

WFLO ON THE GO

World Food Logistics Organization: Building the Cold Chain Internationally

By Al Rickard, Special to Quick Frozen Foods International

Feeding the world's ever-growing population is an ever-present challenge.

The issue is not one of supply – more than enough food is produced to feed everyone on the planet.

The challenge is distribution – ensuring that food is harvested, stored and distributed to retailers and consumers in a way that minimizes spoilage – from farm gate to food plate.

In the food industry, it's simply called “the cold chain.”

Fortunately, there is an organization that has assumed the mission of building and maintaining the cold chain in nations around the world – the World Food Logistics Organization (WFLO).

Government agencies including the US Department of Agriculture (USDA) and the US Agency for International Development (USAID) recognize WFLO as the primary organization charged with helping develop the necessary food distribution infrastructure in developing countries. These nations often need technical assistance in modernizing food handling or distribution, and are also in a position to benefit from food exports from the United States once the infrastructure is in place to accept these food products.

USAID in particular seeks to promote political stability in developing nations, and recognizes that providing safe and adequate food supplies to the people of these countries is an essential element of this process.

“These agencies realize that WFLO is an essential link to build the bridge between agriculture and commerce,” said WFLO Chairman Eben James of Trenton Cold Storage, Inc., based in Trenton, Ontario, Canada. “Working with our partners, including government agencies and universities, WFLO has helped to strengthen this infrastructure in nations around the world.”

“WFLO has stepped in to strengthen the cold chain in South Africa, the Philippines, Vietnam, Ukraine, and other countries,” explained John Reddington, former



WFLO President & CEO Bill Hudson (center) meets with two association executives from Shanghai and Beijing as part of a WFLO mission to China. Chinese executives included Liu Long Chang (left), secretary general, Shanghai Association of Refrigerated Warehouses, and Chen Zhihan, director of the China Commercial Cold Storage, Science and Technology Information Center (CCCSSTIC) in Beijing.

head of the Dairy, Livestock and Poultry Division at USDA. “It’s rare to discover a small non-profit organization which is willing and able to take on such an important and prodigious challenge.”

Reddington was so impressed with the work of WFLO that he accepted an offer to serve as a Public Member of the WFLO Board of Governors. In this capacity, he helps guide the organization, monitors its work, and keeps abreast of international projects which may be helped by WFLO. The work of WFLO has also attracted the attention of university presidents and deans, ambassadors, CEOs,

ministers of agriculture, eminent scientists, and other prominent citizens who have accepted appointments to serve on the WFLO Board of Governors and the Scientific Advisory Council.

WFLO has conducted several programs under the umbrella of the USAID Partnerships for Food Industry Development project in conjunction with Louisiana State University and Michigan State University.

For example, WFLO representatives have recently completed a four-year project in Ukraine and Moldova conducting technical training programs, awareness-building seminars, educational programs, and company-specific cold chain improvement activities. A partnership in Moldova with the Citizens Network for Foreign Affairs (CNFA) is helping to build a cold chain for fruit and vegetable producers in that country.

The Louisiana State University Agricultural Center is currently working to develop the food industry in 10 countries in Eastern Europe, Central America and Southern Africa. Lakshman Velupillai, Ph.D, Director of International Programs at the Center, appreciates the assistance and expertise that WFLO provides.

“Our team of specialists has come to rely on WFLO to guide and assist us in critical post-harvest activities, which make it possible to get food from where it is produced to where it is consumed,” Velupillai said. “The work that WFLO does in association-building alone vir-

tually guarantees that our work will have a lasting and profound impact. WFLO is our 'go to' organization."

Other missions have taken WFLO to Thailand, Vietnam, China, India, the Philippines, the Dominican Republic, Brazil, Colombia, Guatemala and South Africa to help develop the cold chain infrastructure. WFLO has also worked on cold chain development projects with USDA in Indonesia, Bulgaria and Palestine.

Activities are focused in developing countries because they have the greatest need and the progress there can produce the highest economic impact.

The missions have allowed WFLO to test certain techniques and practices and apply them to other countries as appropriate, since the needs of every nation are different.

WFLO President & CEO Bill Hudson explained that WFLO gears its international programs in developing nations around three "pillars," which are:

- Assessment/Awareness
- Resource Development
- Association Building

The focus is on developing commercially viable solutions using the latest technology and information available. An important goal is to create a sustainable program that will survive and prosper after the initial funding has been utilized.

"Sustainability of the cold chain infrastructure is absolutely essential for these nations," Hudson



A visit to the engine room at the Wujing Cold Storage Company was part of a tour conducted as part of a WFLO seminar in Shanghai, China.

observed. "It means little for us to go in and help these countries in the short term. What we must do in every instance is provide the education, resources, structure, and economic systems to solve the long-term problems of food distribution. We are happy to report that we've developed a pretty good track record in most of the places where we have worked."

WFLO: 62 Years of Industry Service and Now Stronger than Ever

The World Food Logistics Organization (WFLO) is a non-profit organization dedicated to the proper handling and storage of perishable products and the development of systems and best practices for the safe, efficient and reliable movement of food to the people of the world. WFLO is affiliated with the International Association of Refrigerated Warehouses (IARW).

Founded in 1943 as The Refrigeration Research Foundation (TRRF), the foundation took its initial support from contributions made by refrigerated warehouse professionals. The name was changed in 1995 to The Refrigeration Research and Education Foundation (TRREF), to better reflect the increasingly important education and training functions of the foundation. In 1999 the name was changed again to WFLO to more clearly depict the broad scope of the organization's work.

The WFLO Board of Governors is comprised of refrigerated warehouse, distribution and logistics professionals and academic, civic, and business leaders interested in promoting the distribution of perishable commodities to consumers, particularly the citizens of less developed nations. The WFLO headquarters in Alexandria, Virginia, USA, is supported by a Scientific Advisory Council comprised of leading food scientists.

WFLO membership includes over 300 warehouse companies in 52 countries around the world, as well as 74 companies in other areas of the food industry which

support and share in this valuable resource.

WFLO supports a wide variety of research projects in food science – over 140 on such subjects as food packaging, tempering parameters, temperature control during transportation, refrigeration technology, and shelf life determination. WFLO also offers a variety of educational programs, including an annual four-day training Institute serving refrigerated warehouse professionals and other food industry personnel. For the past 37 years, the Institute has been held on the campus of the University of Oklahoma. A similar program, the WFLO European Education Program, has been held in Belgium since 1998.

WFLO publishes several periodicals and manuals that are important resources for the industry. The Commodity Storage Manual is considered by many to be the "bible" of the food distribution industry and contains critical information on the handling and storage of more than 200 different food products.

The WFLO Information Center comprises both physical and virtual materials on handling temperature-sensitive products, operating a public refrigerated warehouse, and other related topics. WFLO continues to invest in this important resource, which will soon be available to members online.

WFLO also offers an education and consultancy program to assist government agencies, companies, and industries in implementing safe and improved food distribution.



PRW Executives Offer Assistance

WFLO is affiliated with the International Association of Refrigerated Warehouses (IARW), a partnership that helps tap the talents of executives from some of the world's leading public refrigerated warehouse (PRW) companies and consultants to the industry.

Len Ebersberger of Refrigerated Warehouse Consultants, Inc., has participated in several WFLO missions to China, Vietnam, the Philippines and Ukraine.

He believes that helping these nations modernize their food handling systems and cold chains is critical as many of them experience the balancing act of transforming their agrarian societies to industrial societies.

Ebersberger observed that the biggest cold chain challenge sometimes occurs "in the last 30 meters from the truck to the restaurant or wet market" in some nations. Proper storage and handling often breaks down at this point, he said, adding that WFLO teams can help teach proper sanitary practices.

He observed that some processing plants in developing nations do not have the same sanitary standards of those in the Western World, and there is often no legal system to enforce standards. Consequently, one task of WFLO teams is to help build the infrastructure to promote safe handling of foods.

Ebersberger is continually impressed by the enthusiastic reception WFLO receives in the nations it visits. In the Philippines, where he was part of a team that delivered a three-day seminar, more people attended each day as the word spread about the value of what was being offered.

"People are interested in what we have to say and they see a future for developing the cold chain," he said. "They are just like sponges – they soak up everything we put out there."

Doug Weathers of Richmond Cold Storage has traveled on WFLO trips to three cities in Colombia – Bogotá, Medellín and Barranquilla – and also participated in a mission to Moldova.

"When you go to developing countries like Colombia, it's a different experience," he said. "What they harvest that day they eat that evening, because of their culture."

He explained that the WFLO helped warehouses in Colombia with many operational issues. Low-cost solutions like keeping dock doors closed and eliminating heat-producing high-wattage light bulbs were some of the easy issues to solve. They also helped with Hazard Analysis Critical Control Points (HACCP) procedures and pest control.

In food packaging operations, they showed workers how to pack salads and beans in colder controlled environments instead of the ambient conditions to eliminate the ballooning of packages once they reached retail stores.

Since Colombia is a very warm country, warehouses had trouble getting people to work in cold environments. The WFLO team helped by showing them the proper uniforms to wear and how to better time work-breaks to keep them more comfortable.

"I learned that we take a lot for granted in the United States," Weathers noted. "Seeing how the industry operates in some other parts of the world helps me appreciate the modern systems we have developed. It's gratifying to be able to share these with people in other countries."

Current programs are taking WFLO to South Africa, Namibia, Mozambique, Zambia, Malawi, Moldova,



Doug Weathers (center) of Richmond Cold Storage reviews an assessment with the directors of Carulla-Vivero S.A., a grocery chain in Colombia, during an WFLO international mission.

Guatemala and Nicaragua. In South Africa, funding is in place to create a cold chain education curriculum at the University of Stellenbosch.

While WFLO is proud of its accomplishments to date and the partnerships built, it envisions a future where the larger food industry and other parts of the private sector become engaged in helping build the cold chain infrastructure throughout the world.

"International food companies all have a powerful interest in maximizing the ability of nations to accept imports of food products that require an efficient and effective cold chain to reach customers," Hudson observed. "WFLO is the bridge that can help ensure that this infrastructure is in place. We make the cold chain connection between the port of entry and the retail outlets in these nations, and we are in a position to help companies do business anywhere in the world."

For more information about WFLO and its programs, visit the organization's website (www.wflo.org) or contact the head office by phone at 1-703-373-4300, or via e-mail at email@wflo.org.

Technical Training Assistance Program Provides Big Benefits

Many cold chain food processing facilities need technical assistance to improve their operations and distribution strategies. That's why the World Food Logistics Organization (WFLO) developed its Technical Training Assistance (TTA) program, which provides technical experts to visit selected facilities around the world.

Specialists work closely with plant management and employees to establish programs and procedures to enhance quality, safety and efficiency initiatives, with the goal of demonstrating increases in each target area and providing a model for enhanced capacity and profitability.

The first TTA program was conducted in Chisinau, Moldova, in 2004 with a company called Carmez International, which produces products for the Moldova domestic market and for export to Russia, Ukraine and Romania. The company produces a wide variety of products, including 14 different sausages made with poultry, pork and beef.

An initial assessment of Carmez International was

conducted by a WFLO specialist in September 2004, who determined that the primary area of need was in overall sanitation programs and temperature control within the plant. The company was producing high quality products, but the conditions of production were unacceptable (production rooms were too warm and the product temperature too variable) and the methods of pre- and post-operational sanitation needed improvement.

A WFLO team worked with plant management and staff on safety and processing improvements. A comprehensive facility audit was conducted, and baseline microbial testing of the facility was gathered using an outside testing agency. WFLO specialists identified specific areas of improvement and created a strategic action plan for implementation.

Carmez International then worked to locate and purchase equipment and supplies to facilitate the improvement of sanitation procedures, and began to implement the recommendations from the WFLO specialists.

In February 2005, WFLO sent a training specialist to Moldova to work with the company to train personnel and implement a Sanitation Standard Operating Procedure (SSOP) to enhance food safety and product quality. The WFLO specialist spent a week in the plant, working with management and employees. The SSOP was developed by WFLO specifically for Carmez International.

Finally, in March 2005, a WFLO specialist returned to the Carmez International plant to review the progress and impact of the program. Sanitation procedures and practices were observed, and a second set of microbial tests was collected and compared to the initial set from October of 2004. The WFLO auditor was pleased to find that the overall sanitation of the facility had vastly improved, temperatures were more in line with acceptable standards, and microbial testing results indicated a 99.9% reduction in bacterial levels from the initial sample.

Through programs like this, the WFLO is achieving a measurable and "real world" impact on the level of quality, safety and efficiency of cold chain processing in developing countries.

Building a Cold Chain in the Philippines: A Case Study of Win-Win Cooperation

A prime example of a WFLO success story is in the Philippines.

In the initial assessment/awareness phase, WFLO began by holding regional seminars to educate companies connected with the cold chain about how to improve the infrastructure and the need for companies in various industry sectors to come together to form a cold chain association. The seminars were also useful in identifying partners for WFLO to work with to accomplish these objectives.

WFLO then set out to work with companies to help them upgrade their cold chain operations, and followed up with evaluations to make sure the improvements took hold.

In the resource development phase, WFLO developed a customized version of its comprehensive Successful Refrigerated Warehousing textbook that focused on the specific needs of companies in the Philippines. WFLO also published the Cold Chain Resource Directory for the Philippines, which is a complete guide for use by food manufacturers/processors, importers/exporters, logistics companies, refrigerated warehouses, shipping companies, transportation companies, retail outlets, food service companies, suppliers of equipment and other services, ports of entry, government agencies, and industry organizations.

"Every nation we visit has its own informal network of communications and resources," Hudson explained. "These publications formalize this knowledge so it can be shared with all the players in the cold chain industry."



Josine DeLeon receives the World Food Logistics Organization's Young Leader Award for her work in building and organizing the Cold Chain Association of the Philippines. Making the presentation is Doug Thomas of Bellingham Cold Storage Company, Bellingham, Wash., USA, who was WFLO Chairman at the time.

He added that just providing company officials with materials produced in the USA "would be overwhelming to them. We filter our materials and customize these publications for the local market."

In the association building phase, WFLO reached out to all sectors of the cold chain industry to create the Cold Chain Association of the Philippines (CCAP), which was founded in 2003.

"We get them talking to each other, and once they are motivated we build an association," Hudson said. "This helps provide an industry system to ensure there is no interruption of the cold chain. The Philippines is our best example of how we created an association that integrates effectively with other international associations."

Josine DeLeon, consultant-secretariat for the Cold Chain Association of the Philippines, is grateful for the support WFLO provided.

"Our involvement with WFLO gave us the start we needed and the continuing resources to run a very productive association," DeLeon explained.

Her work in helping to launch CCAP earned her the World Food Logistics Organization 2004 Young Leader Award.