GROWERTALKS

Features

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Quality Makes the Cuts

Marta Pizano

Located in Colombia, South America, the Flores Funza group comprises 220 hectares (543 acres) in production, almost 35 years in the business, 3,000 employees and more than a dozen flower types. Known worldwide for reliable, stable and consistent quality cut flowers and bouquets, they're also pioneers and leaders in implementing robust environmental standards.

"We are proud to have contributed to environmental awareness in our sector," Funza President Emilio Borrero declared recently. "Awareness about the need to protect our natural (non-renewable) resources and to provide a healthy, pleasant work environment for our employees," Emilio adds, "have been core values of the company since its foundation, and always within a clear scope of profitability." The truth is Funza has impacted not just fellow growers, but also buyers and other customers, even end consumers.

In a business that is constantly changing—which is so sensitive to external factors affecting consumption and production, and ever increasingly subjected to claims, requirements and standards—how do you comply with these and still achieve high yields and offer top-quality flowers to your customers each and every time?

"The non-negotiable bottom line is understanding that the concept of 'environment' comprises a whole lot more than a pretty landscape," says Martha Ortega, general manager of one of the Funza farms. "Every production practice—from pest control to grading, from pinching to watering—every input we use, the people we work with and how they conduct their work, plus factors that we cannot control like the weather, are all part of the environment, and influence the quality and quantity of the resources we have access to."

Producing within the best environmental standards, "where you take the best that nature has to offer and then put it back to guarantee a long-lasting, profitable business," takes time, requires a high level of commitment and persuasion and, many times, a change in production practices and even attitude, according to Rosario Carulla, technical manager. The long experience of this company has taught them that additional effort and investment are often necessary when going the environment-friendly route, and that you need patience until the time to reap the benefits comes. Constant training and education is an absolute must, and this makes employee stability, at all levels, absolutely essential. How else can you succeed at efficient logistics, scouting,

IPM and others?

Funza (and all Colombian exporters) are presently subjected to numerous local and international requirements. Chemical usage (including pesticides, fertilizers and postharvest treatments) has to be closely monitored. Irrigation has to be as efficient as possible. All waste generated should be recycled or adequately treated or disposed. Worker protection standards need to be strictly observed, including occupational health and associative initiatives. The list never ends.

Pest and disease management

Without a doubt, pest and disease management are the most difficult hurdles to overcome when growing flowers within environment-friendly parameters.

“You can have the best IPM program implemented, including careful and constant scouting, cultural controls, biological controls and others, and suddenly a severe pest or disease outbreak forces you to take more extreme measures (such as applying a contact pesticide) and this spoils all your efforts,” >>> Martha says. Recently, for example, with severe drought and high temperatures occurring, pests like spider mites and thrips have gone literally out of control. In spite of the altitude—which brings cool temperatures—conditions are still tropical, with no seasonal changes. This has been shown to increase the number of life cycles that some pests undergo in a production season by a factor of 14, when compared to a location where regular seasons occur.

True seasons, where distinct changes in temperature and day length occur, contribute to keeping populations in check; but since this doesn’t happen in the tropics, populations multiply non-stop. When a severe outbreak occurs and spraying is the only option, the company is still committed to using products of the lowest toxicity possible. “This can turn out to be difficult and costly,” explains Martha, adding that at present they do not use any toxicity I-level chemicals at all and only two level II, the rest being category III and biological products. Active ingredient consumption is closely monitored.

Pest management at Funza is thus based on strict IPM, constant scouting, very small product inventories that allow for easy rotation, and only using products and quantities that are absolutely necessary. “We are not only working against stringent quality parameters, but also advocated to comply with demanding international phytosanitary standards,” Rosario adds.

Waste management

Efficient waste management becomes a way of life. Everything needs to be sorted and classified from the source (at the moment it’s generated), but above all, the most important thing is to produce as little waste as possible and avoid the problem to the largest extent you can. Funza does this by preparing an amount of (pesticide or fertilizer) tank mix that is adjusted as closely as possible to your actual needs, so only negligible amounts are left in the tank or sprayer; reusing everything, to minimize waste; finding suitable recycling options: plastics (including polyethylene greenhouse covers) cardboard and paper can be sold to recycling companies; chemical companies often pay to receive used pesticide and fertilizer containers; metal also has a price.

“Last year alone, sales of recycling materials drew almost $100,000,” says Rosario. They reinvested the

whole amount into worker welfare programs such as continued education for employees, study credits for their children and others. “This really encourages our employees to maintain waste management programs, since they see a real benefit in them (beyond caring for the environment).”

Composting is another significant and important component of waste management. Plant refuse is produced every day, when pinching or disbudding plants, for example, or in the course of grading and packing. However, it can be a very valuable resource.

“Years ago we used to struggle with disposing of all the plant waste, especially when replanting greenhouse ranges,” Martha declares, stating that one hectare of roses can produce several tons of waste. “Now we wish we had more of it!”

Throughout Funza, plant waste is composted for six to eight weeks and then put back into the soil, ideally at the pre-plant stage. It also works well as a soil amendment added during the growing cycle for long-cycle plants like roses and alstroemerias, which are renovated every five years. Compost improves the soil structure, increases water retention capacity of the soil by about 20%, provides beneficial microorganisms that help combat “soil fatigue” usually caused by depletion of biodiversity, and reduces the need for chemical fertilizers. Potassium in particular can be almost fully supplied through compost. Cation exchange capacity of the growing medium is also much improved. Two important tips: 1) The effects of amending the soil with compost take time, and 2) you need to add lots of compost—between 40 and 80 tons per hectare according to the natural organic matter content of the soil and the crops grown.

What about composting and risk of spreading plant disease? For example, can you add carnation compost back into carnation beds? Composting is like a natural pasteurization, given that temperatures inside the piles reach 60C to 65C (140F to 149F), enough to kill the vast majority of plant pests and pathogens. It should take care of eliminating foliar pathogens such as mildews, and even *Fusarium oxysporum f. sp. dianthi*, the feared causal agent of carnation fusarium wilt. Although there is research showing very significant elimination of this pathogen, Martha and Rosario are not willing to take the risk of reinoculating this severe disease back into the soil.

“We take so much care keeping the wilt out,” says Rosario who has been using steam at one of the farms that grows carnations exclusively for 20 years, and keeps losses down at a mere 2%, “that we simply cannot afford giving it even the slightest chance to come in.” The solution? Composting carnation waste separately and adding it to other flowers that are not susceptible to this particular pathogen, such as roses.

Water management

Water availability has been restrictive at times. Rosario still remembers the “El Niño” phenomenon of 1992 with terror. “The drought became so severe and the water so scarce, that we were forbidden by law to use well water; human consumption became the utter priority. We had to close off all irrigation lines and watch the plants slowly dry out and die.” This forced them to carefully monitor water consumption, determine very specific needs, and design a water management program geared towards the highest level of efficiency possible.

At present, Funza collects about 90% of the rainwater hitting greenhouse roofs during the year. This not only saves water, it can also represent large energy savings since the water pumps used to extract underground water are not needed. Last year for example, at their production location where it rains the least, it was only necessary to resort to well water the last two months of the year, when it didn’t rain at all. This represented nearly a 20% savings in the overall energy bill for the year. Water needs are closely monitored with the aid of tensiometers, which provide useful information for each flower type and even different cultivars.

“Overall, we have made great strides in water management,” Rosario says. “If an equally severe ‘El Niño’ came by, we would be prepared to face it. I am sure we would not have to watch the plants die off again.”
Is it worth it?

Looking at the company’s history and achievement, the answer is clear. Flores Funza was one of eight companies that joined forces in 1994 (when awareness for the environment was still rather scarce in the floriculture world) and formed a working group called ECOFLOR aimed at evaluating all production processes from an environmental standpoint and then developing a “Code of Conduct” that would lead to optimum performance. Two years later, this group had interested such a large number of growers in the Colombian Association of Flower Exporters (ASOCOLFLORES), that it launched FLORVERDE, the Colombian environmental and social label. ECOFLOR members immediately joined and brought with them the know-how and experience generated during their 30 months of work. Funza was one of the first farms obtaining the FLORVERDE certification when it was first awarded in 2003.

What has this certification meant to the company, from a marketing point of view? Perhaps the label does not have an economic value per se, but it’s evident that consumers throughout the distribution chain are becoming increasingly sensitive about the way the flowers they buy have been produced. Awareness used to be more pointed in Europe, says Rosario, but recently American and Japanese customers are also asking about production practices, working conditions and other related topics.

Implementing the FLORVERDE label clearly helps to maintain a stable workforce, which is essential to them. “We really need a highly trained team to adequately implement the thorough IPM, waste management and worker protection programs,” she says.

Rewards

The 34 years of efforts conducted at the Flores Funza group have been widely recognized: In 2007, for

example, the United States Environmental Protection Agency (EPA) awarded them a “Stratospheric Ozone Protection Award” for their commitment to safeguarding the environment and their generosity in sharing their experiences with growers from many countries. This was in regard to entirely avoiding the use of methyl bromide, which is being phased out because of the damage it causes to the ozone layer.

“Flores Funza went far beyond the call of duty in halting the use of methyl bromide that depletes the fragile ozone layer, harms human health and damages ecosystems. Flores Funza demonstrated that flowers used to celebrate the most important human events can be produced in a way that is friendly to the Earth,” Dr. Stephen O. Andersen, Director of Strategic Climate Projects at the EPA wrote in a congratulatory letter addressed to Funza President Emilio Borrero.

What about other labels presently operating in the international floriculture scene? Do they think it necessary to join them so their customers in different countries recognize their efforts sufficiently? There are many options at present and each label strives at recognition and differentiation, but duplicity is unavoidable and that makes joining several labels cumbersome and inefficient. Although Funza has earned several certifications such as the ISO 14,000, they are very satisfied with the level of recognition that FLORVERDE has achieved internationally. The fact that the FLORVERDE label has been homologated with GLOBALGAP gives them further confidence. **GT**

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