



Dutch Greenhouse

Tennessee garden center has Old World influence

Story and Photos by Carolyn R. Tomlin

Today's glass greenhouses have come a long way from the simple horticultural buildings of yesterday.

Using a design from Holland, Bas van Buuren used state-of-the-art concepts in both the construction of the Dutch Garden Center in West Tennessee, and in the way he serves his customers. Van Buuren should know, as his family has been in the business in Holland for generations.

His great-grandfather was a farmer who developed rheumatoid arthritis and diabetes, which confined him to a wheelchair. Unable to work the land, he became a middle man,

a broker, for cattlemen trying to find feed for farmers. Later, Bas van Buuren's grandfather developed different types of growing soils, which the Dutch Garden Center sells.

Bas Van Buuren came to the U.S. as an exchange student in the 1990s and majored in horticulture at Lambuth College in Jackson, TN. It was in west Tennessee that he met his future wife, Amy. After they married the couple returned to the Netherlands in 1998 with the intention of working in the family business. Four years later, however, they returned to the United States to establish their own garden center and greenhouses.

The Dutch Garden Center sits on 175 acres in a growing commercial development north of Jackson, TN. The center occupies about 75 acres. Two greenhouses, about 23,000 square feet each, built in the European design, contain plants for both residential and commercial sales.

All the equipment and supplies for Dutch Gardens came from Holland. Even the generator that switches on in case of a power failure was made in Holland. Algae do not grow in the overhead greenhouse plumbing, which was made in Europe. This construction keeps the UV lighting from filtering through. However, all plants are grown and purchased from U.S. nurseries.

The company is one of the largest growers of citrus trees in the southeast. Not only does Dutch Gardens sell the citrus trees, the center allows customers to "overwinter" their own large plants and miniature fruit trees. Located in Zone 7, these plants must be brought indoors before freezing weather sets in. A large section of the greenhouse is allocated for privately owned large containers. Before any specimen is brought into the facility, the plants are placed outside, weeded and de-bugged. Two weeks later, they are brought indoors, fertilized and watered. Costs for 6 months of care run \$1.50 per square foot (includes the space of branches) per month. Owners who have large outdoor citrus trees or patio pots take advantage of this service because it's less expensive than replacing the large plants when warm weather returns. Few homes can accommodate large plants and provide



Bas van Buuren checks the computer which operates the heat, humidity and vents on the glass greenhouses



Poinsettias that require bottom watering are placed on flood tables over the winter.

the correct light conditions and humidity levels.

Computer automated greenhouses

“A cell phone can change the temperature,” explains van Buuren. “I can be back home in Holland and control the humidity, heating or cooling here in Tennessee.”

Natural gas heats the houses, but radiant heat is used to circulate hot water through the pipes. Even the shade cloth is controlled by a computer, which adjusts its position depending on the season to make sure the plants have the right amount of shade or sunshine.

Should a problem develop with the computer system, a representative from Holland

arrives to correct the trouble. It’s simpler and more cost-effective to bring a technician over here than to hire or train someone to work on this complicated program.

“In order to make the greenhouse as maintenance free as possible, flood tables will water the plants, then drain,” says Dawn Gale, general manager. This technique, originally from Holland, allows the garden center to “water with the human touch.” This is especially important for plants such as the poinsettia, as they can not tolerate overhead watering. The computer programs the needs of individual groupings of plants such as succulents and cacti.

“Within a three-year period these tables will pay for themselves in labor cost,” Gale said.

Adjacent to the back of the area, a tree lot complete with a drip line is under construction. A spigot is inserted into each pot, supplying water through a series of pipes.

Last summer the entire Southeast experienced a severe drought.

“Unless you have a watering system, you lose trees,” explains Gale. “And when trees die, you lose money.” Dutch Gardens sells most of the large trees in pots instead of burlap bags.

Glass – Pluses and minuses

Greenhouses made from tempered glass panes are preferred for durability. They allow the most unfiltered light to penetrate through and provide an attractive appearance. But glass isn’t without drawbacks – it requires a strong, sturdy frame and solid foundation. If the structure is going to be placed near trees, children playing ball or in a windy area, glass can be an expensive option. Heavy duty equipment used in the greenhouse area is another concern.

The Dutch Garden Greenhouses are built like those in Holland. There, rain is usually in the form of a steady drizzle. In the southeastern U.S. heavy thunderstorms are more the norm. The tempered glass protects against hail storms and high winds that occur.

“On the front end, the cost is higher,” says van Buuren. “I purchased the frames in the Netherlands and the glass in the U.S. and hired local contractors to put the panels in place.” The panels are easily cleaned with bleach and last for years.

Put to the test

Last winter a series of tornadoes tore through the Southeast, leaving a swath of destruction and death in its wake. One twister smashed into Jackson, destroying dormitories at Union University that housed half of the school’s 3,000 students, damaging roofs and tossing cars.

The tornado did not hit the Dutch Garden Center, but such a weather system doesn’t need to hit directly to cause damage. Sudden, massive shifts in air pressure can cause large glass structures – such as a greenhouse – to either explode or implode.

But at the Dutch Garden Center, a weather station installed inside noted the changing air



An array of large planters lines the walkway at the Dutch Garden Center.

pressure and communicated the information to the computer that regulated the vents accordingly, preventing any major damage.

Center for learning

The Dutch Garden Center is more than high-tech buildings. It's a community.

"A good, customer-friendly approach is to us, of the utmost importance," van Buuren said. "A business such as this has many opportunities to connect with the area that we serve. I often ask, what knowledge can we share with others? How can we serve the community? Hopefully, other greenhouses in the country will incorporate some of these suggestions and use greenhouses as a place for learning and education."

The Dutch Garden Center provides mulch for flower beds to local churches and schools and hosts events supporting the Humane Society's shelter and local schools. College students in the area use the center to gain practical experience for agricultural degrees.

Growth from substrates

Along with the glass greenhouses, the family realized that healthy plant growth begins with the foundation — the base in which the plant grows. Building on the family business, van Buuren's grandfather began experimenting with different types of soil. What plants grow best in sandy soil? Which ones thrive

in acid loving soil? Which ones need Perlite or peat moss?

Using well-honed family recipes, van Buuren can produce soils that supply nutrients to any plant.

"He can put together a mixture for either sandy soil, or one with lot of peat, or one with added sterilized manure," says Gale.

Bas van Buuren and Euroveen — the Netherlands company that makes the substrate materials — are convinced that a healthy growth can only be guaranteed by having an optimal base product. Several companies make up the Bas van Buuren (BVB) group that is concerned with the production of horticultural substrates. These companies have been expanding steadily as a completely Dutch company and are now one of the biggest in the field.

Computer controlled mixing lines guarantee customers always receive the same mixture with an optimal composition. A sample is taken from each load delivered so the BVB laboratory can determine its chemical composition. Samples are then sealed and stored for nine months in order to facilitate tracing in the unlikely event of an investigation. The major amount of the substrate is kept covered, even during the most severe winter.

In addition to all types of potting compost mixtures, BVB is an important supplier of hydroponic alternative substrates, like pumice stone, cocos-peat-oasis and Basalan Rockwood. These substrates are being used more and more in professional horticulture. Together with the broad range of such additives as cocos-fibre, bark, perlite, and cocos-chips, BVB offers a wide choice of the most important substrates. In addition, two types of sand, coconut bark or husk, peat moss from Holland, perlite and other ingredients supply hydroponic centers with materials.

Further information can be obtained by visiting the company Web site, www.dutchgarden.com. An on-line catalog offers a large variety of bulbs and other garden materials. 🍀

Carolyn Ross Tomlin, Jackson, TN, is a frequent contributor to The Growing Edge Magazine. She writes for numerous education and gardening publications.



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