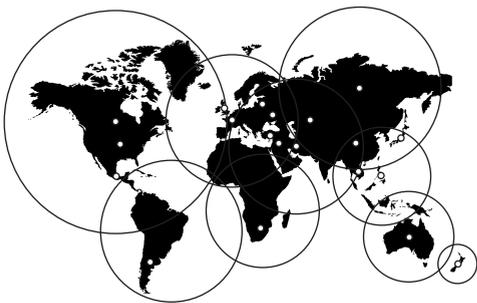
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The grain storage facilities and terminal elevators at Necochea port, Argentina. Photo by Luis César Tejo/Shutterstock.com.

what the Minister of Transportation told *World Grain*, work is being done on the implementation and expansion of port structures in the Northern and North-eastern regions of Brazil. The country also highlights the expansion of the railroad and the execution of the Strategic

Waterway Plan (PHE) which it has been working on for the last decade.

The Minister of Transportation explained to *World Grain* that the Brazilian government is completely aware of the importance of having well-structured ports and being capable of main-

taining an adequate level of Brazilian agricultural production in the international market. The first step was taken in the National Plan of Logistics and Transportation (PNLT), whose first version was launched in 2007. It is also apt to cite the recent investment in logistics (PIL) launched by the government, which meant an investment of \$20.7 billion in the next 25 years.

MAP OF BRAZIL'S TRANSPORTATION SYSTEM

More than 61.1% of the total load of the country is transported on the roadways of Brazil. And to get a good idea of the state of these roads, The National Confederation of Transportation (CNT) carried out a survey of the entire road network and the main national highways — close to 91,000 kilometers. The study revealed that 14.7% of these roads are in excellent condition, while 26.5% are



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Profile of Brazil

- The Federal Republic of Brazil is the largest country of South America and the fifth largest in the world.
- The country has a surface area of 8,511,965 km², of which 8,456,510 km² are solid land and 55,455 km² are water.
- Brazilian territory is mostly flat, with few mountains and a narrow coastal fringe.
- Brazil has a coast with 7,491 km of length.
- Brazil is the second largest agricultural producer after the United States.

in good condition. Another 33.4% was evaluated as average, while the roads in bad condition represent 17.4%, and those defined as very bad only make up 8%.

According to the Institute for Applied Economics (IPEA), the resources assigned to the transportation sector in-

creased from a shared resource of 0.38% of the Gross Domestic Product in 1999 to 1.15% in 2008. But the growth was driven by an initiative from the private sector. During this period, public organizations invested between 0.1% and 0.2% of the GDP, that is to say, small numbers. This is because private investment increased from 0.24% and 1.05% of the GDP.

Of the 91,000 kilometers evaluated by the CNT, 84% are under governmental management, while the rest is administered by private licensees. Improvements were made in almost all parameters.

“The critical problems, like the potholes in the asphalt or the erosion of the slopes, went from 193 in 2009 to 109 in 2010, which represents a reduction of 43.5%,” according to the CNT.

Moreover, the participation of the railroad in the Brazilian manner of distribution is close to 21%, with a goal

of reaching 32% of activity by 2025. Currently Brazil has 29,000 kilometers of railways whose privatization began slowly, starting in 1992, and finished at the end of the 1990s with three large operators — Vale, ALL and MRS Logística. In the port stretch, the Port of Santos mobilized 2.7 million TEUs, getting 27.9% of the traffic moved by containers on the Atlantic coast.

According to the CEPAL, currently all of the soy that arrives to the Port of Santos does so by railroad, and sugar is also starting to follow this tendency (13 million tonnes in 2008). In the bulk carrier segment, the Ports of Tubarao and Ponta de Madeira lead the movement of bulk agriculture, minerals and other bulk loads with 107.7 and 96.4 million tonnes, respectively, which accounts for close to one-third of the total moved from the east coast in 2010. According to the information released by the World



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rice?



other?



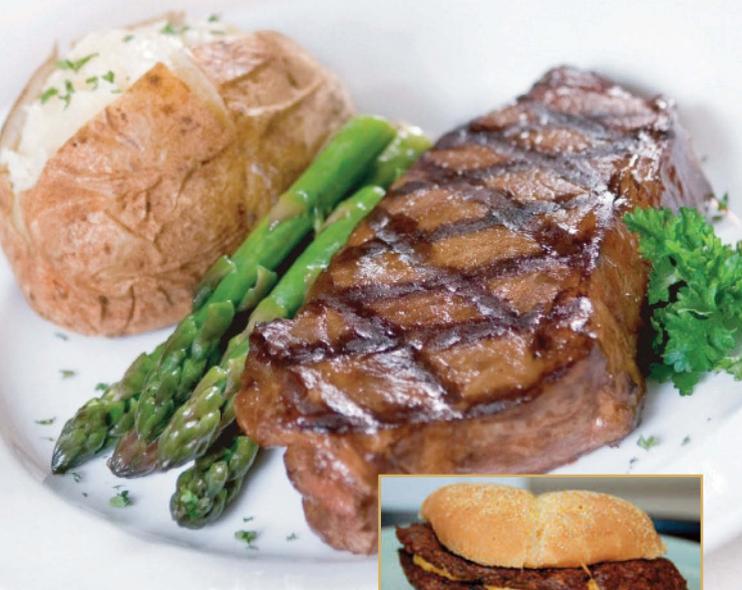


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Bank, Brazil has 1.7 million kilometers of roadways, but only 9% of them are paved, which translates into only

environment, according to the Economic Commission for Latin America and the Caribbean (CEPAL) in its report titled

“The main challenge Brazil is facing in relation to its transport system is the long distance that exists between the main grain-producing regions and the big cities where consumers live and operate exporting ports.”

— Brazilian Transportation Ministry

314,000 kilometers of roads. This is one of the principal causes that provokes the delays in transfer and high prices.

THE RAILROAD OPTION

The connectivity of the port-railroad is one strategic element for port development, for economic as well as competitive reasons, and also to reduce the externalities for the population and the

“Integración puerto ferrocarril: desafíos y oportunidades para América Latina,” published in 2012.

The individual economies of Latin America show very diverse patterns of development. In many of the processes of modernization in Latin American ports, the railroad connections were not considered as an integral part of the infrastructure. During the reforms of the

1990s, the state railroad companies, in general very large and difficult to manage, were broken up to permit the introduction of private companies in the activity, principally in the service of freight.

“Although it is true that the profitability of the business permitted rehabilitating the roads and rolling stock, in many cases it meant the end of railroad service as it had been known until then,” CEPAL said. “This was relegated to particular stretches with specific loads, giving birth to many ports dispensing with their railroad connections and concentrating only on highway transport for the connection to the hinterlands.”

In general, the economic activity in Latin America is concentrated geographically in coastal zones, with the majority of its principal markets having developed around port cities. The space for the development of railroads in general in Latin America has been very

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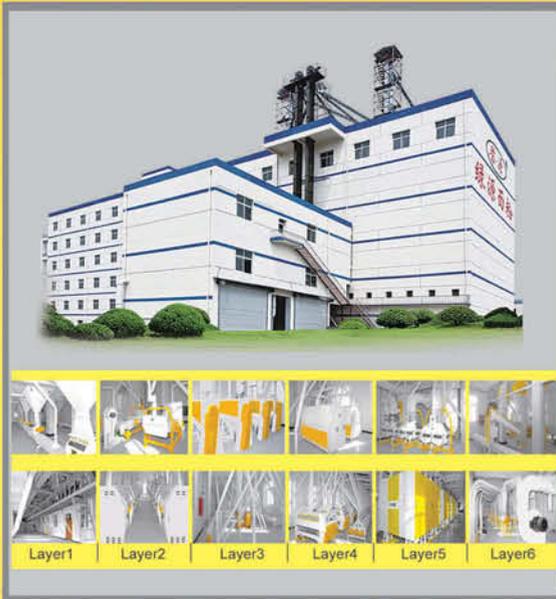
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narrow and limited to those industries whose economies have a strong component of commodities.

ARGENTINA TRANSPORT ISSUES

The second biggest producer of grain and oilseeds in South America is Argentina, and it faces many of the same logistical challenges as Brazil.

According to the latest statistics of the Universidad Tecnológica Nacional Argentina (UTN), most grain transportation in Argentina is done by roadways. Of the total domestic production, 96% circulates there. With this scheme in which trips by highway have taken on such weight, it is very difficult to revert or improve the equation. There are close

to 610.9 billion tonnes which are transported by roadways.

The railroad sees only 4% of freight, or 23.4 billion tonnes. And while it is true that the impact of the railroads is very minor in Argentina, the amount of freight that moves by waterway is smaller. It represents only 0.23% of the total and it is equivalent to 1.5 billion tonnes.

As in many other Latin American countries, the Argentine ports have been slowly losing their railroad connections. For example, today there is not a direct connection to the port in the Buenos Aires province by railroad. Currently, there is an interest in slowly recuperating the access to the railroads in the ports, either to organize the flow of vehicles or for environmental concerns.

In regard to ground transportation, different estimates show a fleet of trucks between 200,000 and 250,000 units, although only a part is affected by this type of freight, much lower than the maximum levels solicited. One must take into account as well that the average age of the fleet of trucks is around 25 years, and it is estimated that the obsolescence for trucks is 20 years.

The foundation Producir Conservando contributes a very interesting perspective. It confirms in its document titled, “El transporte de granos en Argentina” by Gustavo Lopez, that the planted area and the production of grain in Argentina grew steadily in recent years, reaching 101.5 tonnes in 2010-11.

Although the estimates are more than promising — in 2020 they will reach a total production of 135 million tonnes — the question, according to Lopez, is whether Argentina will be capable of transporting these growing and significant volumes with its available resources. In this way, Argentina faces a serious and profound challenge. WG

Cristina Kroll is a freelance writer based in Buenos Aires, Argentina. She can be reached at ckroll@infovia.com.ar.

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Wheat blending

Method allows millers to deliver consistent product to customers while minimizing raw material cost

by Mark Fowler

The current situation in the global wheat market challenges flour millers around the world to evaluate their wheat purchasing decisions much more critically than in the past. Higher prices, increased price volatility and greater options from more exporting countries requires buyers to look beyond their traditional wheat suppliers.

Buyers forced outside of their traditional buying patterns must ask difficult questions to determine the impact of sourcing different types of wheat. Changing wheat type or origin will alter the milling and baking quality characteristics impacting milling and baking performance. When defining the quality characteristics required by the miller and the baker, I suggest that there is not “good quality” or “bad quality” wheat, only different quality characteristics depending on variety, type, and country of origin to name a few. The challenge is to value these quality characteristics appropriately to make the best purchasing decision for the benefit of the miller, baker and consumer of the finished product. Blending wheat or flour to meet customer requirements is a critical part of the production process that enables millers to deliver consistent quality products to their customers. The blending objective must be properly defined to allow the miller to make the best blending decisions. Reasons for blending wheat and/or flour in the flour milling process fit into three categories:

- to deliver a consistent product;
- to develop a unique product; and
- to minimize raw material cost.

When making the critical decisions as to what wheat to purchase, the milling quality characteristics and the baking quality requirements as well as the cost implications should be evaluated. The objective is to produce flour to meet the customer requirements and expectations of quality and consistency while minimizing raw material cost.

MILLING CHARACTERISTICS

Optimal milling performance means maximizing extraction, which is to maximize the amount of flour extracted from the wheat purchased and processed. All wheat is not created equal. Variety, class and environmental conditions in which the wheat is grown all impact wheat quality characteristics impacting flour extraction.

Test weight (or hectoliter weight) is a measure of density. Al-



though not an exact science, test weight is an important measure of wheat quality and estimation of flour extraction. Higher test weight wheat is expected to yield more flour per bushel. However, test weight is only one of several measures of kernel size that should be considered. Thousand kernel weight (TKW), or the weight in grams of 1,000 wheat kernels, is a quality characteristic that complements test weight. Whereas test weight measures the weight per bushel or hectoliter, TKW represents the weight of individual kernels. In cases where the TKW is low and test weight is high, extraction will be lower. This is due to the fact that test weight is high because the average size of the individual kernels are smaller and more kernels are in the volumetric measure of a bushel or hectoliter.

There are additional tests, such as the kernel size distribution test that measures the percent of small, medium and large kernel in a sample of wheat. The single kernel characterization system (SKCS) measures individual kernel weight (mg), diameter (mm), length (mm) and hardness. These tests help to evaluate physical traits that impact the milling qualities of wheat. Individually, they are valuable, but combining more than one of these tests when evaluating the physical properties of wheat gives a more complete analysis and better estimation of flour extraction.

Another quality characteristic generally associated with wheat class is kernel hardness. Kernel hardness is many times measured in the percent of vitreous kernels. The hardness of the kernel does impact milling extraction. Generally, harder kernels have a higher flour extraction. The milling system can be adjusted to



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maximize the extraction of softer wheat, but it is important to understand the impact of hardness when making a purchasing decision.

The final wheat quality characteristic to consider is the amount of impurities in the wheat shipment. The U.S. grading system measures impurities in several ways when grading the wheat. Dockage is removed prior to the grading of the wheat, and then shrunken and broken kernels are measured, foreign material is measured and other damaged kernels are counted. All of these together account for the screenings that are removed during the wheat cleaning process prior to milling. Other countries measure wheat screenings in different ways so it is important to understand these differences when evaluating the value of wheat from different countries.

BAKING CHARACTERISTICS

Milling properties are important, but

even more critical is producing flour with the baking quality characteristics required for the products it will be used to produce. Protein content is almost always considered in the purchase price and contract, but more important than protein content is the quality and functionality of the protein. When making purchasing decisions, it is absolutely critical to understand the differences in value and functionality in wheat of different classes or countries.

For example, the percentage of water absorption not only impacts product quality, but the value as well. Lower water absorption reduces the amount of water the baker can add when preparing the dough. Less water means less dough and that means fewer pieces to sell. Other dough characteristics such as mixing time and stability, viscosity, elasticity, extensibility and gluten strength all impact end product quality. Knowing not only the specific products the flour

customers are making, but the process that they are using to make their products is important. Increased mixing time lengthens the production cycle for the bakery. If each batch requires two minutes longer, or two minutes less to reach the optimal dough development, how does that impact the rest of the baking production line? Does the baker have the flexibility in the system to adjust to changes in dough viscosity?

An increasingly common solution to adapt to changes in wheat and flour performance is the use of flour improvers such as enzymes and other additives. In some cases, flour improvers are a good solution to flour inconsistencies or to utilize lower cost wheat. However, some markets and consumers are sensitive to the amount of ingredients used in the finished product. Simple, all-natural products are preferred. Knowing market preferences

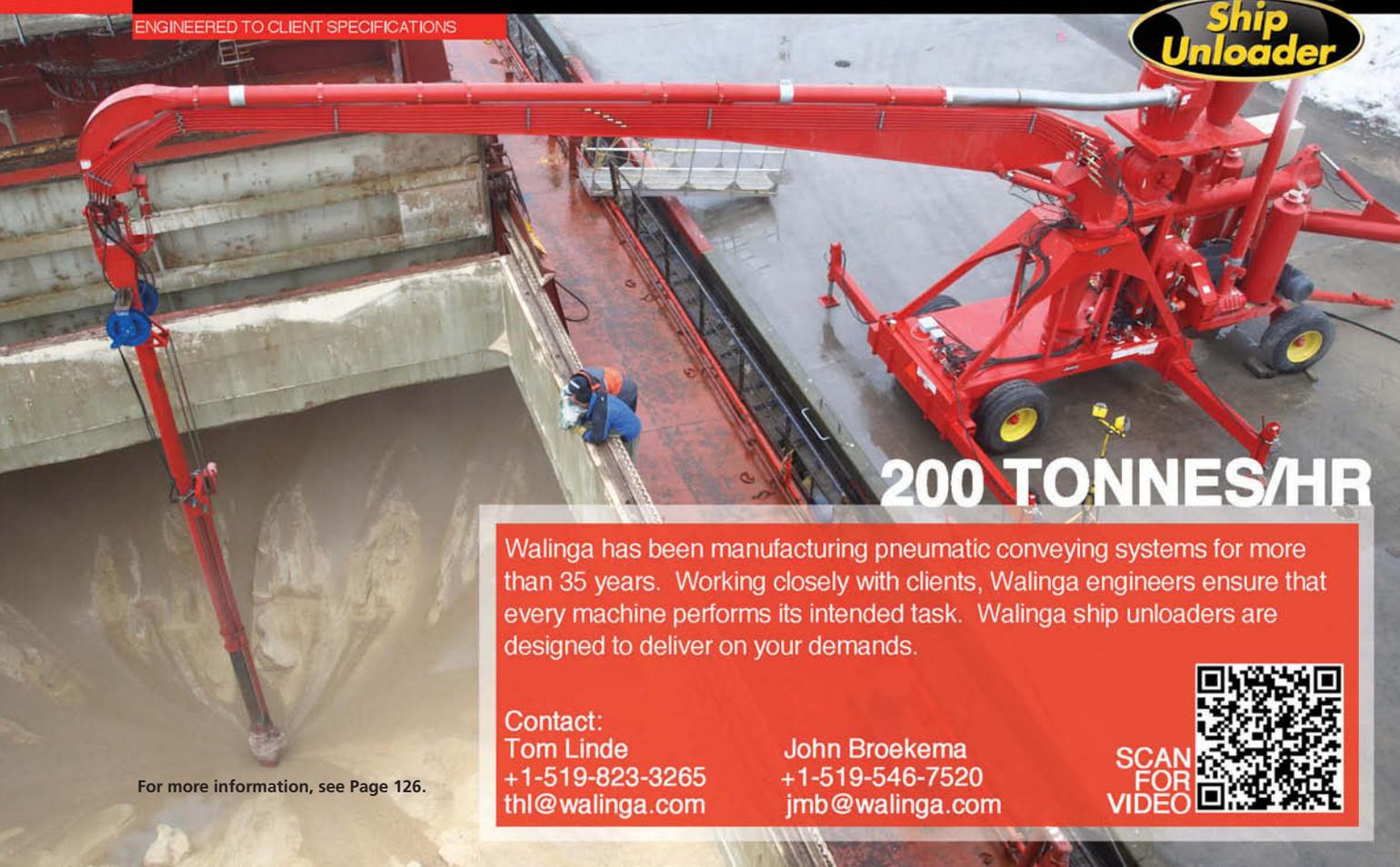
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and labeling requirements is important before deciding to use flour improvers.

CONTROLLING COST

For both millers and bakers, getting the correct flour quality characteristics required to make best quality products for the consumers is the most important element when making purchasing deci-

sions. But in this time of higher prices and increased price volatility, everyone is concerned about cost.

In the end, the product produced must be acceptable to the consumers. Consistency is critical. Wheat purchasing plans with a long-term vision to deliver a consistent supply of wheat will lower the overall cost of flour production. Uni-

formity of the wheat to the mill will help to maximize yield and improve other measures of flour production efficiency such as mill utilization, downtime and energy consumption. Changing the types of wheat used in the mill blend will change the functional properties of the flour. When deciding what wheat to use, it is important to not only deliver a consistent quality of flour day to day, but consider the availability of different wheat options throughout the year.

Variations in the moisture, protein and density of wheat delivered to the mill can negatively impact mill balance and result in lower extraction rates and decreased flour output. But most importantly, if the flour produced is not consistent in the necessary dough quality characteristics required to make the end products, then the mill will not have satisfied customers.

So in the end, delivering a homogeneous mix of wheat to the mill at a competitive cost is crucial in delivering uniform flour to the customer with repeatable quality characteristics at the best price. Key requirements to making the best purchasing decisions are knowledge of the milling process and customer requirements for flour performance. To achieve good, cost-effective management of the wheat supply to the mill, the manager must have good knowledge of the wheat inventory and available supply, knowledge of the mill and elevator capabilities, knowledge of the market and of the customers.

The increased price volatility in the global wheat market and the ever-changing forecast of available inventory make purchasing decisions even harder. Buyers forced outside of their traditional buying patterns must have the knowledge to make the correct choice, for the success of the mill depends on successful customers. **WG**

Mark Fowler is associate director of the International Grains Program and instructor in the Grain Science and Industry department at Kansas State University. He may be reached at mfowler@k-state.edu.

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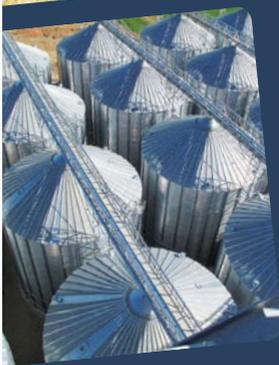
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Choosing the right bearing

The correct type must be used for each application including proper mounting and lubrication

by Fred Fairchild

Rotating shafts are used in many types of equipment in feed mills. This can vary from a simple hand wheel shaft to open or close a gate, to high speed shafts turning pulleys or blades in a piece of equipment. No matter the purpose of the shaft, it has to be supported with some type of bearing. These bearings vary from a simple plain sleeve-type bearing to a precision ball or roller bearing.

Bearings are subjected to two forces or a combination of these forces. The first force is radial based on the forces that act perpendicular to the shaft. Examples of these are forces needed to hold a shaft in place from forces pulling perpendicular to the shaft. Keeping the hand wheel shaft in a fixed location while it is used to move the slide in a gate is one example. Another is to support the headshaft and pulley on a bucket elevator or conveyor.

The second force is thrust force created parallel to the shaft that tries to pull the shaft out of the bearing. This type of force is always present in bearings securing a vertical shaft. An example of a piece of equipment that has both forces is a screw conveyor. It requires bearings that support the radial loads of the screw flight, but also needs at least one bearing to hold back the thrust that the screw flighting creates while it moves the material along the length of the conveyor. This is done by using a combination radial and thrust bearing on one end of the screw conveyor.

A radial bearing can simply be a hole bored in a block of



All rotating shafts must be supported by some type of bearing.
Photo by Sergiy Goruppa

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metal to support shafts that do not continuously turn such as a shaft turned by a hand wheel or intermittent power source. As the speed increases, the bearing support may be lined with a sleeve

ity but also a high friction resistance to the turning shaft or journal.

In order to reduce the friction between the shaft and the bearing surface, metal or other types of bushings are often in-

Roller bearings are used in applications like conveyer belt rollers, where they must hold heavy radial loads.

of different metals for intermittent or slow speed light loadings. As speeds or radial load increases, a ball or roller bearing is used to carry the radial load and minimize friction between the shaft and its mounting

PLAIN BEARINGS

A plain bearing, also known as a friction bearing, is the simplest type of bearing, comprising just a bearing surface and no rolling elements. Therefore the journal (i.e., the part of the shaft in contact with the bearing) slides over the bearing surface. The simplest example of a plain bearing is a shaft rotating in a hole. Plain bearings, in general, are the least expensive type of bearing. They are compact and lightweight. They have a high load-carrying capac-

serted into the bearing housing to support the shaft. These bushings are usually made of a different type of material than the shaft. Some of the most common materials are babbitt, bronze, cast iron, graphite, plastic, nylon, Teflon and even oil impregnated arguto wood bearings used in many screw conveyor interior fighting bearing hangers.

BALL BEARINGS

Ball bearings are probably the most common type of bearing. These bearings can handle both radial and small thrust loads and are usually found in applications where the load is relatively small, but the shaft is turning at higher speeds. The balls are enclosed in a cartridge formed by an inner and an outer enclosure called a race. The load

is transmitted from the inner race to the ball and from the ball to the outer race. Since the ball is a sphere, it only contacts the inner and outer race at a very small point, which helps it spin very smoothly. But it also means that there is not very much contact area holding that load, so if the bearing is overloaded, the balls can deform or squish, ruining the bearing.

ROLLER BEARINGS

Roller bearings are used in applications like conveyer belt rollers, where they must hold heavy radial loads. In these bearings, the roller is a cylinder, so the contact between the inner and outer race is not a point but a line. This spreads the load out over a larger area, allowing the bearing to handle much greater loads than a ball bearing. However, this type of bearing is not designed to handle much thrust loading.

TAPERED ROLLER BEARINGS

Tapered roller bearings can support both large radial and large thrust loads. The rolls are mounted at an angle within the races so that their contact line can handle both radial and thrust loads simultaneously. This may be a single circle of

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rollers or for more radial and thrust capacity, a double circle of rollers.

BEARING SHAFT CONNECTION

In a plain bearing application, the bearing surface is not attached to the shaft as the shaft must turn freely in the bearing. In ball and roller-type bearings, the inner and outer races are not connected to each other and the inner race is attached to the shaft. This connection is accomplished using set screw through a collar that attaches to the shaft and holds the inner race in place on the shaft. Another method often used where the collar is attached to the inner race using an eccentric fit. By turning the collar against the race, the collar is locked on to the shaft. This method is much more secure in locking the inner race to the shaft than just using set screws.

BEARING HOUSINGS

Bearings are offered in several types of housings. The housing holds the bearing sleeve or cartridge, but may be used for several different purposes. The most common types of housings for the bearing cartridges are pillow-block and flange types.

Other types of housings include sliding housings for moving the bearing

perpendicular to the shaft for take-up applications. Bearing cartridges may be installed in other types of special housings depending on their design and use in the equipment.

LUBRICATION

All bearings supporting a continually rotating shaft require some type of lubrication. Plain bearings often have a

Bearing seals help keep out unwanted water and dirt, and other particulates that can be harmful to bearings.

method of dripping or applying oil directly on to the turning shaft. Bearings that use ball or rollers require that the bearing be run in oil or grease.

The purpose of bearing lubrication is to prevent direct metallic contact between the various rolling and sliding elements. This is accomplished through the formation of a thin oil (or grease) film on the contact surfaces. However, for ball and rolling bearings, lubrication has additional advantages: reduction of friction and wear, dissipa-

tion of friction heat, prolonged bearing life, prevention of rust and protection against harmful elements. In order to exhibit these effects, a lubrication method that matches service conditions must be used. In addition to this, a quality lubricant must be selected, the proper amount of lubricant must be used and the bearing must be designed to prevent foreign matter from getting in or lubricant from leaking out.

BEARING SEALS

Bearings may be either sealed where the lubrication is added and then permanently sealed or they are built to be re-lubricated. Bearing seals have two purposes: to keep debris out and lubricant in. The different seal types trade sealing ability for performance. Bearing seals help enhance performance of the bearing as well as increase the life expectancy.

Bearing seals help keep out unwanted water and dirt and other particulates that can be harmful to the bearings. Seals also help keep in the lubrication, be it grease or oil, to maximize efficiency. Depending on the type, application, and material of the bearing, there can be a different choices of the seal used.

Seals and shields are both used to keep contaminants out of a bearing. In order

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of effectiveness, the enclosures that are offered are as follows: metal shields, rubber non-contact seals, Teflon non-contact seals and rubber contact seals. Not surprisingly, as the sealing performance is increased, the torque required

to turn the bearing will also increase due to the increased friction caused by the seal/shield. The application's condition and life requirements are important to know to determine the best shield or seal choice.

and maintenance of their products.

More bearings have been damaged and ruined by over lubrication than any other reason. Bearings should be lubricated according to the manufacturer's recommendations and instructions. A sure sign that a bearing is being over lubricated is when grease oozes through the seal around the shaft.

If you are not sure if the bearing has enough lubrication, I would suggest removing the grease fitting (zerk) and run the bearing long enough to achieve normal operating conditions.

If too much lubrication is in the bearing, it will be excreted through the lubrication opening. Once the excretion is finished, stop the machine, replace the zerk, and put the machine back into operation. WG

More bearings have been damaged and ruined by over lubrication than any other reason. Bearings should be lubricated according to the manufacturer's recommendations and instructions.

tion due to temperature variations, and at different rates. Axial shaft expansion can be an issue in machines where there are temperature changes between the shaft and the bearing mounts. One bearing should serve as an anchor bearing to hold the shaft lengthwise. All other bearings should permit the shaft to move freely lengthwise. Most bearings are available as fixed or expansion type. The anchor bearing must be a fixed bearing, but all others attached to the same shaft should be expansion type bearings. On long shafts, the anchor bearing should preferably be located near the center of the shaft to keep the expansion of the two ends to a minimum.

In summary, the proper type of bearing must be chosen for each application including proper mounting and lubrication. Every bearing manufacturer has available specific data and information on the selection, application, installation

INSTALLATION

Not only is choosing the correct bearing for the application important, equally important is the proper installation of a bearing. Each bearing must be carefully installed and aligned on the shaft to avoid damage to the bearing or seals.

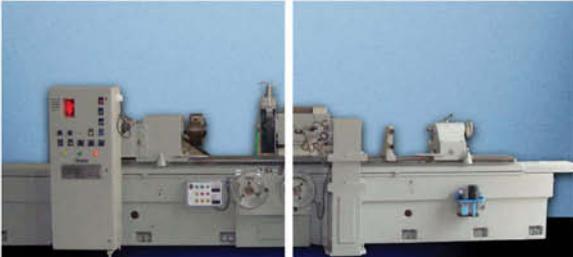
Often the shaft and the base on which the bearing housings are mounted are subject to linear expansion or contrac-

Fred Fairchild is a professor in the Department of Grain Science and Industry at Kansas State University. Prior to coming to Kansas State in 1994, he worked in the industry designing, constructing and commissioning of numerous mill facilities. He is a licensed professional engineer. He can be reached by e-mail at fjf@k-state.edu.

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Arctic melt down

Recent years of volatile weather brought most meteorologists, climatologists and the novice forecasters out of the woodwork trying to discover why weather conditions are so volatile. The truth is that conditions were almost equally volatile in the early 1900s, according to the U.S. National Climatic Data Center. But, even with their assessment, there are still others who want to link recent extreme weather to causes other than a repeating cycle.

One topic that has received much attention recently is the link between polar ice accumulations and global weather. Recent record-setting low amounts of ice coverage in the Arctic has brought on a slew of weather guessers into the arena trying to make the winter of 2012-13 warmer than those of the past, but this may fail as we investigate further.

The U.S. National Oceanic and Atmospheric Administration created a "Climate Extremes Index" as a method to determine how extreme weather conditions have been from one year to the next. Historical data show a cyclical pattern of extremes with wild weather occurring in the early 1900s across the United States and similar conditions occurring in more recent years. The extremes index this summer has soared to a new high with the extreme drought that impacted the U.S. causing problems with moisture shortages as well as extreme heat. That coupled with some severe weather outbreaks early in the year and a few other weather calamities makes this an unusual year, but it may still be part of the cycle.

Weather extremes have not been confined to the United

by Drew Lerner

Scientists examining the significance of less sea ice on global weather

States in recent years. Nobody can forget the Russian Drought of 2010 or the extreme flooding in Pakistan from that year. Canada's Prairies were also suffering from extremely wet conditions. Since then we had record droughts in Mexico and the southern U.S. Plains in 2011, and over the past two years there has been drought in at least a portion of every major grain and oilseed production region in the world. Is it climate change, global warming or is it a new worry that is a byproduct from our changing climate? Some believe it is associated with polar ice accumulations, or the lack thereof.

ANARCTIC ICE INCREASING

Global warming enthusiasts have been quick to point out the diminishing trend in Arctic sea ice as a byproduct of rising world temperatures. In recent years, a number of scientists have been working on research trying to determine the significance of less ice in the Arctic on global weather. So far, the theory is based on the obvious. If there is no ice or less than usual, hence it would make sense that the world would

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have less cold weather. For residents of North America, where it has been one of the hottest years on record and drought took its toll on grain and oilseed crops, it would not take much convincing to link the lack of Arctic ice to the warmer temperatures.

But how does one explain that while the Arctic ice this summer was at a re-

cord low, the Antarctic ice accumulations were above average, in fact at a record high. The Antarctic ice build-up has been ongoing for a number of years. In fact, while the Arctic is experiencing its meltdown, the Southern Hemisphere ice build-up has been increasing.

If we all live on the same planet, how does global warming explain that one?

And if the Arctic has had a record low amount of ice this summer, how is it that most of the Northern Hemisphere outside of North America and the Arctic had a cooler than usual year until recently? And how do we explain the fact that U.S. temperatures, while hot during the summer, were at record cold levels recently with earlier than usual frost and freezes noted in much of the nation so far this autumn?

The latest ice accumulation chart from the National Snow and Ice Data Center in Boulder, Colorado, U.S., suggested sea ice in the Arctic was at a record low from mid-August through early October. Some forecasters were then projecting a warmer winter for many in the Northern Hemisphere, because there was less sea ice than normal. Actually, sea ice area has been well below the 1979-2000 average most of the past 10 years and yet the world temperature has not surpassed the record set in 1998.

From that quick assessment and noting the trend in the Antarctic one almost has to come the conclusion that sea ice area is more a symptom or byproduct of the problem rather than the cause. The earth can still generate some impressive cooling. If World Weather, Inc. is correct, we may see some colder biases again this winter around the Northern Hemisphere. But it will have nothing to do with the sea ice accumulation, although the more ice that is present in the Arctic the slower warming might be in the spring and vice versa.

The recent quick ice accumulation in the Arctic is being noted by some forecast models and they are predicting above average ice accumulations for the Arctic north of central and western Russia over the next two months and also in northern Canada.

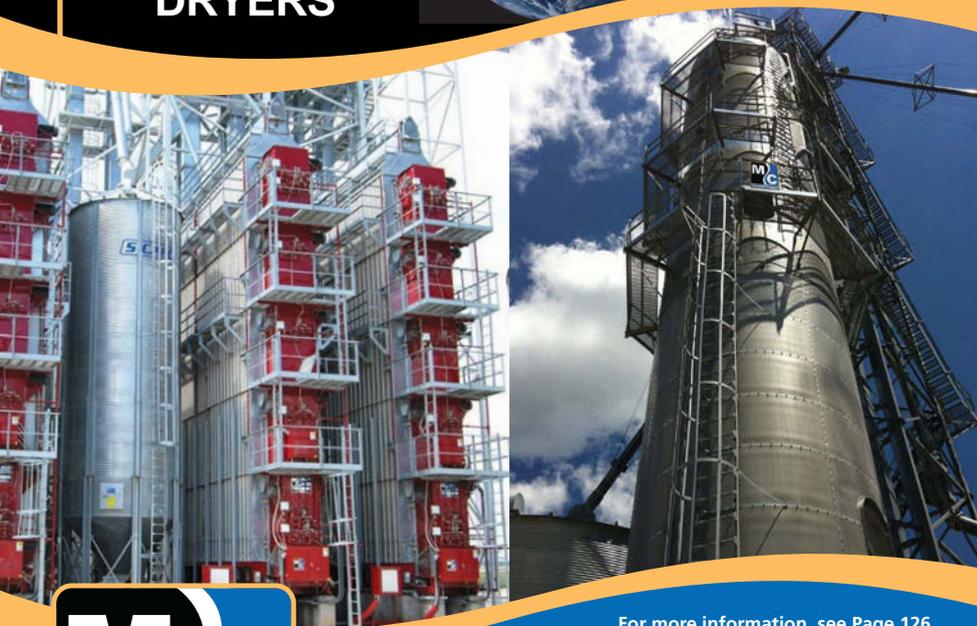
World Weather, Inc. has suggested that this year's 18-year cycle in atmospheric weather patterns will support greater amounts of cold air moving through eastern Canada and the U.S. Great Lakes region, as well as in portions of Russia in the next few months. The forecast for colder-than-usual

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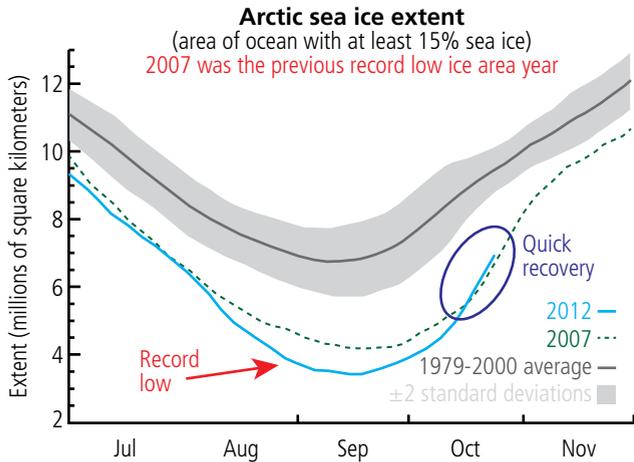


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Source: National Snow and Ice Data Center

weather in these areas was independent of the forecast sea ice accumulations made by NOAA's CFS forecast model. So which comes first: the sea ice and then colder weather or colder weather and then sea ice?

World Weather, Inc. believes the problem may be that we are not looking at the right indicator. Could it be that maybe the sun does not produce the same amount of heat from one

year to another? Actually, we already know that the sun is not a constant burner based on sunspot cycles going back to the 1700s. Could it be that the warming trend that the sun experienced for more than 30 years in the 1960s, 1970s and early 1980s heated up our planet through the 1990s, but has run out of steam? Actually, the sunspot cycles of the past 30 years since 1983 have suggested the sun has been in a cooling trend.

2013 will be the solar maximum year in the current solar cycle, but the sunspot data says the sun may not be generating nearly the heat that it did many years ago and that this ongoing cycle could provide more cooling for the planet in the next 20 years or so to at least slow global warming and to "perhaps" restore more of the Arctic sea ice. The proof will be in the Arctic. Keep it in the back of your mind the next few years and we promise to revisit the situation often. **WG**

Drew Lerner is senior agricultural meteorologist with World Weather Inc. He may be reached at worldweather@bizkc.rr.com. World Weather, Inc. forecasts and comments pertaining to present, past and future weather conditions included in this report constitute the corporation's judgment as of the date of this report and are subject to change without notice.

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Global Food Safety Initiative

The food safety auditing landscape has changed significantly over the last decade, but the top priority — ensuring that food is prepared in the safest facility environments possible — remains the same.

Actually, that priority led to the creation of the Global Food Safety Initiative (GFSI) in 2000. Coming on the heels of a number of food safety scares, a group of international food retailers launched GFSI to hold food processing facilities to safer and more consistent standards globally. GFSI is not a standard itself like other familiar third-party audit food safety programs, such as AIB (American Institute of Baking), British Retail Consortium (BRC) and Safe Quality Food (SQF), to name a few. GFSI does not coordinate or undertake any accreditation or certification activities.

Instead, GFSI's guidance documents contain commonly agreed-upon criteria for food standards, against which any food standard can be benchmarked. An organization may comply with GFSI specifications in the United States if they adhere to one of four recognized and GFSI-accredited standards: International Featured Standards, Dutch Hazard Analysis and Critical Control Point, SQF and BRC.

So while your facility can't be "GFSI certified," you can get certified for a food safety quality standard approved by the GFSI organization. And those benchmarked standards are quickly becoming the bar that national retailers look for their suppliers to meet.

Today, some of the largest food retail companies in the world, including Walmart, Coca-Cola, Kroger and Carrefour, require their suppliers to comply with the standards benchmarked by GFSI. Third-party auditors like AIB, NSF and ASI now frequently audit facilities using GFSI-recognized standards like BRC or SQF rather than their own.

In regard to pest management, those programs have their own set of standards from these GFSI benchmarks. In its guidance document, GFSI requires a system to be in place

by Zia Siddiqi

Keep your food safety up to par with GFSI pest management standards

for controlling or eliminating the risk of pest infestation on the site or facilities. Because pests are often attracted to food facilities where food, water and shelter are readily available, an Integrated Pest Management (IPM) program can stand up to these benchmarks.

An IPM approach focuses on proactive, preventive measures that ultimately targets the causes of pest infestations and addresses them without the need for chemical pesticides. The essential components of an IPM program include work-



Work with your staff and pest management provider to set up a sanitation plan everyone can follow, especially in break areas. Photos by Orkin.

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If a pest finds a snack outside your facility, it will likely want to come inside. Keep all dumpster areas clean and clutter-free.

ing closely with your pest management professional, continuous facility maintenance, stringent sanitation practices and ongoing staff training.

To ensure your IPM plan is up to pace and meeting the GFSI benchmarks, you should work with your pest management professional and consider following these basic IPM tips.

SECURE YOUR PERIMETER

A proper IPM program takes the fight to pests outside. The exterior of your facility is a target for pests which don't need much of an opening to work their way inside. Inspect your exterior walls regularly and patch up any cracks or holes that may have developed. You should also use caulk to seal any gaps or crevices on your building.

To keep from attracting flying insects near entryways, swap out fluorescent bulbs next to doors and win-

dows with sodium-vapor lights that are less appealing to these pests. For an even greater effect, place mercury-vapor lighting in fixtures at least 100 feet from your facility to help draw pests away.

Also, pay attention to your landscaping. Budding flowers can attract flying pests, while mulched and ivy-covered areas can harbor roaches and rodents. If possible, install gravel around your building to create a buffer between your facility and pests.

Last, be mindful of your surroundings and make sure you keep your parking lots and dumpster areas clean and free of litter. Set up your dumpster as far away from your building as possible, and follow a regular cleaning and rotation schedule. If a pest finds a snack on the grounds outside your facility, you can bet it will want to get inside for a full meal.

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SHUT THE DOOR ON PESTS

Pests do have something in common with visitors and workers at your facility — they'll try to enter right through the front door. But there are plenty of steps you can take to make sure they're locked out.

Consider installing weather-striping around your doors and windows to cover up any seam that pests may try to use to come inside. Talk with an HVAC professional to make sure your facility has positive airflow — that is, when you open the front door, the air blows out instead of getting sucked inside.

You can also install vertical air curtains that will help create an added barrier of air to keep flying pests out. If possible, swap out your traditional door for automatic doors — or, better yet, double doors — to cut down on the time pests can get into your facility.

KEEP IT CLEAN AND CLEAR

You don't have to fight pests at your facility alone. Work with your staff and your pest management provider to set up a sanitation plan that everyone can follow. Also, use organic cleaners to remove spills and grimy buildup from drains and floors, and make sure your employees keep the break room clean and free of any food crumbs.

In your storage area, break down and remove cardboard boxes as quickly as possible since cockroaches can use them for food and shelter. You should store dry goods in air-tight, closed containers at least six inches off the floor and 18 inches away from walls.

Don't forget about your receiving areas. It's important to make sure that these are clean, well-lit and uncluttered. Clutter in these areas serves as the perfect hiding spots for many pests. All exterior doors in the receiving area should

also form a tight seal when closed. Remember, mice can squeeze through an opening the size of a dime, while cockroaches need an opening the size of 1/8 of an inch to get inside.

Talk with your pest management professional to develop your IPM program and find ways to improve your efforts. With the proper IPM plan in place, your facility will be on the right track to meeting an important GFSI benchmark. WG

Dr. Zia Siddiqi is Director of Quality Systems for Orkin. A board certified entomologist with more than 30 years in the industry, Dr. Siddiqi is an acknowledged leader in the field of pest management. For more information, e-mail zsiddiqi@rollins.com or visit www.orkincommercial.com.

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iRely

takes 100-year view

by Susan Reidy

Software company allows customers to upgrade programs at their own pace

iRely takes a 100-year view of technology that allows customers to stay up-to-date without overloading them with too many changes at one time.

Rather than shock a customer with a massive upgrade, the Fort Wayne, Indiana, U.S.-based software provider releases a steady flow of updates in small incremental pieces.

“Technology is ever evolving. iRely is committed to bringing these advances to the grain industry. However, to unleash an upgrade all at once is a lot of change for some companies to absorb. Therefore, we’ve set up the technology so that customers can adopt the changes at their pace,” said Sarah Musselman, marketing manager for iRely. iRely has offered software solutions to the agribusiness industry for 30 years. It covers the entire market from commodity storage to trading, from processing to final sale and everything in between.

GRAIN MANAGEMENT

For grain elevators, iRely offers a comprehensive program that covers grain accounting and merchandising.

For merchandising, iRely’s Live Daily Position Report (DPR) shows what effect every transaction has on a company’s position and allows easy access to all needed information. From one screen, it is possible to monitor in-house, offsite and in-transit inventory.

iRely Target Pricing uses future prices and accounts for BOT basis levels and freight basis. It can be integrated with real-time quote services. Hedging is incorporated as an integrated function, and hedges can be entered into the system by

broker, commodity and period.

On the accounting side, the iRely software can handle multiple scale ticket types. Contract management is simplified with the ability to manage commodity, quantity, price, delivery form, price basis, freight basis, market zone and options.

With the Dashboard tool, a grain company can see its entire position in real time, at all times. It comes with more than 60 pre-defined metrics, but users can create additional charts and graphs. It can be deployed as a desktop application or through the web or a mobile device. Dashboard Reporting stores all reports in a central location.

iRely also offers several e-tool features including eCommerce, eDistribution and eSignatures. With eCommerce, customers can access their data online 24/7, minimizing clerical time and phone traffic for the grain company. eDistribution sends customers electronic forms through e-mail and/or fax, while eSignature capture signatures electronically so customer signatures merge with invoices and contracts.

Several deployment methods are available for the iRely programs. With the “Software as a Service (SaaS)/Cloud method, the company pays a monthly fee to have the software hosted offsite at a secure data center. There is no upfront application costs, reduced international IT requirements and access anywhere with an internet connection.

With the hosted method, the software is again hosted offsite, but the customer owns the software, which means a lower monthly fee and the ability to move the software in-house without having to purchase it. The licensed option has a larger upfront cost but includes software ownership, no hosting fee and reduced risk from Internet outages.

WG



iRely’s Dashboard feature shows a company’s entire position, in real-time.

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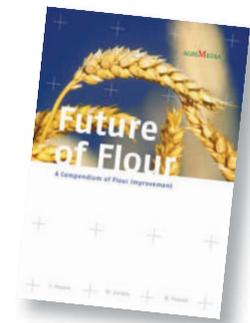
The team of authors led by the acknowledged expert Dr. Lutz Popper (Mühlenchemie) gives special attention to the nutritional and technical aspects of flour fortification. Mill managers will find answers to the most common questions asked about flour and suggestions for solving the typical problems that occur in flour processing. An impressive work covering a broad range of topics from the exchange of raw materials between continents to genetic engineering.

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Ocrim

hosts milling event

In order to highlight its link with the city, the company's roots, the tradition and the people of Ocrim S.p.A. working toward a common goal, Ocrim on Sept. 23 hosted an event called "WHEAT, FLOUR AND..." at its headquarters in Cremona, Italy. The day began with a welcome to all participants by the Managing Director Alberto Antolini.

After a short speech, there was the delivery and customization of a roller mill in a limited edition to one of Ocrim's most loyal customers and the screening of a video focused on three main concepts:

- Red color, as a symbol of Italian excellence and the primary color on Ocrim's logo.
- Tradition, the result of a deep knowledge of the art of milling in which Ocrim has taken its roots.
- Innovation, which is developed in the most modern technology.

For many years Ocrim has been spreading the "Italian made" message, and the company noted it has been making investments all over the world in order to create high quality innovative and competitive products. Ocrim said that its 2012 growth, innovation and expertise results were "very satisfactory."

During the event, agreements with two major players in the agricultural-food sector were also announced. The first



Vance Taylor, president and general manager of North Dakota Mill, left, and Alberto Antolini, managing director of Ocrim, share the stage.

by Meyer Sosland

Italy-based equipment manufacturer thanks its customers, partners and friends in the global agricultural-food sector

was a close collaboration with AXOR of Cento (FE), a pasta processing line manufacturer that will generate significant synergies for both companies, as well as to complete a commercial offer.

The second agreement was between the International Association of Operative Millers (IAOM) School and the Ocrim Milling Technology School concerning staff training. IAOM and Ocrim will collaborate to host a series of professional courses at the Ocrim Milling Technology School. Ocrim said this initiative will allow the transfer of knowledge and increase the level of know-how in the international milling industry.

The day continued in the Silvia Paglierani Conference Room where four leading speakers from the international milling industry participated in a roundtable discussion entitled: "The Milling Industry between Globalization and Food Habits Trends." This portion of the event was designed to examine changes in the global milling sector.

Ocrim noted the speakers shared their knowledge on the major change factors and the new politics of innovation needed to face the international milling sector evolution.

There were also demonstrations held by master bakers from all over Italy. This portion of the event was organized to help the visitors and employees understand the important role Ocrim and flour milling play in the chain of the global grain-based foods industry, in which the company noted it operates with great sense of social responsibility. WG

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SternMaid expands its Wittenburg site

WITTENBURG, GERMANY — SternMaid GmbH & Co. KG announced on Oct. 15 that it officially opened the extension to its Wittenburg plant in September.

After completion of this eighth phase of construction, in which the company has invested €14 million, SternMaid employs a staff of 180, making it one of the biggest employers in the region. With the recent extension, SternMaid is entering a new business field and will in the future be able to produce for the pharmaceutical industry as well as offering new products for the food sector.

The company specializes in customized solutions for blending, processing and filling powdered foods, food supplements and active pharmaceutical ingredients and excipients. The plant was established in 1996, originally as a production facility for the companies of the Stern-Wywiol Gruppe based in Hamburg. But in the meantime, the Wittenburg factory no longer produces solely for the various units within the group, which specializes in functional ingredients for food and animal feed worldwide.

From the start, SternMaid systematically enlarged its processing capacity and invested in advanced production technology in response to its customers' needs. The latest acquisition opens up new processing opportunities including fluid bed technology, which permits a specific influence on the physical properties of solid products and their applications. Powders are dried, granulated, agglomerated or coated, depending on the intended application, and thus acquire a tailor-made profile.

“Fluid-bed technology is one of the



From left: Commercial Manager Mark Riemer, First Deputy District Administrator Wolfgang Schmölling, Torsten and Volkmar Wywiol and SternMaid's Managing Director Stefan Schliesser at the opening of the extension to the SternMaid plant in Wittenburg, Germany.

most important formulation methods in the pharmaceutical and food industries. With this versatile technology we will be able to enter new markets with a promising future,” said SternMaid's managing director Stefan Schliesser.

Two fluid-bed processors with different capacities form the basis of this new field of applications. A laboratory-scale pilot plant is available for test runs for developing and optimizing new functional ingredients. Commercial-scale production is then carried out in a multi-purpose industrial unit.

The focus of the plant is on applications in the pharmaceutical and health-care industries. In the case of the pharmaceutical

industry, SternMaid has recently added to its specific range of services. For example, the counter-current container blending line that came into service in 2009 primarily for blending vitamin compounds has been qualified retrospectively and is now officially certified according to Part II of the E.U. GMP Guide.

With the latest extension to the factory, SternMaid will be equipped for new orders from its customers. Blending capacities have been increased to 40,000 tonnes per year, and the enlarged high-bay warehouse accommodates 20,000 pallets. To facilitate procedures, a new incoming goods area and a larger area for small packs have been created.

Imas builds mill in Nigeria

ABA, NIGERIA — Imas recently constructed a mill for Valleumbra Flour Mills in Aba, Nigeria.

Construction of the 600-tonne-per-day facility took eight months and cost \$12 million, Imas said.

Imas provided Valleumbra's Aba facility grain silos, a prefabricated metal building and all the machinery and equipment from pre-cleaning machines to bagging systems.

The facility has a 100-tonne-per-day pre-cleaning capacity, 6,000 tonnes of grain storage, 30-tonne-per-day cleaning house capacity, and a 600-tonne-per-day milling capacity.

Flour and bran bagging is completed with a carousel bagging machine. The entire mill is fully controlled by PLC/automation, Imas said.

Valleumbra sources its wheat from the U.S.



Imas supplied this 600-tonne-per-day milling line to Valleumbra Flour Mills' facility in Aba, Nigeria. Photo courtesy of Imas.



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For more information, see Page 126.

Global Industries opens research, development center

GRAND ISLAND, NEBRASKA, U.S. — Global Industries, Inc. announced on Oct. 1 that it has established a state-of-the-art research and development center in Grand Island, Nebraska, U.S.

The facility highlights products from the company's portfolio of popular brands, including MFS grain storage and drying silos, Hutchinson and York material handling products, NECO aeration, conditioning and drying products, as well as Brownie and Eclipse support structures.

“The mission of our new R&D facility is to conduct tests to confirm design integrity, ensure product quality and consistency, to display our various products, to provide training and education for our employees, dealer network and end users, and to enhance our brand recognition,” said Doug Fargo, president and chief financial officer.

The facility is under the direction of Dr. Volkan Kebeli, vice-president of engineering for all divisions within Global Industries.

Global Industries names Weber R&D coordinator

GRAND ISLAND, NEBRASKA, U.S. — Global Industries, Inc. announced on Oct. 1 that Robert Weber has been named coordinator of the company's new research and development center in Grand Island, Nebraska, U.S.

“When we decided to establish our R&D center, we wanted it to be managed by an engineer with a research mindset, one with years of prac-

tical experience and credibility,” said Dr. Volkan Kebeli, vice-president of engineering for all divisions within Global Industries. “Robert brings a wealth of experience, and a true understanding of our industry.”

Weber is a native of Nebraska, and was most recently employed by the University of Nebraska, Lincoln, in its Industrial Agricultural Products Center.

Pavan hosts FoodTechMaster courses

GALLIERA VENETA, ITALY — The Pavan Group hosted the FoodTechMaster courses, which consisted of three training courses in food technologies: Snack-Pellet, Fresh Pasta & Ready Meals, and Dry Pasta.

In 2012, Pavan also offered three different training courses for plant managers, production managers, R&D managers, quality control managers and production engineers from all over the world. The FoodTechMaster courses were held at Pavan's headquarters in Galliera Veneta, Italy.

Pavan noted that the courses were conceived to share the most advanced technologies applied to food processing and to spread knowledge and expertise. These unique training experiences, included lectures and practical lessons for an in-depth understanding of all proposed topics. The lectures were held by professors, experts of the academic world and by Pavan process engineers. The lectures were combined with practical lessons, production trials in

lab-scale plants and tests for sensorial evaluation of food products. This integrated approach was designed specifically to allow the attendees to experience directly the food products and to apply theory learned during lectures.

The third training course — Dry Pasta — was held Oct. 14-19 and was attended by some 50 participants from Central and South America, Asia, Africa and Europe. Among the lecturers were Maria Grazia D'Egidio, CRA Experimental Institute of Cereal Growing, Rome, Italy; Donatella Peressini, Food Science Department University of Udine; Professor Bruno de Cindio, Department of Modeling for Engineering, University of Cosenza; and Antonio Nespoli, Barilla.

Pavan noted that one of the strong points of the FoodTechMaster courses was that attendees had the opportunity to establish relationships and connections that went beyond the training experience to the benefit of the future working path of each student.

For more information, visit www.foodtechmaster.com.



Participants in Pavan's FoodTechMaster courses learned about a variety of topics. Photo courtesy of Pavan.



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Grain drying

The Argentinean company **Ingenieria Mega S.A.**, which manufactures grain drying systems, has clients all over the world. Ingenieria said its grain drying systems have several unique characteristics. These include a mixed airflow drying system that combines the virtues of column and trestle systems and air columns without in-between floors that helps avoid product accumulation and decreases the likelihood of fire.



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Recalling Donald M. Mennel as leader

by Morton Sosland

Grain-based foods, and especially flour milling, is one of the few major industries where family ownership still has an important role. Indeed, many of the corporations in the industry's top tier are currently identified with founding families. Five of the 10 largest flour milling companies in the United States are privately-owned and controlled by families, distinguishing milling when compared with other food sectors. This structure becomes especially relevant in learning of the recent death of Donald McKisson Mennel, who showed just how important a family caring about a company and about the industry in which it operates may be. In many ways, Mr. Mennel and his family influenced the evolution of milling, the industry that produces the main ingredient of a huge array of foods consumed in every American home.

Mr. Mennel brought to his leadership of his family's Mennel Milling Co. a multi-generation commitment to doing superbly as miller and to understanding the importance of helping guide the industry. His impressive intelligence and his physical presence were characterized by strength of conviction supported by realism and respect for facts. A dose of good humor and regard for his fellow human beings, whether mill workers or milling executives, served him well in his long service on the board and executive committee as well as chairman of the Millers' National Federation. His active participation in industry affairs aimed to assure milling avoided missteps.



Donald M. Mennel from March 29, 1975 issue of *Milling & Baking News*.

Especially memorable was his commitment to soft wheat production and soft wheat quality. He is remembered for his cogent arguments to prevent twists in governmental acreage programs that would have disadvantaged soft wheat farmers. His sympathy for producers in areas where the temptation was always great to grow corn or soybeans came through his assuring that his company's mills always had plenty of storage capacity to meet the needs of area producers and to assure uninterrupted grind. He brought sensitivity to urging production of soft winter

wheat varieties that met the quality requirements of cracker, cookie and cake bakers, thus working to assure that soft wheat was not treated as the lowest common denominator.

In managing his family's milling enterprise, Mr. Mennel pursued a different course from many other family operators who often looked to selling their plants. He focused on maximizing efficiency, while adding capacity in Michigan and Virginia to serve the needs of what he fervently believed was a growing market. It was Herman Steen, the milling historian who noted that when the company's headquarters plant in Fostoria, Ohio, U.S. was built in the last quarter of the 19th century, as many as 800 flour mills operated in Ohio. That total is now 11, two of which are owned by Mennel.

This page's admiration for Mr. Mennel would be incomplete if it failed to mention the unique advertising effort in *World Grain's* sister publication, *Milling & Baking News*, launched a half century ago under his direction and with his understanding of the readers he wished to reach. It was Mr. Mennel who suggested that a different message focused on soft wheat in each issue would emphasize how the company operated with wheat always in mind. Timely comments meant to educate have become the messages provided by Mennel advertising.

If anyone was ever tempted to wonder about Mr. Mennel's eagerness for learning or his willingness to pursue new adventures, they need look no further than the way in which he launched his new career as a lawyer after retiring, at 65, as president of the family milling business. He obviously was comfortable with the next generation running the milling business, even though he remained as chairman and chairman emeritus. He studied the law, earning his degree in three years and practicing law until the early 2000s. For his friends in milling, Donald M. Mennel was often spoken of and known as a pre-eminent miller, one who contributed to the industry's progress and well-being, while tending to the advancement of his family and its flour milling business. **WG**

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1982

A \$16.2 million floating grain-transfer facility capable of loading export vessels at about 1,500 tonnes an hour, and said to be the largest of its type in the world, has been put into operation on the Louisiana Gulf in the U.S.



Clinton Odell, president of Rogers Terminal & Shipping Corporation, the stevedoring subsidiary of Cargill Inc., said the loader, which is 110 meters long and 25 meters wide, “is the largest, most sophisticated barge-transfer facility in the industry.”

A £56 million (about \$100 million) contract has been awarded to Henry Simon of Stockport, England, by the Benue state government of Nigeria for food manufacturing complexes at Taraku and Ihugh. The sites will be used to make maize and rice products and crude vegetable oil. The work is expected to be completed within three years. Simon is the main contractor for site development and is responsible for the design, engineering, installation, commissioning and associated civil engineering work.

1997

A consortium that includes Continental Grain Co. and Seaboard

Corp. has made a successful \$9 million bid for a flour mill in Haiti, consortium officials announced in mid-October. The purchase of the mill, La Minoterie d’Haiti, represents the first privatization in Haiti of a government-owned enterprise. Because the mill has sustained considerable damage since it was closed in the early 1990s, the consortium will spend up to \$6 million in repair work, according to Steve Bresky, vice-president at Seaboard Corp. Before ceasing operations, the mill had daily milling capacity of about 500 tonnes of flour. The work will restore capacity to this level. Grain storage capacity includes about 27,200 tonnes of upright storage and 9,500 tonnes of flat storage.

Molinera de Mexico, a joint venture between Gruma, S.A. de CV of Mexico and Archer Daniels Midland Co. (ADM), Decatur, Illinois, U.S., has acquired two wheat flour mills — Harinera Monclova S.A. and Harinera de Saltillo S.A., which are affiliated with each other — in Saltillo and Monclova, Coahuila, according to a Gruma S.A. press release. The mills have a combined annual capacity of 45,000 tonnes.

ConAgra Flour Milling Co. announced in early October plans to build a new flour mill in Southern California. “We believe the growth in population and consumption of wheat-based products presents a substantial opportunity for our flour business, and we want to meet the increasing demand with a modern, technologically advanced mill,” said Darek Nowakowski, president ConAgra Flour Milling Co.

Vietnam in August made its first purchase of U.S. wheat since the end of the Vietnam War in 1975,

according to the U.S. Wheat Associates. Officials representing Vietnam’s Binh Dong Flour Mill purchased 10,000 tonnes of U.S. wheat, comprising 5,000 tonnes of hard red spring and 5,000 tonnes of hard red winter, for October delivery, according to Dan Gerdes, U.S. Wheat chairman.

2002

In a new initiative, AWB Ltd. has announced it is directly targeting international, end product consumers through an unprecedented agreement with Indonesia’s Bogasari Flour Mills. AWB Managing Director Andrew Lindberg said the consumer campaign was part of its marketing strategy to further strengthen end user demand for Australian wheat. The agreement establishes minimum percentages of AWB wheat to be used in Bogasari’s grist, thereby securing demand for Australia wheat.

European Union nations have failed to agree on rules to allow genetically modified crops in the farming and food industry, but a top E.U. official said an end to the ban on such products is inevitable. E.U. agriculture ministers disagreed on whether to allow an unintentional presence of up to 1% GM material in food before a warning label would be mandatory. The ministers also split on the threshold for accidental presence of GM seed for planting.

Morocco will soon have its first modern feedlot, according to the U.S. Grains Council (USGC), which is providing technical support for the project. COPGAG, a Moroccan integrated dairy and feed milling operation, will work with the USGC to build the facility, which will raise both dairy and feed cattle.

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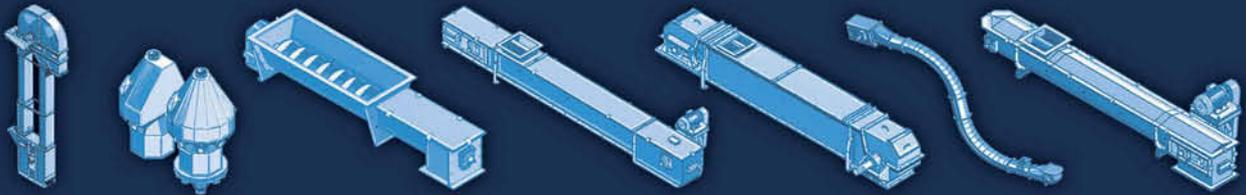


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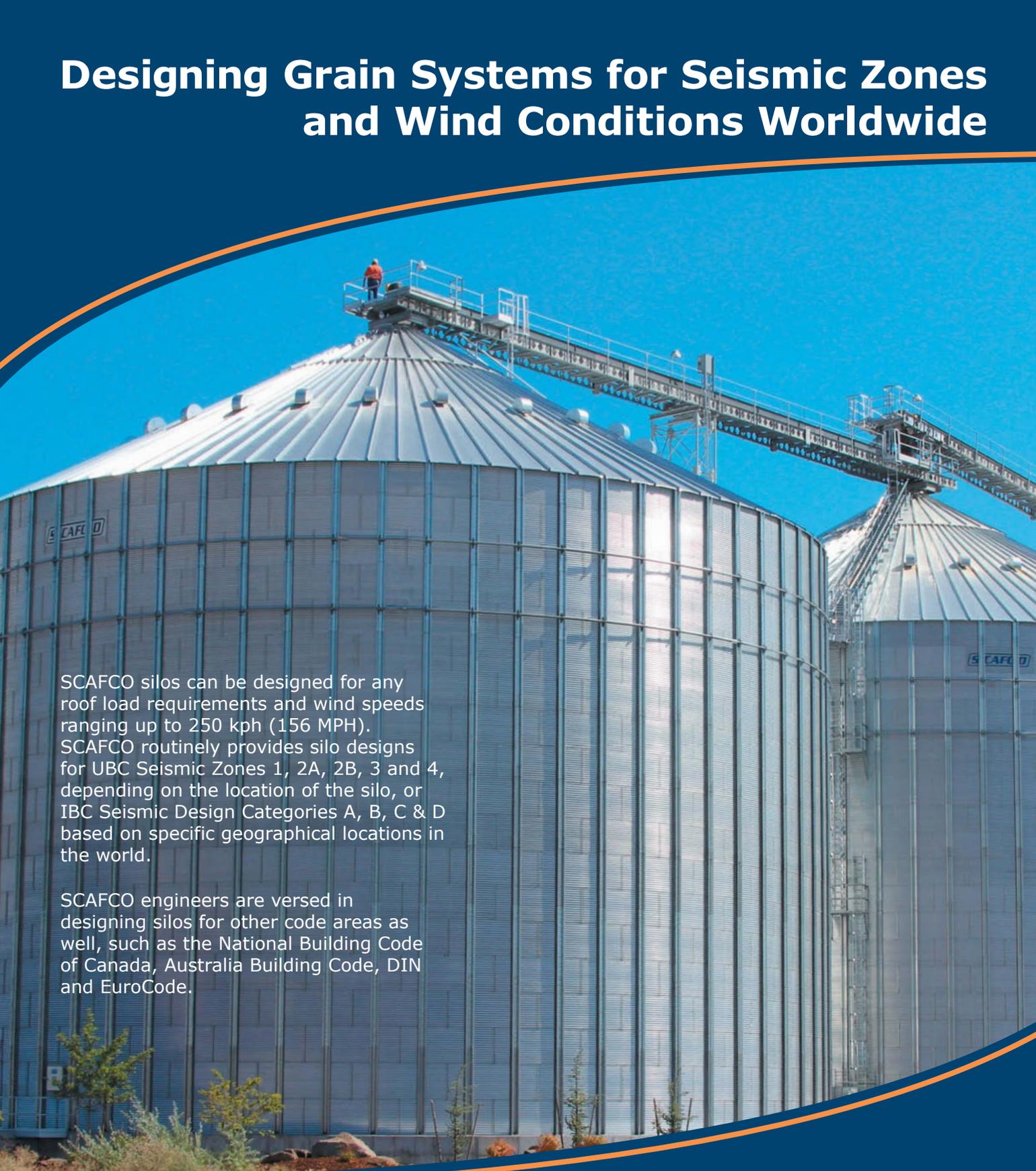
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A large, cylindrical grain silo under construction. The silo has a corrugated metal roof and a metal frame. A worker in an orange safety vest is visible on a platform at the top of the silo. The silo is surrounded by other similar structures and a network of metal walkways and ladders. The background is a clear blue sky.

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