

By Marco Antonio Nascimento, TBM Senior Management Consultant



Picture mountains of soybeans dwarfing the people and heavy equipment used to move them—hills of beans like so many large, rounded grains of sand waiting to be moved from ship to plant. It's a staggering sight to see so much of one grain in one place, and this is what greets the visitor at the port operations of Bunge Argentina's Puerto General San Martín Industrial Complex, located on the Paraná river coast. Here the mountains of soybeans are crushed into meal and crude vegetable oil and then exported throughout the world. The port facility handles other grains, such as corn and wheat, also for export purposes, but soybeans account for the bulk of the processing.

Bunge was founded in 1818 and has grown into an agribusiness and food company with over 22,000 employees in more than 450 facilities in 32 countries around the world. In 1884, Ernest Bunge, grandson of Bunge's founder, moved to Argentina to take advantage of the growing grain trade market.

Since that time Bunge focused on a number of businesses, and today the company includes fertilizer, agricultural, and food products with operations around the world. Bunge has expanded its Argentine operations via organic growth and acquisition.

By 2010, South America is expected to produce 127 million tons of soybeans—more than the rest of the world combined. As South America's leading originator and processor of soybeans, Bunge's industrial facilities will handle much of the processing of that grain.

Back in Puerto San Martín, the crushing plant processes nearly 8,000 tons of soybeans every day. Additionally, the two berths at the complex's port facilities have a 3,000 ton-per-hour loading capacity. This is a high-volume processing plant that operates around the clock.



When there is a high demand for a product and a process runs around the clock nearly every day of the year, concerns about quality, productivity, safety, and efficiency loom as large as the mountains of soybeans. Bunge Argentina's corporate goals include maintaining a flexible and efficient organization with a focus on integrity, the customer and farmer, teamwork, an entrepreneurial mindset, and openness and trust. With these goals, taking the Puerto San Martín industrial complex through a lean transformation seemed the logical thing to do.

Carlos Nowik, plant manager of the complex, joined Bunge in early 2005, and his first day on the job coincided with the first day of the plant's first kaizen events. Fortunately for Nowik, he had been exposed to lean principles in his previous job and so wasn't completely overwhelmed with the pace and activity associated with the week-long kaizen while trying to learn a new job.

Nowik says, "I was with Unilever in Argentina as production manager and distribution manager in a soap plant. For that reason I was very familiar with continuous process improvements. Unilever had been running a TPM program for some time under the Japanese Institute of Plant Maintenance. So I was pretty familiar with 5S, autonomous maintenance, and things like that. Of course the industry was absolutely different, but I was very happy to start my new job doing things that I already knew."

Those first kaizen events involved both the crushing facility and the port operations. For the crushing facility, event goals were to reduce the oil in white flakes by 0.1 percent and initiate three safety improvements and one housekeeping improvement. For the port facility, the goals were to increase the meal loading rate and initiate three safety improvements.

These first two events, which were in addition to several other events held at a number of Bunge sites, were a phenomenal success. The crushing plant met all its goals, and the port increased loading rates by 10 percent and met the safety goals. From the six events that were held at various sites over a three-week period, Bunge realized \$2.5 million in potential savings and additional margin.



A subsequent kaizen event had a goal of reducing time to restart a line after a shutdown. According to Ariel Lascano, the production manager who is responsible for the crushing lines, among other things, restarting a line after a long-term shutdown (such as for maintenance) or a power outage was very time consuming. The kaizen event sought to find ways to reduce the time needed to restart a line. The results were extraordinary, but more important according to Lascano was that the improvements were made by the operators, “by us.” Lascano adds, “These new methodologies have removed our former daily way of working and allow us to increase our work goals [by] searching for new and better standards [of work].”

The dramatic results that can be attained using kaizen have been well documented, but how does a lean transformation really affect a company? Nowik notes that LeanSigma is beneficial because it is more focused and gets results more quickly and effectively. Enrique Humanes, chief operation officer, adds to that: “The vision you have working with a team is much broader than when working alone.” And that’s the essence of a lean transformation—teamwork and creativity. “It’s really very creative,” continues Humanes. “I’ve found that the people involved are spectacular...because they want to be part of the group and create value.”

Loscano adds, “All the people ... know the advantages and benefits of working with a lean production system, and all of us try to eliminate those things that don’t add any value to our daily efforts.”

The creativity engendered by a kaizen event is evident. Consider that for those initial events at Puerto San Martín participants had 107 improvement ideas for the crushing operation and 78 for the port. People’s willingness to make suggestions and then act on them is a “good example of Bunge’s values—commitment, entrepreneurship, and innovation,” says Humanes.



However, enthusiasm alone does not guarantee the success of a lean transformation. Nowik highlights that commitment is the key, and that commitment starts with management. “What I learned at Unilever is that this kind of process goes from top to bottom and it absolutely has to have the great commitment of the top management to support the process. Management has to provide the resources and has to be convinced about the benefits in both the short and long term. Very often this kind of process will fail if the top management or top directors are not convinced about it. When people see the commitment, everything will go better.” Lascano agrees, “The support provided by the management has been crucial. This, added to the positive results, has promoted even more the managers’ involvement.” In fact, at a roll-out of lean at another factory in Argentina all of management was there for the kick off—a great show of commitment.

From the beginning of the process, both Nowik and Humanes have spent a lot of time on the shop floor. Nowik notes that Humanes is a driving force for LeanSigma in the industrial parts of Bunge’s business. “At the end of last year our corporate president also came here to see how it was going on the shop floor,” he adds. “We showed him our achievements, especially in the production area and in the boiler house. He was impressed by the transformation he could already see.”





Visitors to the factory can see the change in the industrial area and the people involved. The long-time employees at the plant, some of whom have been working there for more than 20 years, are now able to present a kaizen and talk in front of 30 people or more. Nowik says, “Those are simple things, but they are very important because kaizen events give them the opportunity to explain their ideas and to show their own work to managers, as well as how their ideas were implemented at the end of the day.” Empowering employees in such a way—allowing them to be creative and proactive—makes a much more satisfied workforce.

When it comes to cultural transformation, Nowik points out that it’s not how long a person has been employed at a plant that will determine acceptance, but rather how open-minded the person is. “Fortunately we have many people convinced about the value of kaizen,” says Nowik. Lascano echoes that sentiment: “Currently, we all comment on kaizen not only as a strong tool to solve problems and to improve our work but also as a cultural change, as a different way of carrying out our tasks.” “We have more commitment right now in middle management and in the operators themselves on the shop floor,” continues Nowik. “They are moving forward with kaizen, following the results, tracking the action plans, and so on.” Lascano notes that this has led to several positive changes: stronger teamwork, respect for others’ ideas, better interaction among the different areas of the complex, better communication, and an every-day commitment to doing things better.

Nowik points out that the process should involve everybody—the kaizen promotion officer (KPO) shouldn’t be single-handedly creating change, but should only be facilitating it. Lascano adds that the internal communication that the various areas maintain with the KPO to plan the new events, improve the visual contact and indicators, and apply 5S has been instrumental in the success of the plant’s lean journey.

At Bunge, good early results and corporate goals that promote entrepreneurship and innovation went a long way toward convincing people of the value of LeanSigma. But it’s not all been easy.

“Our main challenge for this year is to work with the line supervisors,” says Nowik. “I have challenged myself to give [the supervisors] more tools and convince them to take a more active role. They are very absorbed by the routine and doing their job day-to-day and are not so convinced [about the value of the changes brought about by a lean transformation].

“They are key people because they are very close to operators and usually they have great experience in their day-to-day jobs, so it’s very important to us to have them on our side. They are the leaders, so they need to lead.”

According to Nowik, this is where Juan Lorido, the plant’s KPO, has been quite effective. Lorido is a former supervisor, so he knows the people on the shop floor very well and they know him, which is an advantage when he forms the teams for kaizen events. He also knows the other supervisors well, and this has helped him in working with them. His 20 years of service in the plant means he has the experience and knowledge that provides the credibility and influence needed to be successful as a facilitator and leader. As is critical for any KPO, Lorido has great people skills and communicates well with colleagues, shop floor workers, and managers. A successful KPO can be instrumental to acceptance of the lean transformation by the operators and supervisors on the shop floor.



Another key to acceptance is to make sure that operators' ideas are heard and acted on. Nowik says, "In many cases kaizen projects arise from ideas suggested by operators." Knowing that their suggestions will be given serious consideration and then acted on has gotten many operators involved in the lean process.

As Bunge looks ahead to the future, it is building on its early successes and counting on its people to drive continued improvement and innovation. Nowik notes that when people visit the factory—which is old and was acquired by Bunge just four years ago—they comment that it looks better and that they see something different going on. These visitors then go out and spread the word to other organizations, which in turn leads to more requests for plant visits. "Outside recognition of the improvements helps us to have the commitment to go forward and get more results and more importantly to sustain the process, which is the main challenge," he says. Humanes adds, "[Bunge's lean transformation is making] the heart of the organization, our people, well prepared to face very hard challenges in the near future."

For the future, Humanes would like to see the whole organization, from operations to trading, adopt continuous improvement as a way of life, eliminating waste in any activity Bunge may undertake. Lascano would like to see suppliers involved with kaizen events to lean the value chain, an increasing emphasis on 5S and TPM, and the inclusion of all of Bunge Argentina's plants in the LeanSigma transformation. With the evident strong support and commitment from both management and employees, it's likely that Bunge will have no problem surmounting any mountains in its path. ■

