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# BEST OF SUSTAINABLE SUPPLY

ETHICAL | ENVIRONMENTAL | ECONOMIC

# 2012

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**THE SUBMISSIONS IN THIS YEAR'S REPORT DEMONSTRATE THAT McDONALD'S SUPPLY CHAIN IS WORLD-CLASS IN ITS ABILITY TO PROVIDE A SAFE, SUSTAINABLE AND ASSURED SUPPLY OF FOOD AND PRODUCTS OUR CUSTOMERS LOVE. THANK YOU TO ALL SUPPLIERS FOR YOUR CONTRIBUTIONS.**

One of our core Values is taking seriously the responsibilities that come with being a leader and using our size, scope and resources to help make the world a better place. Nowhere is that commitment more evident than in our supply chain.

McDonald's is committed to working with all three legs of the stool to continuously improve. We believe that doing so is consistent with our Values and also gives customers more reasons to feel good about visiting our restaurants.

The Best of Sustainable Supply report is one way that we honor outstanding leadership among our suppliers. It also provides a way for our suppliers to share best practices and affect positive change in their respective industries.

The following report showcases 51 supreme examples selected from more than 400 submissions – each one demonstrating innovation from our suppliers. Selecting the very best was difficult, but also represents an important step in continuing to raise the bar for our entire supply chain.

The submissions in this year's report demonstrate that McDonald's supply chain is world-class in its ability to provide a safe, sustainable and assured supply of food and products our customers love. Thank you to all suppliers for your contributions.

We hope you enjoy reading them as much as we did.

**JOSE ARMARIO**  
CORPORATE EXECUTIVE VICE PRESIDENT, WORLDWIDE SUPPLY CHAIN

# WELCOME TO THE BEST OF SUSTAINABLE SUPPLY

## FIFTY-ONE CASE STUDIES HIGHLIGHTING SUSTAINABLE SUPPLY BEST PRACTICES FROM AROUND THE WORLD

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These 51 case studies were chosen from among hundreds of supplier submissions by the Sustainable Supply Steering Committee and a panel of executives and external experts. We want to thank every supplier who took the time to tell us their story and remind us of the progress our entire supply chain is making toward sustainability.

### SUSTAINABLE SUPPLY STEERING COMMITTEE

**APMEA:** Brian Kramer

**EUROPE:** Keith Kenny, Jacqui Macalister

**LATIN AMERICA:** Leonardo Lima, Lisa Yee

**NORTH AMERICA:** Susan Forsell, Jeff Fitzpatrick-Stilwell, Jessica Droste Yagan

**GLOBAL:** Townsend Bailey, Bruce Feinberg, Erik Gonring, Gary Johnson, Lisa McComb, Rona Starr



### SUSTAINABLE SUPPLY VISION

Over time, all of our food and packaging will come from sustainable sources.



**ETHICAL** Sourcing from suppliers who ensure the health and safety of their employees and the welfare and humane treatment of animals in our supply chain.



**ENVIRONMENTAL** Working to ensure that our food, drinks and packaging and their production, distribution and use minimize lifecycle impacts on the environment.



**ECONOMIC** Delivering affordable food while supporting equitable trade practices and investment in the communities where our suppliers operate.

### SUPPLIER LEADERSHIP

McDonald's works closely with its suppliers to continuously improve the economic, ethical and environmental impacts of our supply chain. Our suppliers take this responsibility seriously and, in many cases, are leading the way toward a more sustainable supply chain.

In recent years, the following markets have recognized these suppliers for exceptional sustainability performance in their respective areas of the world. Winners include:

**APMEA: KEYSTONE FOODS**

**CANADA: BURNBRAE FARMS**

**EUROPE: CARGILL MEATS EUROPE (2010),  
ESPERSEN (2011)**

**U.S.A.: CARGILL (2010),  
THE COCA-COLA COMPANY (2011)**



## CMT SCHOOL EDUCATES EMPLOYEES



*Chinatep Sangsuwon*  
*Human Resources Director*  
*Cargill, Inc.*

**OPPORTUNITY:** Due to financial constraints, many people in Thailand are not able to complete their formal education because they have to work to help provide much-needed income for their households. As a result, many people never go on to complete any form of secondary or higher education.

**SOLUTION:** To address this enormous challenge, Cargill developed a program in Thailand that is known locally as the “CMT School.” In partnership with the Thai government’s Department of Non-Formal and Informal Education, this program allows Cargill’s Thai employees to complete their primary, secondary and higher education while working for the organization. The local Cargill business bears all costs related to the school on behalf of its employees, including tuition, fees and all extracurricular activity costs. Employees who attend classes also get paid the equivalent of their overtime rate for the hours they spend learning. Through the CMT School, employees learn about different areas of business that are relevant to their jobs and their lives. This gives them the opportunity to improve their communication and problem-solving skills, technical know-how and to grow as people. Once participants complete the required elements for each level of education, they receive accredited certifications, which are the equivalent of the country’s formal education program.

**RESULTS:** The CMT School has been a strong model for alternative education. More than 2,100 employees have participated in the program since it began in 1994. Each year, the number of participants has increased as more employees look to further their education through the CMT School and improve their quality of life.

# EMPLOYEE WELLNESS

Employee Wellness focuses on the ability of women and men to secure decent and productive employment in working conditions that support freedom, equity, security and dignity so the company’s economic growth benefits all. Employee Wellness also touches on areas such as compensation and benefits and the use of appropriately aged labor. The following McDonald’s suppliers have gone beyond the basic obligations of law and McDonald’s Supplier Code of Conduct to proactively support the well-being of their employees.





## PUTTING EMPLOYEE SAFETY FIRST



*John Tignor*  
Safety Director  
Smithfield Foods

**OPPORTUNITY:** Smithfield Foods has always viewed employee safety as its greatest responsibility. Unfortunately, despite the many safeguards put in place over the years, the company found workplace injuries were still occurring because employees continued to take unnecessary risks. So Smithfield Foods went a step further and began focusing on reforming employee behavior and encouraging a culture of safety at every level of its operations.

**SOLUTION:** Smithfield Foods implemented a number of policies and programs to address employee safety, including the Employee Injury Prevention Management System (EIPMS) and the Behavioral Risk Improvement (BRI) process. The EIPMS serves as a catalyst for reducing injury and illness rates by establishing an organized, process-oriented, proactive methodology for injury prevention. All of Smithfield Foods' operations are required to implement EIPMS, including farms, feed mills and processing plants. The system is designed to minimize potential risks, improve business performance and enhance relationships within the marketplace. Under EIPMS guidelines, each wholly-owned or subsidiary facility must identify all potential hazards and conduct assessments of associated risks; develop and maintain effective safety operating control measures and training programs; set safety management goals to measure progress; establish, document and communicate responsibilities to all relevant staff; and identify nonconformance, accidents and near-misses to prevent future incidents. The BRI process supports EIPMS by encouraging hourly employees to observe and encourage one another to make safe decisions. Thus far, it has been implemented at facilities in St. Charles, Ill., Dennison, Iowa, and Omaha, Neb. The goal is to identify opportunities where small but important behavioral changes can reduce or eliminate the risk of injury.

**RESULTS:** These employee safety efforts have been a tremendous success within Smithfield Foods' operations as evidenced by the fact that Smithfield outperforms OSHA benchmarks for the meatpacking industry and has continued to demonstrate year-over-year performance improvements. Smithfield's injury rate is 32.5 percent below average for beef and pork processors. The BRI process alone has resulted in more than 735,000 peer-to-peer observations, heightened awareness, and improved personal accountability for all employees. The process has helped reduce injury and illness rates by 23 percent at the Illinois and Iowa plants. And facilitators at the company's Springfield, Mass., and Sioux City, Iowa, locations are prepared to implement BRI in 2012.



## PREVENTATIVE HEALTH PLAN



*K. Gokce Olcay*  
EVP APMEA  
East Balt, Inc.

**OPPORTUNITY:** South Africa does not have a reliable well-structured national healthcare program, and limited free medical treatment is only available through a few state-owned hospitals and clinics. These facilities are generally understaffed and sparsely equipped with a disproportionately low doctor-to-patient ratio. In the past, East Balt employees who sought care at these establishments had to wait up to three days before receiving medical treatment. Those too desperate to wait often sought help from traditional healers, or sangomas. As a result, company leave benefits were being depleted, which placed a severe burden on the employee's family and the employer/employee relationship.

**SOLUTION:** East Balt SA (EBSA) decided to give the employees the opportunity to participate in a medical scheme, Discovery Key Care Kern. This is a hospital plan, and the fees are paid by the company. Membership in the hospital plan allows employees to make use of reputable hospitals on the Discovery Hospital list when needed. Employees can also join Discovery Key Care plus. The program gives employees the opportunity to access licensed physicians at reputable health care facilities on an ongoing, sustainable basis.

EBSA employees also participate in a wellness program managed by Kaelo through EBSA's South Africa partner, Astral Foods. Employees receive free health assessments during working hours, followed by monthly patient management reports. The wellness program includes an established AIDS campaign program that works in conjunction with Discovery Health.

**RESULTS:** This strategy has generated dramatic results, improving family relationships and reducing absenteeism due to illness. Not only has the dignity of East Balt's employees been restored, but many lives have been saved and extended through the program.



## LET'S GET HEALTHY TOGETHER!



*Susan Baltrus*  
Human Resources Director  
Mullins Food Products, Inc.

**OPPORTUNITY:** In response to rising workers' compensation and health insurance costs, Mullins Food Products began a program called Be Safe Bingo, which provided substantial financial rewards for safe work practices. The program was so enthusiastically received that Mullins decided to expand it into a comprehensive wellness program designed to improve employee health and build morale.

**SOLUTION:** Mullins Food Products' Let's Get Healthy Together wellness program is focused not only on educating employees on the importance of medical and nutritional health, but also on the need for sound financial health and wealth management. The program offers medical education and treatment administered by professionals. Included is an on-site chiropractor who provides spinal adjustments, joint treatment and related medical advice, as well as a company nurse who administers health screenings and blood pressure testing. In addition, the company has promoted weight-loss contests, supplied free annual flu shots, and organizes participation in walk-a-thons that benefit local and national charities. In 2010, Mullins Food Products opened a full-service workout center and subsidized its employees' participation in Weight Watchers®. In addition, a professional financial advisor is now available to give free financial planning advice and educate employees on using investment tools other than company-sponsored savings methods.

**RESULTS:** Factory work can be fatiguing and have negative physical and spiritual effects on a person over time. However, Mullins Food Products' health and education programs have, without question, raised employee morale and created a healthier, friendlier working environment.



## MAKING HEALTH AND WELLNESS MORE ACCESSIBLE



*Laurie Graves*  
Human Resources Director  
The Bama Companies

**OPPORTUNITY:** In 2006, The Bama Companies was faced with double-digit healthcare cost increases. To counter this growing trend and improve the overall health and wellness of each team member and their families, Bama implemented a four-part wellness program designed to encourage employees to take an active role in their overall health and physical fitness.

**SOLUTION:** The Bama Companies began by opening an on-site clinic and three fitness facilities that are free and available 24 hours a day. The clinic performs annual personal health assessments for employees and all of their family members over the age of 18. The fitness centers employ three personal trainers who are available to assist, educate and guide employees in developing their personal fitness plans. Next, the topic of "back safety" was included in all new employee orientation meetings, and re-training is conducted annually. Stretching exercises are also mandated before each shift. In addition, on-site vending machines now stock low-fat, low-calorie, nutrient-dense foods and zero-calorie beverages. Healthy living campaigns (like tobacco cessation and stress management) are conducted annually. The company also worked with the Tulsa Community Foundation (TCF) to create the Bama Emergency Assistance program, known as BamaAid, which provides team members with short-term financial assistance during unexpected hardships and emergencies beyond their control, such as home catastrophes, natural disasters, personal or medical emergencies, funeral expenses, emergency travel and military deployment.

**RESULTS:** The results of the program have been exciting, both physically and fiscally. As of July 2011, the rise of insurance premiums has not affected Bama's employees. Voluntary turnover is down to 7.5 percent across the entire company, resulting in a 50 percent improvement since 2008. The clinic is averaging 250 office visits and 150 chiropractic adjustments/therapy treatments per month – all at no out-of-pocket expense to the employee. The accident/total incident rate has also steadily declined – down from 6.8 in 2009 to 3.7 in 2011. Fitness center usage has also grown to include 25 percent of the employee population.



## OPENING CHANNELS FOR EMPLOYEE COMMUNICATION



**Monica Yim**  
Senior Director Compliance Management  
The Marketing Store

**OPPORTUNITY:** Working in a factory can be stressful. To address this issue, The Marketing Store rolled out some innovative, proactive measures in its factories in China to help promote a healthier, more positive attitude toward work and life.

**SOLUTION** The Marketing Store's facilities took several innovative steps to create a platform for employees to share their feelings and address their grievances. Social worker/volunteer team counseling was conducted to advise employees and help them solve any problems they were experiencing due to anxiety, depression, work pressure, personal development and interpersonal relationships. All the information gathered was kept confidential. Factories conducted employee surveys to determine if they were satisfied with their work environment, living conditions, cafeteria service, training, internal communication and management performance. After a thorough analysis of the information collected, improvement projects were implemented. A special Short Message Service was also set up in one factory, allowing employees to submit suggestions and complaints. And some facilities began broadcasting warm greetings, messages from co-workers, and popular music requested by the staff.

**RESULTS:** The Marketing Store reported that employee turnover at its China facilities (between January and May 2011) had decreased by 10 percent compared with the same period a year ago and was 50 percent lower than the average employee turnover rate in China. Workers also reported that they felt more closely connected to their senior managers after these transparent and convenient communication channels were made available.



## TEACHING GREEN FARMING PRACTICES IMPROVES EFFICIENCIES



**Jorge Moreno**  
Managing Director  
Florette Agrícola-Spain

**OPPORTUNITY:** Florette Agrícola-Pentaflor specializes in growing produce and supplying the raw materials for Florette's fresh-cut manufacturing sites. Not only are 100 percent of the crops Florette Agrícola-Pentaflor grows GLOBALGAP certified, but the company is certified by LEAF Marque, which promotes environmentally responsible farming, and its greenhouse crops have been recognized as a Flagship Farm by McDonald's Europe. However, the company has historically had difficulty maintaining a stable workforce to harvest its crops in Spain. Florette Agrícola-Pentaflor has a staff of 200. Among those, 85 percent are immigrants.

**SOLUTION:** To solve this problem, in 2007, Florette Agrícola-Pentaflor invited a team of 110 experienced farmers from Thailand. The package the company offered the Thai farmers included full-time, fixed contracts; work permits; lodging (three to four people per apartment); transportation; and an assistant who accompanied them to the bank, grocery store, hospital and the post office. Florette Agrícola also organized regular holiday trips for the farmers to visit their families in Thailand.

**RESULTS:** Of the original 110 Thai farmers, 94 are still with Florette. That's an 85 percent retention rate over four years. As a result of this consistent labor force, Florette Agrícola-Pentaflor's permanent staff has been able to work with the Thai farmers to implement best practices in the growing and harvesting of produce leading to significant environmental benefits, as well. Over those four years, Florette Agrícola-Pentaflor reduced the amount of fertilizer and pesticides it used by 30 percent, cut irrigation water usage by 20 percent, and reduced machinery work hours by 50 percent. As a result, the company has achieved new certifications, improved the quality of its crops and now operates a more efficient business.



# WASTE

The McDonald's suppliers selected in the Waste category have taken giant strides toward eliminating waste sent to landfill by reducing the waste in their production processes and increasing the recovery of the remaining waste.

## APPROACHING ZERO WASTE TO LANDFILL



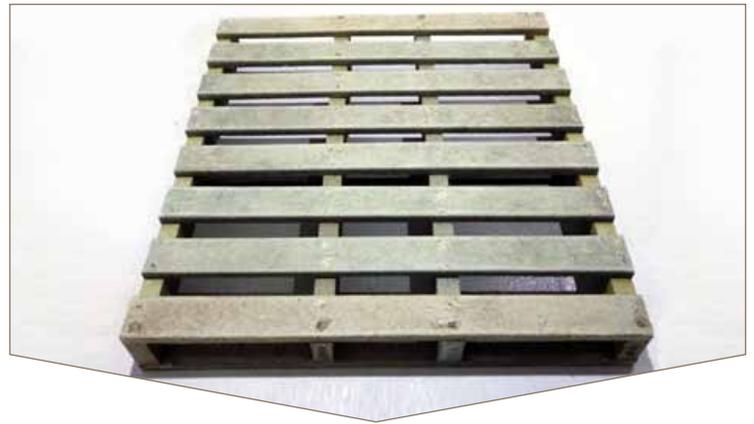
*Mick O'Sullivan*  
Site Director  
Arla Foods

**OPPORTUNITY:** Food manufacturing operations have the potential to generate large amounts of waste, including food materials, packaging, solids and liquids. Historically, the method for disposing of waste in the United Kingdom has been to ship it to landfills. In 2005, Arla Foods' UK operation sent 1,904 tons of waste to landfills. That same year, the company launched plans to eliminate all the waste sent to landfills by 2012.

**SOLUTION:** By early 2011, Ashby Dairy, which supplies fresh milk, milkshake and McFlurry to McDonald's in the UK, became the second site within Arla Foods UK to achieve zero waste to landfill, thanks to a holistic approach and strict application of the waste hierarchy. There was a tremendous focus placed on eliminating or reducing waste at the source through the application of LEAN manufacturing techniques and engaging the whole workforce to eliminate or reduce all forms of waste. By the end of 2010, the company recycled 265 tons of waste, recovered 18 tons of hazardous waste, and managed to send only 107 tons of waste to landfills.

**RESULTS:** In 2011, approximately 73 percent of Ashby's solid waste was already recycled. The site then partnered with a national waste contractor to divert the residual. Initially this waste was sent to a local mechanical biological treatment plant, where the waste was pulverized before being separated into different waste streams for recycling, energy recovery, or (for organics) anaerobic digestion and final composting. In June 2011, the route was changed, with the waste being transferred to a dedicated materials recycling facility before being separated into recycling and energy recovery fractions. Today, all 107 tons are recycled and recovered for energy. This represents a straightforward savings of 161 tons of carbon. When the carbon value of the saved material is counted, this rises to 212 tons of carbon per year from the Ashby site alone. The business is well on track to ensure all other Arla Foods UK sites are zero waste to landfill by 2012, using the lessons learned at the Ashby site.





## REDUCE, REUSE AND RECYCLE



**John Page**  
Vice President, General Counsel and Sustainability Office  
Golden State Foods



**John Wafer**  
Managing Director  
Golden State Foods Australia and New Zealand

**OPPORTUNITY:** Golden State Foods New Zealand has, for many years, focused on protecting the environment and operating in an ethical and sustainable fashion, both within its own operations and where it interacts with others. To support these objectives, the Auckland plant has implemented a “reduce, reuse and recycle” policy.

**SOLUTION:** Golden State Foods New Zealand focused on redesigning all packages to reduce excess materials, using 100 percent recyclable materials, and developing a program to “right size” the unit of issue to reduce in-store waste. The company has also trialed the use of returnable crates to replace cartons. Freight movements have been reduced by modifying the order pattern with growers to cut down on delivery trips and by moving smaller customers from inefficient direct-to-store deliveries to deliveries in conjunction with other products.

**RESULTS:** As a result of these changes, Golden State Foods has seen a 50 percent reduction in water usage (in addition to the 30 percent reduction the previous year) and a 50 percent reduction in wastewater discharges (building on the 20 percent reduction the prior year). The company has also reduced the quantity of solid waste sent to the landfill by 33 percent, and it has plans to separate plastics for recycling and other wastes to further reduce the quantum of waste going to landfills. Since implementing the policy, Golden State Foods has reduced in-process waste by 75 percent, cut office paper use by 60 percent, and all plant waste is sent to compost.

## RECYCLED PLASTIC PALLETS



**Oscar Patiño Cardenas**  
General Manager  
Griffith Colombia S.A.

**OPPORTUNITY:** Griffith Laboratories is a global manufacturer of food ingredients, including seasonings, sauces, gravies and soup mixes. Recently, executives at Griffith’s Marinilla, Antioquia (Colombia) facility tackled a nagging environmental challenge that consistently showed up on the company’s environmental impact assessments. The facility generates large amounts of co-extruded film and solid waste during the production and packaging process that the business wasn’t able to recycle because of the various plastics and aluminum contained in the waste. So Griffith searched for a partner that could help it come up with a more ecologically friendly solution and reduce its impact on the local environment.

**SOLUTION:** Griffith reached out to Plastipol S.A., located in nearby Itagui. Plastipol manufactures plastic products (pallets, playground equipment, etc.) widely used across Colombia. Together, the two companies developed a sustainability initiative that involved training Griffith’s employees on the importance of recycling and teaching them how to gather and separate the various waste materials generated during the manufacturing process. As part of the agreement, Griffith also sent co-extruded film waste to Plastipol, which it uses to create its own products. For every 480 kilograms of co-extruded film the company sends to Plastipol, Griffith receives a plastic pallet.

**RESULTS:** Since the launch of the program, Griffith Colombia S.A. has sent 26,000 kilograms of co-extruded film to Plastipol and, in return, has received 540 plastic pallets. Not only has Griffith saved a significant amount of money by no longer purchasing wooden pallets, but it preserved 60 trees that would have been cut down to make those pallets and kept tons of film waste out of local landfills.



## RECOVERING ANIMAL GREASE FROM DISSOLVED AIR FLOTATION UNITS



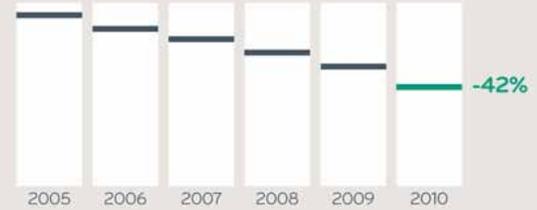
**Mark Ritsema**  
Environmental Director  
JBS USA, LLC

**OPPORTUNITY:** JBS USA's Beef Division realized there was an opportunity to reduce a massive amount of waste from each of their facilities and produce a more environmentally friendly product. JBS pre-treats its wastewater in dissolved air flotation (DAF) units. As a beef division, the DAFs generated an equivalent of roughly 13,000 tanker trailer loads of DAF sludge per year that was sent to local fields for land application. The sludge management process generated GHG emissions from transportation and land application that, if mismanaged, could present storm water pollution and odor concerns from neighbors. JBS realized that an opportunity existed to beneficially use some of this material and reduce much of the environmental impact of this necessary wastewater treatment process.

**SOLUTION:** JBS worked through many process iterations to select the best solution, ultimately choosing a centrifuge process to recover the animal grease from the DAF sludge. Certain facilities had to upgrade their DAF systems and/or piping systems to allow for optimal capture of DAF sludge. The sludge is then heated and routed to a three-phase centrifuge, splitting the sludge into water, grease and solids. The grease portion is then routed to another 'polishing' centrifuge, refining the grease to meet very stringent quality specifications that allow it to be marketed and sold. The dewatered, non-grease-bearing solids are transferred to land application, while the separated water goes back into the wastewater treatment system, in many cases yielding a beneficially usable biogas. The improved system has been installed in six of JBS's eight beef harvest facilities, and installation is scheduled in the remaining facilities in 2012.

**RESULTS:** The grease recovery system has positively impacted the environment and JBS's bottom line, proving again that being an environmentally minded company results in a sustainable business. As a side benefit of the success of these systems, JBS began to focus on improving 'upstream' practices. The company projects that once all eight facilities' grease recovery systems are online, JBS USA will produce over 60 million pounds per year of saleable grease; reduce land application tonnage by over 175,000 tons per year; reduce truck trailer traffic associated with land application activities by over 8,700 loads per year, which is roughly 350,000 truck vehicle miles; and greatly minimize the potential for storm water pollution or odor concerns.

Global Manufacturing Waste  
Generation (kg/ton)  
% Change Since 2005



## ZERO WASTE TO LANDFILL GOALS REALIZED



**Elisabeth Wenner**  
Director, Global External Corporate Affairs  
Kraft Foods

**OPPORTUNITY:** At Kraft Foods, solid waste generated from manufacturing accounts for more than 99 percent of its total waste. The company already recycles or reuses about 90 percent of its manufacturing waste – in some cases, using manufacturing by-products as energy sources. However, in 2007, Kraft Foods decided to launch a pilot program with Sonoco, a global packaging and recycling company, to substantially reduce waste in its plants. The objective was to send zero waste to landfills.

**SOLUTION:** Roughly 70 percent of Kraft's North American packaging is recyclable. For the remaining 30 percent that can't be recycled, the company is working hard to find alternatives. Kraft Foods has partnered with TerraCycle®, a company that collects post-consumer and post-industrial packaging and turns the waste into merchandise. In Allentown, Pa., employees in Kraft's plant created a campaign to focus colleagues on a zero-waste goal, which they achieved. The plant has reduced its trash pickup schedule from 328 times per year to only 52 (once per week) – an 84 percent reduction in just one year – through recycling, reuse and raising awareness. In Fairlawn, N.J., Kraft's facility became a zero-waste-to-landfill plant in February 2010. The plant re-used three machines to compact plastic film trays for recycling, and its recycling team set up storage cages throughout the plant to collect other plastic materials and oversee collections. And Kraft's waste-to-energy projects at its Lowville and Campbell, N.Y., cheese plants create enough renewable energy to heat about 2,600 typical homes in the Northeast for one year. The U.S. Department of Energy named the Campbell, N.Y. plant an "Energy Champion" as part of its 2010 Save Energy Now Award for implementing significant energy savings in their facility.

**RESULTS:** Kraft Foods has 36 plants in nine countries that have hit zero waste-to-landfill status, including 24 plants in Europe and 12 facilities in North America. With 2010 as a base year, by 2015, Kraft Foods' goal is to reduce waste by 15 percent worldwide. Globally the company has reduced net waste from its manufacturing plants by 50 percent from 2005 levels.



## LANDFILL INITIATIVE DECREASES WASTE EXPENSE, INCREASES RECYCLING REVENUE



**Helmi Ansari**  
 Director of Sustainability  
 PepsiCo Foods Canada

**OPPORTUNITY:** For years, PepsiCo Foods has been working to reduce waste sent to landfills. Recently, the company took this pledge a step further and established a program to reach zero landfill status in all of its manufacturing facilities. The program was founded on three pillars: to reduce/eliminate the use of nonreusable and nonrecyclable materials in all PepsiCo Foods facilities plants, to reduce waste to landfill from the company's operations to zero, and to transform waste disposal costs into material revenues.

**SOLUTION:** The first step was to establish plant-level zero landfill teams. Because reaching zero landfill is such a big goal, cross-functional teams were necessary to lead the program effectively. Once established, those individuals focused on identifying predominant waste streams and developing scorecards to track all waste leaving the facility. Next, waste streams were identified and quantified, and a database of waste generation, related costs and revenues for each stream was established. The focus of the program then shifted to the separation of waste, including waste oil used to make biofuel, food waste used as animal feed, packaging film recycling, and plastics and metal recycling. Finally, PepsiCo Foods Canada's zero landfill teams process data and review their program every four weeks on a local level. Best practices are then shared nationally.

**RESULTS:** The company has had tremendous success with its zero landfill program to date. As of June 2011, PepsiCo Foods Canada diverts approximately 68 million kilograms of waste away from landfill annually and four of the company's manufacturing sites have achieved zero landfill status, including the Kentville, Nova Scotia, Frito Lay; Peterborough, Ontario, Quaker; Cambridge, Ontario, Frito Lay; and Taber, Alberta, Frito Lay plants. The net result is that waste disposal has been transformed from an operating cost into a revenue source. It is also proof that what is good for the planet can also be good for business.



## EXPLORING COST-NEUTRAL LANDFILL REDUCTION EFFORTS



**Richard Morrow**  
 Complex Environmental Manager  
 Tyson Foods, Inc.

**OPPORTUNITY:** While water and energy conservation, waste reduction and environmental stewardship have long been leading practices among McDonald's dedicated Tyson production facilities, very often a local infrastructure for cost-neutral recycling has not existed in rural locations where Tyson Foods operates. This is why Tyson Foods' dedicated McDonald's chicken production complexes in Union City, Tenn.; Hope, Ark.; and Nashville, Ark., have partnered with local businesses and nonprofit organizations to reduce the items being sent to area landfills.

**SOLUTION:** Tyson's complex teams networked within their local communities and with Tyson's extended business partners to gain insights into best practices from other local companies. On-site reviews were conducted to identify the top excess materials mix at each complex being sent to landfills. Crumbs, corrugated paper, plastics and metals were the leading materials identified as potential wastes. Complex plant managers and environmental managers established recycling recognition and recovery points throughout the production facilities, enlisting key stakeholders in every area for employee engagement and education. At the Union City complex, Tyson forged an agreement with a new regional recycler. In the Arkansas production complexes, a nontraditional avenue was available through the county Children's Center to reclaim corrugated paper. Finally, a three-month awareness campaign was implemented in production facility break rooms through the use of posters, banners and suggestion boxes for "ideas that can make a difference."

**RESULTS:** Tyson Foods' dedicated McDonald's production facilities have accomplished a 43 percent reduction in waste materials sent to community landfills between 2009 and 2011, an average of 165 tons monthly, by using the available local infrastructures for diverting and reclaiming recyclable materials. While rural reclamation infrastructures may change, one constant remains: Tyson's environmental teams continue to seek out new opportunities to reduce the volume of wastes sent to landfills and increase the materials recycled or reused in their communities even more.



## LOGISTICS DIVERTS RESTAURANT WASTE FROM LANDFILLS



*Olav Gribnau*  
Managing Director  
HAVI Logistics Environmental Services

**OPPORTUNITY:** With waste increasingly becoming a valuable resource, HAVI Logistics Environmental Services saw an opportunity to provide waste management services to McDonald's restaurants in The Netherlands and Belgium. HAVI has now been collecting the waste streams arising in these restaurants for 20 years. Over this period, HAVI has worked with McDonald's to divert increasing amounts of this waste away from landfill, with the aim of achieving zero waste to landfill from all McDonald's restaurants in these markets.

**SOLUTION:** HAVI Logistics Environmental Services collects the waste arising from the restaurants through making use of specially designed waste collection trucks. HAVI Logistics maintains full control of the waste streams from restaurants to waste processor. The waste is either recycled or efficiently converted into an energy source depending on the particular waste stream. For example, all used cooking oil and grill fat is collected and processed into biodiesel, all paper and soft plastics from behind the counter are segregated and recycled, and all of the organic kitchen waste is sent to aerobic digestion facilities, where it is converted into a source of renewable energy. The remaining customer waste is efficiently converted to energy. According to a study by CD Delft, by diverting waste from landfills and converting it to energy, it is possible to reduce the greenhouse gas (GHG) emissions of that waste by 1,833 kg of CO<sub>2</sub>e per ton of waste diverted. That represents a 75 percent reduction in GHG emissions per ton of waste converted to energy.

**RESULTS:** As a result of these efforts, all McDonald's restaurants in The Netherlands have been sending zero waste to landfill for the past 15 years; this includes both restaurant and customer waste. Since 2009, HAVI has been working with McDonald's to divert all waste from landfills for all restaurants in Belgium by the end of 2012. Currently, 76 percent of Belgian restaurants are participating in the scheme, all of whom are now sending zero waste to landfills. Between The Netherlands and Belgium, a total of 275 McDonald's restaurants are participating in the program. HAVI is continuing to work with McDonald's to further improve waste utilization within these markets and is looking for opportunities to apply these solutions in other markets, as well.

# CLIMATE / ENERGY

Many of McDonald's direct suppliers are identifying the sources of their greenhouse gas emissions and reducing their carbon footprints by steps such as increasing energy efficiencies or using more renewable energy. The following projects demonstrate how our suppliers are leading the way to a more carbon-efficient future.





## ENERGY REDUCTION GENERATES SAVINGS



*Bill Macleod*  
Purchasing Manager  
Burnbrae Farms

**OPPORTUNITY:** Burnbrae Farms has proactively investigated ways to enhance energy efficiencies by minimizing consumption and increasing the use of renewable energy. In an effort to reduce its environmental impact and demonstrate the company's concern for climate change, Burnbrae Farms began an energy awareness program in 2008.

**SOLUTION:** As part of this company-wide commitment, "energy champions" were established at all Burnbrae locations to promote energy-saving ideas and generate enthusiasm among employees. In 2011, for example, energy champions organized activities for Environmental Week to raise awareness on the impact electronic waste has on the environment. Burnbrae also contracted Energy Advantage Inc. (EA) to guide the company's efforts in the areas of energy consumption, energy efficiencies, renewable energy and greenhouse gas emissions. As part of their contract, EA issues a monthly report for each plant showing electricity and natural gas usage, and the accompanying savings in greenhouse gas emissions. Every plant manager is issued a scorecard at the beginning of the fiscal year with similar energy goals. Scorecard performance is part of each manager's yearly bonus structure.

**RESULTS:** Burnbrae has reduced energy usage by more than 5 percent nationally and has established a goal to reduce its carbon footprint in 2012 by another 5 percent. Energy champions rewarded employees for energy/environment conservation. The company implemented thermostat-control initiatives and a program to reduce process wash water temperatures. It initiated a competition between locations to reduce paper use and solar walls were installed in a number of poultry barns to heat incoming air. Air compressor heat was captured and reused in storage area. And lighting retrofits were completed in two facilities, reducing electricity by 30 percent.



## REDUCING THE USE OF FOSSIL FUELS & SUPPLYING ENERGY TO THE COMMUNITY

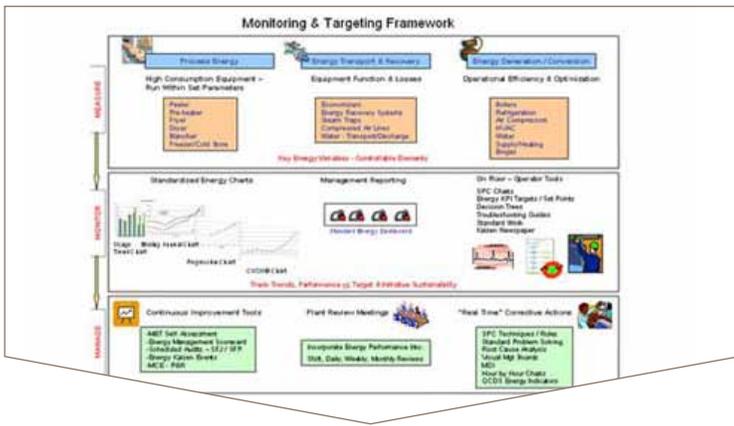


*Arturo Donaldo Melo Sarasqueta*  
President and CEO  
Grupo Melo

**OPPORTUNITY:** In 1978, just east of Panama City in the town of Cerro Azul, Empresas Melo S.A. installed two hydro turbines (dubbed Rio Indio #1 and Rio Indio #2) in its local manufacturing facility. The installation was viewed as a green solution to generate energy in an area when the national power grid was not available. The company, which produces, processes, sells and distributes poultry products across the region, uses flowing water from a local river to generate electricity, allowing the water to pass through the turbines before returning it to the river. By the 1980s, Empresas Melo's growth and the demand for more energy had risen so high that the company searched for and located a new site downriver to produce the necessary energy. In 1986, the company launched the mini-hydro (named El Salto) with a power capacity of 333kW. In the decades that followed, Empresas Melo S.A. operated as an isolated system. Then, in 2006, the company developed a plan to connect all the mini-hydros to the public power distribution grid. The objective was to make it possible for the company to sell excess hydro-generated electricity to the national power grid during the rainy season and buy energy from the power grid during the shorter dry season in order to avoid the use of the thermal plants.

**SOLUTION:** Within two years, the interconnection and synchronization of all the hydro turbines was finalized. Next, the company decided to optimize the use and reliability of the El Salto system by installing a second turbine (El Salto #2), which began operating in November 2008 with a capacity of 333 kW.

**RESULTS:** Today, Grupo Melo's four turbines provide all of its hatcheries, breeders and broiler farms with clean energy from May to January. The company is also generating 3,125 mWh per year and supplies energy to the local police station, primary public health clinic and the public school in the Cerro Azul area.



## INCORPORATING 'REAL TIME' ENERGY MANAGEMENT



Joseph Balkovec  
Global Project Manager  
McCain Foods Limited

**OPPORTUNITY:** It is part of McCain Foods' environmental program to continually look for ways to reduce its energy consumption. The challenge is to sustain energy reductions when capital investment is no longer an economically feasible means of doing so. Engaging staff and managing energy use at the facility level in real time is the next frontier of opportunity.

**SOLUTION:** The E-Live monitoring system is an efficient tool that McCain developed inhouse to track, target and manage energy usage in real time. The development of the tool began in Europe in 2010 and has been implemented at all McDonald's french fry producing facilities in Europe, Great Britain, North America, Australia and New Zealand. The system uses Excel-based tools and computerized controls at the factory to monitor energy use. Systems and unit operations are assigned selected key performance indicators, and these are managed using statistical process control tools. Situations where the operation is using more or less energy than best practices would dictate are immediately identified and trigger a corrective response using a set of standard decision-making and troubleshooting guidelines specifically developed for each unit operation.

**RESULTS:** Continental Europe acted as the test bed and development region for the tool. In 2008, McCain's European operations committed to reducing energy consumption by 6 percent before 2012. The energy management system, which includes the E-Live system, allowed McCain Europe to achieve an effective reduction of 7.5 percent between 2008 and 2011.

## BUILDING THE SUSTAINABLE BAKERY



Dennis Colliton  
Vice President Engineering  
Northeast Foods, Inc.

**OPPORTUNITY:** When Northeast Foods was offered the opportunity to build a new bakery in North Carolina for McDonald's, it wanted to engineer a sustainable, highly efficient, high-tech, low-cost operation.

**SOLUTION:** The roof on Northeast Foods' new bakery is glossy white to reflect the sun's heat away from the building. Skylights were installed in order to intensify natural daylight into the plant, allowing Northeast Foods to "light harvest" its high bay lighting. The high bay lighting was installed utilizing the latest induction-style fixtures that consume half the wattage of conventional fixtures. LED flat panel lighting in all non-production areas on motion detectors was included, and all filtered plant air intake units were matched with exhaust fans in specific areas. Northeast Foods also separated its domestic water supply from its process water supply so it could charcoal filter the process water and remove all traces of chlorine. The company purchased direct drive, inverter-driven compressors that operate from 15 horsepower (HP) up to 100 HP, delivering only the compressed air needed without consuming all the power required by conventional air compressors. The ammonia system from its freezer system is used to chill glycol for the process equipment, mixers and ingredient cooling, eliminating separate equipment for the process chilling. By utilizing a heat exchanger system, the company recovers heat from the glycol compressors. That warmed glycol is then pumped through the freezer sub floor to keep it above freezing. All of the heating and cooling requires no additional energy consumption.

**RESULTS:** Only 20 percent of the 1.5 million gallons of quarterly domestic water usage is returned to the sewer. Of the remaining water, 40 percent is used in the product, and the remainder is lost through evaporative cooling. This plant has water meters on use points and has been accepted by the municipal water department. Light-harvesting and induction-style fixtures in production areas reduce total lighting wattage requirements by 62 percent compared to a normal bakery. The total energy usage (gas and electricity combined) is 21.3 therms per ton of production. That is a 6 percent improvement over the company's New England facility, which has a comparable amount of throughput across its two lines. The electricity usage in the new bakery is 288 kilowatts per ton of production. Compared to the company's Virginia facility, a single roll line that also froze all of its product, that is a 20 percent improvement. These two bakeries are most comparable to the new North Carolina facility in terms of production volume or volume of frozen product.



## INTEGRATED CARBON REDUCTION



**Michele Noera**  
Energy Manager  
Amadori Group



**Federico Foschi**  
Production Director  
Amadori Group



**Maurizio Arienti**  
Live and Feed Mill Production Director  
Amadori Group

**OPPORTUNITY:** The Amadori Group, a major broiler breeder in Europe, has launched a number of carbon reduction projects in Italy aimed at drastically reducing its energy dispersion.

**SOLUTION:** The first project is a self-sustainability initiative that involves installing photovoltaic plants on the roofs of 14 breeding farms. The objective is to source energy through the solar panels, and the energy produced will be used to fully cover the energy needs of the farms. Another project is the development of an “energy hub” in the city of Cesena, which will involve integrating a thermal power plant with a gas cogeneration plant. The plan is to install four new steam boilers and a new pressurized condensation return tank with a degassing tower; The company will also create a new hot water circuit to switch some utilities that operate on steam to lower temperature utilities, thus reducing energy waste. At its main feed mill in Ravenna, Amadori, in partnership with other local industries, is also creating a cogeneration plant powered by vegetable oil that will be connected to the grid and to the existing thermal power plant, supplying the feed mill with electricity and heat. And at the company’s Teramo processing plant, a wastewater treatment plant has been added to lower the facility’s environmental impact and guarantee greater energy savings. The goal here is to recover the proteins and fats dissolved in the wastewater and transform them into energy. The biogas produced (containing 70 percent methane) will power a combustion engine to cogenerate electricity and heat, which will be used in the production processes.

**RESULTS:** With the photovoltaic plant system running at full capacity, the Amadori Group estimates annual energy production will be 6,600,000 kilowatt hours (kWh), reducing CO<sub>2</sub> emissions by 4,068 tons per year. The new energy hub is expected to save the equivalent of 3,604 tons of oil (TOE) annually, and Ravenna’s cogeneration plant will supply the feed mill with 90 percent of its electrical needs and provide an annual savings of 3,300 TOE. Finally, the wastewater treatment plant added to the facility in Teramo is expected to save approximately 837 TOE/year and cut CO<sub>2</sub> emissions by 2,287 tons annually.



## BIODIESEL AND REVERSE LOGISTICS



**Warren Morris**  
General Manager Quality Systems & Business Sustainability  
Keystone Foods

**OPPORTUNITY:** Keystone Foods/Allied Keystone Logistics in the United Arab Emirates sought to use alternative fuel for its delivery fleet to support McDonald’s plan to optimize its delivery-backhaul loop. The team also wanted to challenge the industry standard of using non-renewable fossil fuels. In 2010, Keystone Foods collected cooking oil from McDonald’s restaurants using the same vehicles that delivered the virgin oil. The used cooking oil was then backhauled to a local facility that converted the material into 100 percent biodiesel. That fuel could then be used in the delivery fleet to continue this process.

**SOLUTION:** Although the incentives to use alternative fuels are lower in the Middle East, the team wanted to demonstrate that it is possible to run a cleaner fuel without modifying the vehicle fleet. After the resulting biodiesel was implemented in the Allied trucks, there were no noticeable negative impacts. There have also been other advantages to the biodiesel conversion and reverse logistics project. McDonald’s restaurants in the United Arab Emirates generate more used cooking oil than the trucks need, which has created an opportunity to sell the excess biodiesel to the open market. The quality of the oil is so high, in fact, that Keystone can produce biodiesel for the same cost as regular diesel fuel while securing competitive predictable pricing. The initiative has also improved the McDonald’s System since separate trucks are no longer needed to backhaul the used cooking oil.

**RESULTS:** Based on current fuel rates, Keystone expects to save \$600,000 over the next five years and plans to collect more than one million liters of used cooking oil each year.



## ZERO ENERGY POTATO STORAGE



Juergen Bruer  
Senior Agronomist  
Agrarfrost GmbH & Co.KG

**OPPORTUNITY:** In order to produce McDonald's fries year round, potatoes need to be safely stored from September to June. During these months, a significant amount of energy is expended by the enormous fans used to keep the potato stock cool. Agrarfrost's goal was to minimize the energy balance used in a newly established potato storehouse with a capacity of 40,000 metric tons in Oschersleben.

**SOLUTION:** Agrarfrost used a combination of measures to neutralize the energy balance in its new storehouse. It installed a 900 kilowatt peak (kWp) solar power plant on the roof, improved the insulation in its walls and roofs to reduce energy loss, and utilized indoor transportation belts to avoid energy losses through open doors during the unloading process. The installation of fans with a variable capacity also reduced energy consumption.

**RESULTS:** This project demonstrated that "zero energy potato storage" in Germany is possible. Between July 1, 2010, and June 30, 2011, the energy solar panels produced over 810,000 kilowatt hours (kWh), while the storehouse only consumed 792,000 kWh of energy, resulting in an excess of +18,000 kWh.



## WASTEWATER TO BIOGAS



Paul Camp  
Regional Sales Manager  
Cargill, Inc.

**OPPORTUNITY:** Cargill's juice blending and packaging facility in Amsterdam realized it could generate green electricity and reduce CO<sub>2</sub> and N<sub>2</sub>O emissions by treating its wastewater more efficiently. The company discovered that 90 percent of the organic materials in its wastewater could be converted to biogas through anaerobic processing. However, Cargill's public partner in wastewater management only offered aerobic processing, reducing Cargill's opportunity to capture value from its waste.

**SOLUTION:** In 2007, Cargill became aware that a third-party organization, Orgaworld, was planning to construct a new wastewater treatment plant in the Amsterdam port area. The new plant would be capable of anaerobic wastewater processing. This treatment plant was part of a larger facility which was built according to the "Greenmills" concept, which integrates process technology and industrial processes by utilizing varying products' waste materials and raw materials. Through this concept, the plant was designed to maximize yield from organic waste. Cargill partnered with Orgaworld, linking its juice facility and Orgaworld's wastewater treatment facility with a 2.7 kilometer pipeline and pump station. The system is capable of processing 500 cubic meters of wastewater per day. The Cargill facility's homogeneous wastewater, with a high chemical oxygen demand (COD) load and low pH, chlorine and nitrogen levels, allows Orgaworld to buffer its processes, providing an excellent nutrient source for the wastewater treatment plant. Another part of the facility produces green electricity by using the biogas from the reactor for combustion in a combined heat and power generation plant. The plant will generate approximately 30 gigawatt hours of electricity per year. The heat generated is used in other processes and for communal district heating. The remaining sludge is dried and used in other processes, greatly reducing total waste and Cargill's carbon footprint.

**RESULTS:** The partnership, which has won support from the city of Amsterdam and its port authority, has created a net savings of 1,850 tons of CO<sub>2</sub> per year, roughly the equivalent of 90 households' annual emissions. This is made up of 850 tons of prevented energy production and 1,000 tons of prevented emissions from the wastewater. Both organizations are able to focus on their core competencies, and local businesses and communities receive additional benefits through the partnership.



# ANIMAL WELFARE

Our suppliers around the world have taken proactive steps to improve the welfare of the animals that play such a crucial role in the success of their businesses. These steps include ensuring the responsible use of medication, growth promoters and genetic selection, as well as improving the nutrition, husbandry and well-being of animals during transport and slaughter. The following suppliers have distinguished themselves through innovation and influence within their own supply chains and respective industries.

## IMPROVING THERMAL COMFORT, LITTER & AIR QUALITY IN POULTRY HOUSES



*Fabricio Delgado*  
Agribusiness Manager  
Brasil Foods

**OPPORTUNITY:** Providing thermal comfort and meeting CO<sub>2</sub> and ammonia standards in poultry houses is challenging. Suitable ventilation is crucial in order to remove dust, disperse excess heat, and supply oxygen for breathing. Also, there have been no set standards regarding the quality and quantity of wood shavings used in poultry houses as chicken litter. That's surprising, considering the litter used in these factors can have a direct impact on the health of the birds and their respiratory systems. The birds spend a significant amount of time both standing and lying down, and painful breast dermatitis and foot lesions can develop. Brasil Foods (BRF) saw this situation as an opportunity to improve the living conditions of birds during the breeding process, thereby improving the poultry's respiratory system.

**SOLUTION:** BRF implemented a pilot project in the region of Santa Catarina (Videira and Capinzal). The company offered to subsidize 100 percent of the cost of wood shavings used in poultry houses if the houses complied with the standards of quality and quantity specified by Brasil Foods for substituting litter. By managing the quantity and quality of the litter, the flocks were more comfortable and the instances of lesions were reduced. The company also installed a pad cooling or ceramic cooling system in the roofs of its poultry houses to solve problems related to temperature and humidity in controlled environments. The system is designed so the entire surface of the panel remains humid by allowing the greatest possible contact of external air with the water. The evaporation of the water then absorbs the warmth in the air. This system is most efficient in hot and dry climates, although it is possible to use it at certain times of the day in humid regions where the highest air temperature is accompanied by the lowest relative humidity.

**RESULTS:** BRF saw a 30 percent improvement in the quality of the poultry's respiratory system during the meat processing stage. The changes were considered a direct consequence of the enhanced living environment for the birds and the improved litter conditions. Providing the chickens with a thermal comfort zone has physiologically harmonized the process in such a way that the birds' minimum metabolic rate and production energy is maximized. It has also greatly diminished thermal stress and mortality in the company's poultry production.





## LITTER QUALITY INITIATIVES REDUCE FOOT PAD LESIONS



*Dr. Jutta Schmid*  
QA Manager Raw Material  
OSI Europe (OSI Food Solutions Europe)

**OPPORTUNITY:** One very important indicator of whether a chicken was raised properly is the evaluation of foot pad lesions (FPLs). Foot pad lesions are a typical contact dermatitis on a chicken's feet that can reduce the animal's comfort. In particular, the activity and mobility of chickens is affected, leading to lower feed intake and growth. McDonald's has an internal limit of 30 percent FPLs, and OSI Food Solutions has successfully remained within this limit for years. But that didn't prevent OSI from launching a project to test its different litter materials in order to gauge their influence on the development of FPLs.

**SOLUTION:** There are several factors that influence FPLs, including litter quality, climate, ventilation, heating and the quality of the feed. The most commonly used litter materials by OSI suppliers are chopped straw and wood shavings. In a study carried out by two suppliers, alternative litter materials were tested using summer and winter flocks under the same housing, ventilation and feeding conditions. The alternate materials included Soft Cells, rice hulls and pelletized straw. The benefits of these materials are the high dry-matter content, the good-water binding capacity and the "softness" of the product. This keeps the humidity and amount of ammonia in the houses at a low level, significantly reducing FPLs.

**RESULTS:** The results of the study showed, on average, that lesions were reduced up to 25 percent when the alternate litter materials were used. The materials also have a high level of biosecurity because the products are heat treated during the production process. McDonald's QA Europe was regularly updated about the progress of the tests. During a supplier's workshop in March 2011, the results of the tests were also shared within the entire European OSI supply chain. While there is no universal solution (due to variations in heating, ventilation, etc.), there is already some agreement in facilities across Europe to switch to pelletized straw.



## SPEARHEADING ANIMAL WELFARE TRAINING IN THE PHILIPPINES



*Elizabeth M. de Leon-Lim*  
Plant Manager  
GenOSI Inc. (an OSI Group partner in the Philippines)

**OPPORTUNITY:** GenOSI, Inc. is one of the leading food processing firms in the Philippines. It is also a major shredded-lettuce supplier and the exclusive supplier of beef and chicken patties, chicken nuggets, breaded fish portions, beef sausage and spaghetti meat sauce for McDonald's Philippines. GenOSI recently demonstrated its leadership in the industry by working with the Philippines' National Meat Inspection Service (NMIS) to improve animal welfare in the country's meat production chain. GenOSI not only helped to fast-track the nationwide implementation of Republic Act No. 8485, otherwise known as the Animal Welfare Act of 1998 and Department of Agriculture-Administrative Order No.18 Series of 2008, but it also conducted a series of training sessions on animal welfare standards for the NMIS.

**SOLUTION:** Dr. Minda S. Manantan, NMIS Deputy Executive Director, Dr. Clarita Sangcal, Plant Operation Inspection Division Head, and a number of food animal welfare officers attended the training held in October 2010. The main topics discussed were animal welfare laws and regulations, the core criteria for poultry welfare audits, minimum standards for global animal welfare (including cattle, pork and poultry), animal welfare checklists, and animal welfare defects and best practices. Following the in-class training, animal welfare audits were conducted in two locations in the Philippines: The San Miguel Food Poultry Processing factory in Bataan and the Rublou Hog Slaughterhouse in Muntinlupa City. During the audits, meat inspectors were tasked to spot the different animal welfare defects (bruised thighs/drums, broken wings, stunning efficacy, etc.). Samples with defects were collected, and noted defects were discussed. Pictures of defects were also taken for inclusion in an animal welfare defect reference guide. This effort resulted in 30 food animal welfare officers being trained.

**RESULTS:** In July 2011, GenOSI held additional training sessions for 26 food animal welfare officers and meat inspectors in Visayas and Mindanao. The company also shared its insights at the Animal Welfare Advocacy Meeting attended by members from the meat industry and local government representatives. Thanks to GenOSI's efforts, animal welfare audits will now be included in all future accreditations for cattle, hog and poultry slaughterhouses in the country.



## ANIMAL WELFARE ADVANCES CREATE LEADING-EDGE FARMS



*John Heuthorst*  
Director of Poultry Operations  
Burnbrae Farms

**OPPORTUNITY:** Burnbrae Farms is committed to the welfare of its hens. The company learned early on that a healthy hen is a high-quality producing hen, which is why Burnbrae follows or exceeds all animal care guidelines in the Canadian Codes of Practice for Farm Animals. All Burnbrae employees are trained in proper animal handling procedures to ensure consistency in handling the livestock. Depopulating and repopulating systems are designed to put the least stress possible on the birds, and Burnbrae Farms strives to continue to conscientiously make improvements.

**SOLUTION:** Burnbrae Farms conducts continuous research on different elements of poultry production. In particular, it has investigated alternative housing extensively and come to its own conclusions on the effectiveness, practicality and suitability of its own production units. Burnbrae Farms has had free-run barns for more than a decade. Most recently, it moved to include aviaries and enriched cages on newly constructed or renovated farms. Burnbrae Farms also invests in institutions like the University of Guelph, where the Centre for Poultry Welfare has recently been established, and the Poultry Research Centre at the University in Alberta. Burnbrae supports several boards involved in research and education, including the Poultry Industry Council, Canadian Poultry Research Council and the Poultry Research Centre in Alberta. In addition, Burnbrae is a member of the Coalition for a Sustainable Egg Supply.

**RESULTS:** Burnbrae Farms achieves high scores on third-party animal welfare audits and, in 2011, two of its farms received a perfect result on their animal welfare scores. It is also nearing completion of a new barn facility that has an enriched cage system. By 2012, Burnbrae Farms will be in a position to provide consumers with eggs from three housing methods – conventional cages, free-run or cage-free systems (including a new aviary free run system), and enriched cage systems – which will ensure their barns and hen housing systems remain on the leading edge.



## WEB-BASED SURVEYS TO DRIVE IMPROVEMENTS ON DAIRY FARMS



*Antone Mickelson*  
Director Farm Practices  
Darigold (Owned By The Northwest Dairy Association)

**OPPORTUNITY:** The task of every Northwest Dairy Association (NDA) cooperative producer-owner is to provide its customers with safe, reliable and nutritious food. To gauge its success, three years ago, the NDA began collecting tangible information about the animal husbandry practices performed on its member dairy farms. The NDA believed it could help identify farm management techniques that underperform and provide incentives to strengthen these areas on a farm-by-farm basis. Doing so could also help increase the profitability of individual farms, reduce the negative environmental impact, maximize cow comfort, and help the NDA detect any unforeseen trends long before they become a problem.

**SOLUTION:** The NDA took its first step toward establishing a comprehensive animal well-being assessment tool when it developed an in-depth, web-based survey that allows producers to more effectively identify, communicate and implement dairy farm improvements. To date, more than 40 percent of the NDA's member farms, representing approximately 60 percent of the total NDA milk supply, have been surveyed. A second round of assessments will provide data on whether or not farmers are making improvements so the NDA can start to assess progress within its cooperative as a whole.

**RESULTS:** The animal well-being survey is the first of several farm-based survey modules that the NDA has underway. A module dealing with community outreach and emergency management is also under development. The NDA also envisions future survey modules dealing with food safety, environmental stewardship, energy conservation, farm biosecurity, air and water conservation and employee management training.



# WATER

The following McDonald's suppliers have demonstrated great expertise and commitment in the Water category by improving their water use efficiencies, reducing water pollution, treating and reusing their wastewater, or by managing to do all three.

## REDUCING OUR WATER FOOTPRINT



*Angelita Barski*  
Environmental Manager  
Cargill, Inc.



*Lourival Trimer*  
Production Manager  
Cargill, Inc.

**OPPORTUNITY:** Cargill produces dressings and sauces for retail at a facility in Sao Paulo, Brazil, that requires large amounts of fresh water. Manufacturing dressings and sauces, like mayonnaise, also generates a significant amount of wastewater, which must be managed to control the plant's environmental impact.

**SOLUTION:** Cargill's plant managers worked with the company's production and utilities functions to raise awareness and set goals to reduce water purchases as well as liquid waste. With the new water reduction goals in mind, plant employees began to change the food creation process, optimizing the lines to reduce water leakage and waste. Employees found they were able to improve recovery times in the demineralization process, reduce water during the "clean in place" phase of mayonnaise production, reuse some water in the oil hydrogenation reactor, and reduce the chemical oxygen demand of plant wastewater.

**RESULTS:** In just two years, Cargill's Mairinque facility improved water uptake by nearly 2 percent, reducing use from 256,491 cubic meters to 251,541 cubic meters of water. During the baseline year of this project, which began in 2007 and continued into 2008, the plant purchased 20,457 cubic meters of water for process activities. Since then, the facility has reduced external water purchases by 20,000 cubic meters each year. The average chemical oxygen demand during the baseline year was 78.3 kilograms per month. The facility reduced this demand by more than 20 percent since the program launched. Even water reuse has improved. Beginning in 2008, water reuse was 3.56 percent. By the end of June 2010, the facility was able to reuse more than 10 percent of its water. The cumulative impact of these improvements dramatically reduced the water footprint of the Mairinque facility. As a result, the facility was awarded the Federation of Industries in Sao Paulo State's Award for Water Conservation and Reuse in 2011.





## REDUCING WATER USAGE IN ARID REGIONS



*Chris Harvey*  
Environmental Sustainability Manager  
JBS USA, LLC



*Gene Curtis*  
Environmental Sustainability Manager  
JBS USA, LLC

**OPPORTUNITY:** JBS USA's Beef Plants in Greeley, Colo., and Cactus, Texas, both lie in semi-arid regions of the United States that receive minimal precipitation annually. This means that water is expensive and in short supply. By using water more efficiently, JBS believes it can help preserve water supplies for future generations, save money and protect the environment. With this in mind, JBS set an aggressive goal of 650 gallons per head of cattle for 2011 in both the Cactus and Greeley facilities. Both plants accepted this challenge and vigorously pursued plans to meet or exceed expectations.

**SOLUTION:** Although both facilities implemented water reduction plans in 2010, many employees were not engaged and the rules were not vigorously enforced. So the next step to reducing water usage was to get all the employees to participate, enforce what had already been implemented and look for new opportunities to reduce consumption in all areas. A water conservation program was developed at both facilities to increase awareness, and Greeley ran additional water lines from its post-treated wastewater tank to expand utilization of recycled water and reduce water pressure in many of the production areas. Cactus installed automation to control the water pressure in the hot water distribution system, and automation was also installed at both facilities on wash cabinets to shut them down when not in use. The water softeners for the boilers in Cactus were also replaced with a reverse osmosis system to improve water quality in the boiler and reduce water blowdown in the boiler system.

**RESULTS:** Over the past year, both the Greeley and Cactus facilities have a combined water usage reduction of more than 10 percent and have saved more than 230 million gallons of water per year. The Greeley facility reduced their water usage per head from 820 gallons per head (gal/hd) in 2010 to 623 gal/hd in 2011, resulting in a 180,000,000-gallon savings. The Cactus facility achieved significant results, too, with a reduction from 772 gal/hd to 709 gal/hd, conserving more than 50,000,000 gallons. The combined annual savings of both facilities was enough to supply water to more than 2,000 homes for an entire year. These savings also helped reduce natural gas consumption used to heat water and electricity used to pump the water. Other JBS facilities, such as the Hyrum, Utah facility, had similar success in preserving natural resources – reducing their water usage rate from 862 gal/hd to 780 gal/hd, saving nearly 50,000,000 gallons in 2011.



## REUSING TREATED WASTEWATER TO REPLACE FRESH WATER



*Paul Stonehouse*  
Project Engineer Whittlesey  
McCain Foods Limited

**OPPORTUNITY:** All of the wastewater from McCain Foods' Whittlesey factory is pumped to an on-site covered anaerobic lagoon where potato solids are fermented to produce biogas. This biogas is either used to power a gas turbine, which generates electricity, or it is burned directly in the plant boilers. Water from the lagoon is then further treated to a very high standard before being returned to the river system.

**SOLUTION:** To make better use of this resource, the factory diverted a portion of the effluent water from the discharge to a new reverse osmosis plant, where it is further treated through two filtration stages and a disinfection step to remove any remaining impurities. The reverse osmosis phase produces high-quality feed water (free of most ions and salts) that is used in the plant's boilers and condensers.

**RESULTS:** The reverse osmosis plant is now complete. When fully operational, it has the capacity to reduce the factory's demand for municipal water supplies by 25 percent. This pioneering reuse project will pave the way for more extensive water opportunities in the future.



## DEVELOPING MORE EFFICIENT WATER TREATMENT REFRIGERATION



**Karine Gacon**  
 McDonald's Unit Commercial and Quality Manager  
 Moy Park (A Marfrig Group company)



**Benoit Laturelle**  
 Maintenance Manager  
 Moy Park (A Marfrig Group company)

**OPPORTUNITY:** Moy Park's Henin Beaumont site in France was responsible for producing 9,400 tons of products for the McDonald's supply chain in 2010. This production process involves the use of water for refrigeration within tightly defined food safety parameters. The same year, Moy Park created an initiative to develop more efficient water treatment refrigeration while maintaining high standards for hygiene and safety.

**SOLUTION:** Moy Park's technical and production staff worked in partnership with Nalco to conduct a six-month review of the site's water use. The result was the decision to install Nalco's Trasar equipment to treat the water, remove any impurities and ensure the water is high quality before it is used in refrigeration. The equipment continuously monitors the water quality in the cooling tower of the cold compressor, and treatment concentration levels are optimized in order to save water and treatment products. Trasar was also installed on all refrigeration systems throughout the site to audit the water softening system and heating. The equipment provides assurance on water quality and usage by continuously recording and graphing information, automatically alerting any deviations from the specification via email alarms to the appropriate personnel.

**RESULTS:** Installing this equipment has helped this Moy Park site improve its sustainability objectives by reducing water and energy consumption, optimizing material lifespan and reducing waste. Savings in the five water cooling circuits range from 7 percent to more than 50 percent. Between October 2010 and December 2011, the company saved 7,051 cubic meters of water. The water softeners were also analyzed, and it was found that they could be optimized to yield an additional water savings of 2,500 cubic meters annually. During 2012, the water softener element of this program will be implemented, demonstrating Moy Park's commitment to continuous improvement in this important area for sustainability.



## WASTEWATER RECYCLING/REUSE SYSTEM EARNS K&K ECO-FRIENDLY REPUTATION



**Shon Lin**  
 General Manager  
 K&K Foods Ltd. (An OSI Group Partner in Taiwan)

**OPPORTUNITY:** In 2008, K&K relocated its chicken nugget manufacturing operations from Taoyuan to Chang Hwa County in order to meet the increasing demand of McDonald's customers in Taiwan. As part of the relocation, the existing water treatment system at the Chang Hwa plant was also renovated to cope with the production volume increase. One year after the move, employees noticed that the levels of chemicals and micro-contaminants in the water treated by this renovated system were much lower than the government required. So executives began discussing ways the plant could reuse this water.

**SOLUTION:** The K&K team came up with a plan to convert the Chang Hwa plant's existing soft-water system to a water purification system, in order to treat the wastewater and reuse it in nonfood operations. In 2010, construction began on the purification system, which included a sand filter, carbon filter and resin ion exchanger. By year's end, the system was up and running.

**RESULTS:** Since its implementation, K&K's plant has discharged roughly 400-650 kiloliters of wastewater per day, and the company has managed to recycle between 65-100 kiloliters of that wastewater each day using the water purification system. This recycled water is used for gardening, road washing, toilet flushing, as well as in the cooling tower. Estimates show the water saved at this facility every two years will equal all the domestic water used in Chang Hwa County over a typical six-week period. As a result, K&K has been recognized by the county as a role model for wastewater treatment. K&K's efforts are a great example of how a few operational changes can not only improve sustainability but help a company earn an eco-friendly reputation in its community.



## REDUCING WATER CONSUMPTION IN ICE MACHINES



*Matt Allison*  
Vice President of Engineering  
Scotsman Ice Systems

**OPPORTUNITY:** Commercial ice machines use water for two purposes: to make ice and flush out minerals and impurities that can build up in the ice machine. This flush water is necessary to keep the machine clean longer and is required to produce clear ice. The amount of flush water is, in some cases, equal to or greater than the amount of water used to make the ice. Also, the amount of flush water required depends on the quality of the water feeding the ice machine. The lower the mineral and impurity content, the less flush water is needed. Typically, the amount of flush water is set at the factory or by a service agent independent of whether the quality of incoming water is good or bad. Scotsman Ice Systems saw an opportunity to reduce the amount of water consumed by its ice machines based on local water conditions.

**SOLUTION:** Scotsman Ice Systems Prodigy ice machines monitor the quality of the water feeding the ice machine and automatically adjust the amount of flush water based on the water quality. The Scotsman WaterSense probe sits in the water sump of the ice machine and constantly measures the impurities of the incoming water. Based on the measurement, the ice machine knows how much flush water is needed to keep itself clean. In clean water environments, the machine will adjust itself and flush up to 25 percent less water than it would under harsher conditions. Since it is constantly monitoring itself, the unit can change flush settings almost instantly if water conditions suddenly change. This ensures the unit is never using more water than it needs to keep cleaner longer.

**RESULTS:** Scotsman's Prodigy ice machines use less water (up to 50 percent in some cases) and energy than most other ice machines currently installed in the market. The Scotsman WaterSense technology results in the Scotsman Prodigy ice machine being more than 25 percent water efficient than usual in certain conditions. This translates into savings of more than 150,000 gallons of water over the typical lifetime of the machine.



## ECO-TREASURE HUNTS UNCOVER INNOVATIVE WAYS TO SAVE WATER



*Richard Stevens*  
HSE Manager  
Tulip Ltd.

**OPPORTUNITY:** Tulip has a corporate objective to reduce water use by 20 percent at all its facilities by 2015. One of its biggest water users is its Bodmin site in Cornwall. To reduce water usage at this location, Tulip formed a water efficiency subcommittee made up of staff from different levels within the business to find innovative ways to achieve their goal.

**SOLUTION:** Dubbed an "eco-treasure hunt," the cross-functional teams visited all areas of the factory to understand operational constraints, discover where new opportunities existed and challenge existing practices. The team found that cookers use water to clean on a CIP system. Cleaning water is released at 5 cubic meters per cycle, and the team recommended the cycle could be increased from 45 to 120 minutes. This resulted in a savings of 20 cubic meters per day. The cross-functional team also worked with the plant's hygiene teams to focus on manual debris removal as the first stage of the cleaning cycle. This has enabled the facility to reduce the amount of time that high-pressure water lances are required. Additionally, it removed drench hoses used to wash the floors from the oven rooms and replaced them with scrapers. The team also recommended adding reduced-flow spray nozzles to all taps and waterless urinals to reduce flow from toilet cisterns.

**RESULTS:** Tulip's Bodmin site cut water usage by 15 percent in 2011. The savings equates to a reduction of 13,068 kiloliters. The cross-functional team also identified the need to measure utility usage in much greater detail, and the facility is in the process of installing detailed monitoring and targeting metering equipment to help discover new opportunities and make further savings.

# RAW MATERIALS

These McDonald's suppliers proved themselves by successfully tackling complex issues at the foundation of our supply chain. These issues include agricultural working conditions, soil fertility, soil erosion and contamination, water conservation, greenhouse gas reductions, responsible use of agrochemicals, biodiversity and the long-term economic viability of producer communities.



## CUTTING CO2 ON DAIRY FARMS



*Nic Parsons*  
Agricultural Manager  
Arla Foods

**OPPORTUNITY:** After recognizing that up to 80 percent of the carbon emissions from milk are generated at the farm level, Arla Foods took the lead in the industry by developing and funding a long-term carbon reduction program. The United Kingdom's Government has set challenging targets for carbon reduction in the agricultural sector, which regularly receives negative press coverage for its impact on the environment. By developing this initiative, Arla and the Arla Foods Milk Partnership (AFMP) can proactively demonstrate the good work that is already being done on its farms while lifting AFMP to the next level in carbon reduction.

**SOLUTION:** Reducing carbon at the farm level makes practical and financial sense for farmers because the most carbon-efficient farms are generally the most profitable. To address this, Arla has launched an industry-leading three-year program for all 1,400 members of the AFMP who supply milk to McDonald's. Each AFMP member is being offered a free carbon assessment of their farm. The assessment reports on the farm's strengths and weaknesses, assesses dairy equipment for energy efficiency, identifies potential savings, and provides a nitrate vulnerable zone report. The assessment also looks at the whole dairy farming enterprise, covering everything from the use of energy to feed utilization, fertilizer application, slurry storage and chemical use. In addition, it analyzes carbon contributors from the herd, including each cow's calving index and culling rates. Over the next three years, 250 on-farm practical workshops are being held across the UK to guide farmers through the key areas that influence carbon outputs.

**RESULTS:** Since their launch in March 2011, 36 workshops have been completed (as of July 2011) and 368 farm businesses (nearly 30 percent of AFMP) have attended the meetings. As a result, 259 on-farm carbon assessment requests are now underway. When completed, these assessments will give Arla a wealth of data, all of which will go towards further developing the project in years two and three.



## CHANGING THE WAY THE WORLD THINKS OF PLASTIC BOTTLES



*Laura Vansant*  
Sustainability Manager  
The Coca-Cola Company

**OPPORTUNITY:** The Coca-Cola Company's sustainable packaging goal is to reduce the company's environmental footprint by reducing our material use, increasing recycling, using more recycled and renewable material in its packaging, and advancing innovative technologies. With approximately 60 percent of its global packaging in polyethylene terephthalate (PET) bottles, being able to replace the fossil fuel-based resin with a renewable resource posed a huge sustainability opportunity.

**SOLUTION:** PlantBottle™ packaging is Coca-Cola's breakthrough innovation and is designed to change the way the world thinks of plastic bottles. It is the first 100 percent recyclable PET plastic beverage bottle made partially from plants. The material looks and functions just like traditional PET plastic, but it has a lighter footprint on the planet and its resources. Introduced in December 2009, PlantBottle™ utilizes sugarcane for up to 30 percent of the weight of its PET plastic. The Coca-Cola Company is using sugarcane from Brazil because it is the only bio-based material widely recognized by thought-leaders globally for its unique environmental and social performance. Acclaimed as a major leap forward in packaging, PlantBottle™ received the 2011 Edison Award for "Best New Product – Sustainable Packaging" and won the 2010 DuPont Award for Packaging Innovation. Coca-Cola is also working with R&D partners in universities and research institutes to expand the plant material content to include such waste products as stems, fruit peels and bark.

**RESULTS:** During 2010 – the first full year that PlantBottle™ was in the market – more than 2.5 billion bottles were produced. This saved the equivalent of 60,000 barrels of oil, or 30,000 metric tons of CO<sub>2</sub>. By the end of 2011, PlantBottle™ was available in 25 countries and used by more than a dozen brands that include Coca-Cola, Coca-Cola Zero and Vitamin Water. Also, all Dasani sold in McDonald's restaurants throughout the United States and Canada is packaged in PlantBottle™.



## SUSTAINABLE WHEAT FARMING REDUCES COMPANY'S CARBON FOOTPRINT



*Matthew Pitchforth*  
Director Quality Assurance Europe  
Fresh Start Bakeries Europe

**OPPORTUNITY:** Two years ago, Fresh Start Bakeries Europe established an environmental strategy to reduce energy consumption usage by 20 percent and its carbon footprint by 12 percent by the year 2020. The company conducted its first carbon footprint analysis in 2009. Results showed the company's main areas of CO<sub>2</sub> production were electricity, transport, gas and raw materials. The big challenge was Fresh Start Bakeries' raw materials, which account for 42 percent of the company's carbon footprint, 62 percent coming from the flour alone. Because flour is a traded commodity and Fresh Start Bakeries had no control over the farmers who grow wheat, this was a challenging area to influence. A carbon footprint analysis of the company's flour mill found that 85 percent of the CO<sub>2</sub> generated from flour production comes from the fertilizer and the impact fertilizers have on the soil.

**SOLUTION:** Once the company understood the causes of its CO<sub>2</sub> emissions, it established an innovative project with its flour miller (Saale Muhle) and two large and professional German wheat farmers who supply that flour mill (Horsch) and YARA (the biggest nitrogen producer in Europe) to see how Fresh Start Bakeries could reduce carbon emissions in flour production. After many discussions, YARA developed a new fertilizer production method that reduced CO<sub>2</sub> emissions by 21 percent. Fresh Start Bakeries has also established key performance indicators (KPIs) relating to its energy usage, waste, water usage and efficiency. These are reported to all bakery management on a weekly basis. And the company has begun the certification process for ISO 50001 and hopes to receive certification for all of its European bakeries by the second quarter in 2012.

**RESULTS:** In the first year, Fresh Start Bakeries reduced water consumption by 7.3 percent, electricity consumption by 4.6 percent, and fuel consumption by 4.6 percent. Total energy consumption was reduced by 9.2 percent and CO<sub>2</sub> emissions were cut 2.7 percent. The two test farmers also received "McDonald's Flagship Farm" status for their best-practice farming standards. In 2011, Fresh Start Bakeries anticipates a possible 48 percent reduction in CO<sub>2</sub> from wheat production.



## WATER CONSERVATION AND MICRO-IRRIGATION



**Manjunath Patil**  
Business Head  
VISTA Processed Foods (an OSI Group Company)

**OPPORTUNITY:** Though India has the largest irrigated land areas in the world, only about 40 percent of the nation's croplands are irrigated. One of the main reasons is the predominant use of the flood (or conventional) method of irrigation, where water-use efficiency is low due to substantial conveyance and distribution losses. Vista OSI saw this as an opportunity to educate its farmer-growers in India on how to improve the nation's water efficiency and better conserve rain water.

**SOLUTION:** Vista OSI's farmer-growers are spread across the country, from southern tropical locations to northern temperate hills, and the vegetable growers (lettuce and tomatoes) have traditionally been dependent on flood irrigation and rain-fed farming. So Vista has spent the past three years working with growers to implement the water conservation (watershed management) and micro-irrigation systems (drip and sprinkler) on their farms. In addition, the company has worked with local governments to extend the subsidy benefits on drip irrigation to small and marginal farmers. Vista has also encouraged grower-consolidators to earmark 25 percent of their annual farm investments toward incorporating more micro-irrigation.

**RESULTS:** In just three years, the country's vegetable production area using drip and sprinkler irrigation has increased from 5 percent to 40 percent. Farmers have also reported they are using less electricity, experiencing fewer weed problems and less soil erosion, and that the benefits of micro-irrigation, in terms of water savings and productivity gains, are substantial. The changes have resulted in 13 million liters of water being preserved – water that can now be used to quench the thirst of millions of people.



## PROMOTING THE SAFE HANDLING OF FARM CHEMICALS IN INDIA



**Manjunath Patil**  
Business Head  
VISTA Processed Foods (an OSI Group Company)

**OPPORTUNITY:** In India, the consumption of insecticides in agriculture has increased more than 100 percent in the last two decades. This fast-growing trend motivated Vista OSI to begin educating their growers about the efficient use and environmentally safe handling of farm chemicals and pesticides.

**SOLUTION:** Realizing the immense need for grower awareness, Vista OSI partnered with Bayer Crop Science to work with Vista's farmers across the country to achieve the desired levels of productivity, quality and residues. As part of the education program, a series of customized crop protection packages were developed. Vista Foods' staff and growers were trained on crop protection management and complying with chemical residue standards. Dedicated food chain consultants were appointed at the farm level to implement and monitor the program. And Vista OSI and Bayer Crop Science, together with grower companies, earmarked about 2 percent of their revenues to cover the expenses related to this project.

**RESULTS:** Over a three-year period, more than 50 percent of the farmer-growers have been trained in the safe and effective use of farm chemicals, and 100 percent of the farms have only been using approved pesticides. The farmers' profitability has also increased by almost 15 percent, due to the reduced use of chemicals and crop damage by pests and diseases. Farm yields of iceberg lettuce have increased by almost one ton per acre (13 percent higher), and there have been no reports in two years of shipments with pesticide residue higher than the permissible limits.



## AGRICULTURAL PROGRAM FOR SOIL RECLAMATION



**Gary King**  
Senior Manager Global Ag Development  
H.J. Heinz Company

**OPPORTUNITY:** In 2006, when Chinese tomato yields were very low, Heinz needed a sustainable and dependable supply of tomato paste for its Asia Pacific factories. That year, Heinz began working with COFCO-Tunhe, China's largest tomato processor. However, after conducting various soil analyses, Heinz discovered that most soils in the Xinjang region, where COFCO-Tunhe growers were located, would not be farmable by 2016 due to decades of poor soil management practices. Local government and community leaders quickly realized the potentially devastating impact on the region and were open to working with Heinz to implement an agriculture program to help reclaim the soil and ensure the viability of farming in Western China.

**SOLUTION:** The challenges have been great as Heinz has helped growers correct 50 years of soil damage caused by the creation of an impermeable hard layer, the destruction of organic soil matter, and over-application of nitrogen fertilizer. Heinz began conducting an educational outreach program throughout the region to introduce farmers to agricultural technologies and sustainable practices that increase tomato yields and reduce production costs caused by inefficient practices. Since the program began, Heinz has dramatically improved agricultural methods by introducing sustainable practices, such as:

- Water efficient drip systems
- Sustainable soil conversion methods that use the appropriate machinery for proper tillage and bedding practices
- Fertilizer management programs that improve soil structure, reduce fertilizer usage and cost, lessen runoff pollution and decrease nitrate problems
- Efficient pesticide application systems that are safer for farmers, workers and the overall tomato crop
- Improved seed and plug transplant technologies to increase efficiencies

**RESULTS:** In just a short time, the Xinjang region's farm yields and quality improved 58 percent. These results have invigorated the agricultural community as more farmers implement Heinz's growing techniques. The company's efforts have also been recognized by the Chinese government, which has given the Heinz team three awards for outstanding contributions to Chinese agriculture.



## INTEGRATED PEST MANAGEMENT



**Leigh Morrow**  
McCain Foods Limited  
North American Potato Suppliers



**Yves Leclerc**  
McCain Foods Limited  
North American Potato Suppliers



**David Ingersoll**  
J. R. Simplot Company  
North American Potato Suppliers



**Richard Burres**  
ConAgra Lamb Weston  
North American Potato Suppliers

**OPPORTUNITY:** McDonald's approached its french fry suppliers in 2009 to discuss ways to reduce pesticide use in future potato supplies. To meet this need, McCain Foods played a key role in developing and implementing a web-based Integrated Pest Management (IPM) and Integrated Crop Management (ICM) survey that will identify and encourage best practices among suppliers and reduce overall pesticide, fertilizer and water use.

**SOLUTION:** Over an 18-month period, the IPM/ICM survey was conceived, developed and tested with input from the potato industry. Growers answer a series of 174 best-practice questions regarding growing and resource management that could impact the health of the crop. Results are displayed according to the percentage of farms following these practices.

**RESULTS:** The survey site went live during the summer of 2011 and will provide both general public reports and secure grower reports with detailed information that allows benchmarking against similar markets and regions. Processors will use these results to identify successful practices of early adopters and promote these successes to suppliers. The objectives of this project have been to communicate IPM/ICM implementation to consumers, provide a benchmarking system to growers, and to identify and transfer best practices. The survey was promoted for use by other sectors of the potato industry (fresh, chip, seed) during the 2012 U.S. Potato Expo. This is a great example of a collaborative partnership between the North American potato industry's supply chains.



# COMMUNITY IMPACT

Giving back to the community is a longstanding priority of McDonald's and one of our core values. The following suppliers have distinguished themselves and demonstrated their commitment to the communities where they live and work through their volunteer efforts, their investment in local infrastructures and the charitable organizations they chose to partner with and support.

## LIFE-CHANGING SURGERIES IN DEVELOPING COUNTRIES



*Michael Donner*  
CEO  
Barco Uniforms

**OPPORTUNITY:** Barco Uniforms works with suppliers around the world and has seen how health issues like cleft palates and severe burns often go untreated in developing countries due to a lack of money and resources. Over the years, Barco has also witnessed charitable organizations like ReSurge International provide life-changing surgeries to those who cannot afford medical care. To show its support for this important cause, in 2009, Barco founded the Nightingales Foundation to raise funds to help pay for these life-saving surgeries.

**SOLUTION:** Two years ago, Barco approached the businesses in its supply chain to raise funds to support the charitable medical work being done by organizations like Resurge International. Through its global initiative, Barco's Nightingales Foundation has secured ongoing commitments from suppliers in Nicaragua, China and Vietnam to donate a portion of revenue from every garment created for Barco Uniforms to the Foundation. By the end of the program's first year, the Foundation raised enough money to fund an additional 170 surgeries in countries where the contributing suppliers are based.

**RESULTS:** In less than 18 months, the Foundation has funded 1,208 surgeries through ReSurge International, and 50 surgeries were paid for with contributions from Barco employees alone. By the close of 2011, the Foundation had funded an additional 430 surgeries through its own efforts and those of its supporters. Also, to recognize the nurses who make these surgeries possible by volunteering their time and skills, the Foundation established the Barco's Nightingales Nursing Award for Excellence. The first award was presented to Dawn Yost, who has devoted two weeks each year for the past 18 years to serve as an operating room nurse on trips with ReSurge International. The Foundation donated 10 surgeries in recognition of her commitment.



## SUSTAINABLE, NUTRITIOUS FOOD FOR BELARUSSIAN ORPHANAGE



*Helen Anne Hudson*  
Chair Belarusian Orphanage Chicken Coop Project  
Burnbrae Farms

**OPPORTUNITY:** In 2010, Burnbrae Farms agreed to work with Canadian Aid for Chernobyl (CAC), a nationally registered non-profit charity that provides humanitarian aid and medical assistance to communities in Belarus still affected by the world's worst nuclear disaster. One of the organizations benefitting from this remarkable charity is the Chaussy orphanage, which houses 100 children. A couple of years ago, an agricultural program began at the orphanage to teach the children how to grow their own vegetables. Following the success of the garden, the next goal was to build a chicken coop to provide the orphanage with a sustainable supply of eggs and chicken, as well as income from the sale of surplus products. It would also serve as an opportunity to educate the children about modern poultry production.

**SOLUTION:** Burnbrae Farms worked with representatives from CAC to develop a design for the chicken coop. The company also reached out to its suppliers who generously donated cages, fans and other equipment. Contacts within the poultry industry helped to source chickens for the project in Belarus, and a local Brockville builder donated his time to put the coop together. And Helen Anne Hudson of Burnbrae Farms travelled with CAC volunteers in June 2011 to help train the orphanage staff and the children on how to properly care for the birds.

**RESULTS:** The chicken coop project succeeded in providing the orphanage with a sustainable supply of nutritious food, supplemental income, and valuable skills training. Burnbrae employees also created Sponsor a Pullet, a project to raise additional money to buy feed for the birds.



## CLEAN WATER TO TWO MILLION PEOPLE



*Laura Vansant*  
Sustainability Manager  
The Coca-Cola Company

**OPPORTUNITY:** According to the World Health Organization, more than 300 million Africans lack access to safe drinking water. Waterborne illnesses, which lead to millions of deaths annually, are key contributors to Africa's high rate of child mortality and chronic malnutrition. This is why Coca-Cola has made helping these communities secure clean water and sanitation one of its top priorities.

**SOLUTION:** The Replenish Africa Initiative, or RAIN, was launched by The Coca-Cola Africa Foundation in 2009 with a goal of bringing access to clean water to at least two million Africans. RAIN supports three types of projects: water access, sanitation and hygiene education; watershed protection; and the productive use of water. To date, the Coca-Cola Company has committed \$30 million to this initiative and is working with various funding and implementing partners that include NGOs, philanthropic organizations and government agencies to enact more RAIN projects. In 2010, an additional component was added – RAIN Water for Schools, which provides clean drinking water to schools that lack a public water supply system. This three-year initiative will bring clean drinking water, improved sanitation and hygiene education to 200 schools.

**RESULTS:** To date, RAIN has supported or is developing a total of 42 projects in 27 countries across the African continent. These projects have improved the water supply of more than 345,000 people and provided updated sanitation services to nearly 100,000 residents. No fewer than 19 projects will be completed by 2013 and will reach more than 630,000 additional people, contributing toward RAIN's goal of two million people. The RAIN Water for Schools project has been initiated in 20 schools in South Africa and an additional 88 projects are planned in schools in other African countries.



## HELPING COFFEE FARMING FAMILIES OVERCOME LOS MESES FLACOS



**Rick Peyser**  
Director of Social Advocacy and Supply Chain Community Outreach  
Green Mountain Coffee Roasters

**OPPORTUNITY:** In 2007, Green Mountain Coffee Roasters worked with the International Center for Tropical Agriculture to better understand the opportunities and challenges that coffee farming families in its supply chain were facing. Nearly 180 one-on-one interviews were conducted in Mexico and Nicaragua. Once the results of the study were tabulated, Green Mountain learned that 67 percent of those interviewed experienced three to eight months a year when food was extremely scarce. These months, known in Central America as “Los Meses Flacos,” represent the period when small-scale farmers have largely depleted their earnings from coffee, just as the price of corn and beans increases in the months before the autumn harvest begins. So Green Mountain began exploring ways to help coffee farming families find sustainable solutions to this food security challenge.

**SOLUTION:** To date, Green Mountain Coffee Roasters has committed to support projects in 13 countries that are now helping 54,518 families (over 250,000 individuals) develop sustainable strategies to overcome food insecurity. The company has also expanded the scope of its work in food security to include advocacy. In April 2011, “After the Harvest: Fighting Hunger in the Coffeelands,” premiered at the Specialty Coffee Association of America’s Symposium and Conference in Houston, Texas. The film explores the challenges faced by coffee farming families and solutions related to Los Meses Flacos. Green Mountain created a website, [www.AfterTheHarvest.org](http://www.AfterTheHarvest.org), which provides visitors with the opportunity to view the film and learn more about the challenge.

**RESULTS:** Green Mountain Coffee Roasters has expanded and deepened its commitment to assist coffee farming families by supporting projects that promote self-sufficiency and economic development at the household level. In addition, the company has been proactive in keeping this issue in front of the specialty coffee industry by advocating for industry collaboration to tackle this challenge that threatens the very foundation and sustainability of the industry itself.



## TEACHING CHILDREN FARM SAFETY



**Dave Dufault**  
Vice President and General Manager Retail  
J. R. Simplot Company

**OPPORTUNITY:** Children growing up in rural communities often face hidden dangers by living so close to heavy industrial machinery, canals, farm animals and chemicals. Some of these dangers exist on properties that contribute to the success of the J.R. Simplot Company, which is why the company created the Safety Days program to alert children to these hazards.

**SOLUTION:** Simplot sponsored three Progressive Agriculture Foundation Safety Days to teach children in communities close to Simplot operations how to enjoy being a kid without putting themselves at unnecessary risk. Simplot recruited a number of partners – including rural school districts in Parma and Twin Falls, Idaho – and made sure Simplot executives participated in the events. Fourth graders in Parma spent a day at the University of Idaho Parma Research and Extension Center. The Center is a cooperative effort between Simplot and the university to promote and ensure continued agricultural research in Idaho.

**RESULTS:** More than 300 children in the two communities learned valuable lessons that will help them stay safe as they grow up around a rural, agricultural economy. Not content to simply sponsor one-time events, Simplot helped design the programs to be slightly different in each community. This way the company could also study the impact that different programs and curriculum choices had on similar groups of children. The Safety Days program proved to be a clear reflection of Simplot’s deep commitment to the long-term sustainability of the health and vibrancy of the communities that support it.



## HUDDLE TO FIGHT HUNGER



**Stephen Chriss**  
Senior Director Scale and Marketing Partnerships  
Kraft Foods

**OPPORTUNITY:** Unfortunately, hunger remains a serious issue in the United States. Nearly 49 million Americans, or one in six people, don't always know where their next meal will come from. Feeding the nation's hungry isn't a new undertaking for Kraft Foods. As the nation's largest food company, it has partnered with Feeding America for decades to support this important mission. Feeding America provides more than 37 million meals annually through its network of 200 food banks and 61,000 agency partners. During the 2010 and 2011 football seasons, Kraft invited the public to join them in fighting hunger through Kraft's Huddle to Fight Hunger campaign.

**SOLUTION:** Kraft Foods' goal was to raise awareness of this critical issue and donate the monetary equivalent of 20 million meals to Feeding America in 2010 and donate 25 million meals to Feeding America during the 2011 campaign through the largest multi-brand integrated marketing program in Kraft's history. Kraft Foods made it easy for consumers to contribute meal donations to their local Feeding America food banks through online activation such as "liking" the Kraft Fight Hunger Facebook page and playing the interactive Two-Minute Drill trivia game. Consumers could also contribute meals through in-store activations at more than 65 retailers nationwide.

**RESULTS:** The program exceeded its meal donation goals both years. Consumers participated throughout the 2010 football season leading up to the Kraft Fight Hunger Bowl in January 2011, where Kraft Foods ultimately donated nearly 21 million meals. In its second year, the Kraft Huddle to Fight Hunger program donated more than 25 million meals to Feeding America food banks in local communities, an accomplishment that was announced at the Kraft Fight Hunger Bowl on December 31, 2011.



## IMPROVED AIR QUALITY THROUGH ANAEROBIC DIGESTION



**Bob Hyra**  
Field Manager Manitoba  
McCain Foods Limited

**OPPORTUNITY:** In 2004, McCain Foods (Canada) purchased a 40-year-old french fry processing plant in Carberry, Manitoba. But even though the manufacturing equipment had been upgraded over the years, the wastewater treatment system had not. Prior to McCain's acquisition, the facility discharged untreated wastewater directly to a slough on the property. Although water from this slough was sought after by neighbors for crop irrigation, the slough was a significant source of foul odors in Carberry.

**SOLUTION:** After acquiring the facility, McCain invested in a state-of-the-art wastewater treatment system to remove biodegradable constituents and dissolved nitrogen compounds in the wastewater that flowed into the slough. This treatment process incorporates anaerobic digestion, which provides biogas to the facility. In 2010, the use of the resulting biogas allowed McCain to eliminate more than 2,000 tons of CO<sub>2</sub> emissions from the operation. McCain also enlisted the help of the local high school, whose students helped plant more than 4,500 hybrid poplars on the down-gradient-side of the slough. These thirsty trees act as a natural barrier that reduce the migration of groundwater off-site and mitigate existing groundwater impacts. McCain also re-contoured the slough and planted native flora that would enhance its wetland characteristics and maximize its ability to further treat the wastewater using these natural plants and processes.

**RESULTS:** Today, the odor that plagued the town of Carberry for decades has been eliminated and the slough is a thriving wetland ecosystem that provides valuable habitat, feeding areas and protected nesting sites for a wide range of bird species.



## ENHANCING COMMUNITY DEVELOPMENT THROUGH FARMER TECHNICAL ASSISTANCE



*Laura Vansant*  
Sustainability Manager  
The Coca-Cola Company

**OPPORTUNITY:** Coca-Cola plans to triple its global juice business by 2020. To accomplish this, the company has begun to emphasize the local sourcing of juice ingredients. In fact, Coca-Cola has taken the innovative approach of working with smallholder farmers in Kenya and Uganda to incorporate them into the company's supply chain. This approach also supports Coca-Cola's commitment to enhance the economic development of the communities where it operates.

**SOLUTION:** The Coca-Cola Company, in partnership with TechnoServe and the Bill & Melinda Gates Foundation, launched Project Nurture in January 2010. This four-year program is designed to help more than 50,000 smallholder fruit farmers in Kenya and Uganda double their income by 2014. The program works with mango and passion fruit farmers to improve the productivity and competitiveness of their fruit. It also links them to new markets, such as those provided by Coca-Cola's locally produced juices, as well as fresh domestic and fresh export markets. To create sustainable demand for the farmers' fruit, Project Nurture is targeting four major market channels: open-air market traders, high-end market consolidators, processors and exporters. Currently, the domestic fresh market is the main market channel in both Kenya and Uganda, accounting for more than 80 percent of Kenya's mango and passion fruit volume. To increase the amount of fruits processed and made available for inclusion within Coca-Cola's beverage portfolio, the project works closely with local juice processors to invest in facility upgrades and advise them on the technical and business requirements to meet the standards of international buyers.

**RESULTS:** In the fourth quarter of 2010, Minute Maid Mango Nectar became the first Coca-Cola product in Kenya to use locally sourced juice puree from a processor whose production facilities were upgraded and approved for use as a direct result of this project. Project Nurture is expected to expand in reach and impact by continuing to implement its core activities.



## RECYCLING OLD UNIFORMS



*Jose Paulo Paraguai*  
Business Supervisor  
Refricon Mercantil Ltda

**OPPORTUNITY:** Located in Bataguassu, Refricon Vegetable Foods is a leading supplier to food service companies in Brazil. Boasting the latest equipment from the United States, Japan, Australia and Germany, the company maintains rigorous quality standards from the harvesting of raw foods to their final delivery. Over the years, Refricon's Bataguassu plant has maintained a staff of roughly 200 employees, and Brazilian law required the company to provide each of those individuals with a uniform. Older uniforms no longer being used continued to be stored on-site as well. Refricon's executives recently decided that this storage space could be put to better use. However, if the company chose to dispose of the uniforms in local landfills, it could take more than 100 years for the material to degrade. Incinerating the material was also deemed out of the question. So Refricon decided to look for more useful ways to dispose of these unwanted uniforms.

**SOLUTION:** After talking to various government departments, Refricon partnered with Centro de Atenção Psicossocial (CAPS), a local institution that treats psychologically troubled patients, on a recycling effort that would turn the unwanted uniforms into rugs. Refricon employees met with representatives from CAPS and toured its facility to better understand the necessities and the capabilities of its patients. Refricon then worked with CAPS to come up with a recycling and delivery schedule and established procedures on preparing the uniforms (including removing the company logo and inspecting the uniforms for lost items) before handing them over to the institution.

**RESULTS:** CAPS has taken the material from Refricon's uniforms and taught its patients/volunteers how to turn them into rugs, which are then sold locally to generate income for the facility and help pay for programs. As a result, not only has Refricon prevented a potential source of pollution, but the individuals creating the rugs feel a great sense of pride, CAPS has a new source of revenue, and Refricon has raised its profile in the eyes of the community.

# THE SELECTION PROCESS

With more than 400 impressive submissions coming from more than 176 different suppliers, selecting the top 51 projects for the 2012 Best of Sustainable Supply was an inspiring challenge. These projects were selected based on measurable results and/or innovation.

Each of McDonald's four business units – North America, Latin America, Europe, and APMEA (Asia, Pacific, Middle East, and Africa) – selected their top projects to be considered as finalists at the global level. A panel of executives and external experts then selected the final 2012 Best of Sustainable Supply projects.



**Bob Langert**  
*Vice President, Sustainability  
McDonald's Corporation*

Bob contributes to a wide range of areas, including McDonald's commitment to the environment, Balanced Active Lifestyles, supply chain sustainability, and more. He and his team collaborate with external functions and leadership to integrate sustainability in day-to-day operations and decision making. Bob joined the McDonald's System in 1983.



**Francesca DeBiase**  
*Vice President, Strategic Sourcing,  
Worldwide Supply Chain Management  
McDonald's Corporation*

Francesca leads global strategy development for our major food, packaging and toy categories. Strategy development incorporates quality, contingency, food safety, sustainability and risk management. During her 20 years with McDonald's, Francesca has lived in Chicago, Munich, Vienna and Warsaw.



**Roland Bonney**  
*Founding Director, Food Animal Initiative*

Roland is a founding director of FAI and a Main Board Director of Benchmark Holdings Ltd., a group of five companies set up to develop, service and promote sustainable progress in food production. Roland's role at FAI is as a senior adviser for sustainable business development to food manufacturing companies, retailers, farmer cooperatives, NGOs and government bodies.



**Sonal Pandya-Dalal**  
*Senior Advisor, Corporate Leadership Strategies  
Center for Environmental Leadership in Business,  
Conservation International*

Sonal Pandya-Dalal focuses on integrating ecosystem services values into corporate sustainability strategies. Ms. Pandya-Dalal works with corporate partners to build environmental and sustainability strategies that combine bold goals with practical solutions that make business a positive force for nature conservation, green economies, and human well-being.



**Kai Robertson**  
*Director, Food, Beverage & Advisory Services  
BSR*

Kai Robertson leads BSR's Food, Beverage, and Agriculture practice. She works closely with many of the world's leading companies providing guidance on defining and integrating responsible business practices into their operations and supply chains and collaborating to create value.



**Jeff Malcolm**  
*Manager, Supply Chains  
WWF US*

Jeff works in the WWF U.S. agriculture department, where he engages companies on sustainable sourcing and operations. This includes evaluating supply chains and sourcing based on business, social and environmental concerns; developing methods to evaluate and quantify risks; and recommending priorities and next steps for corporations that WWF engages.



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McDonald's Global Best of Sustainable Supply is available on the web at [www.bestpractices.mcdonalds.com](http://www.bestpractices.mcdonalds.com). While you're there, check out McDonald's Global Best of Green, a collection of leading environmental best practices from McDonald's markets around the world.

