

Experience tells to keep operations simple

In the USA, growth of the bedding and container plant market is encouraging many growers to expand. One young, small company is becoming quite experienced with putting up new greenhouses.

By Helen Armstrong



“Keep it simple”, despite all the technology available, is Mark Foertmeyer’s advice to anyone building a new greenhouse. The grower in Delaware, Ohio, USA, has regularly built new houses to meet his growing needs since starting his operation in 1989. Although he prefers to grow outside and hence uses a lot of frost cloth he has still has a large area down to greenhouses.

Having put the first one up himself, he turned to constructors to build the remaining greenhouses. The greenhouses still appear reasonably sophisticated, one for example having a retractable roof but he maintains that the houses were easy to erect and therefore the engineering is good. The automatic computer controls

which have been installed do far more than they actually use. “We use all we require,” says his greenhouse manager, Ron Dubena, who admits he is not inclined to stand on a ladder to alter the controls while reading the manual.

For spring the company is mostly growing hanging baskets, Proven Winners’ annuals, gerberas, Fiesta Double Impatiens, Wave petunias as well as container combinations. For summer, the company moves into other annuals and hanging baskets and later, for autumn, into pansies, kale and chrysanthemums before producing a range of poinsettias for Christmas.

Home-made improvements

The first greenhouses Foertmeyer built were three Keeper Glasgow Quonsets, which Mark put up himself and later moved to the back of his site to make way for the larger greenhouses. These are simple polyethylene covered structures, measuring about 10m by 30 m (30ft x 95ft) with home-made roll-up sides and doors on each end. He says they are very versatile and strong and are good to grow in, using them for poinsettias and all the spring crops.

The company then added two Nexus Quonsets, 10 m x 60m (30ft x 180ft) with heated cement floors. The aim was to flood them but this has not worked since 180 ft is too long to vent with fans, he says, “and it is extremely expensive.”

Therefore he is planning to convert both to have roof vents and roll-up sides

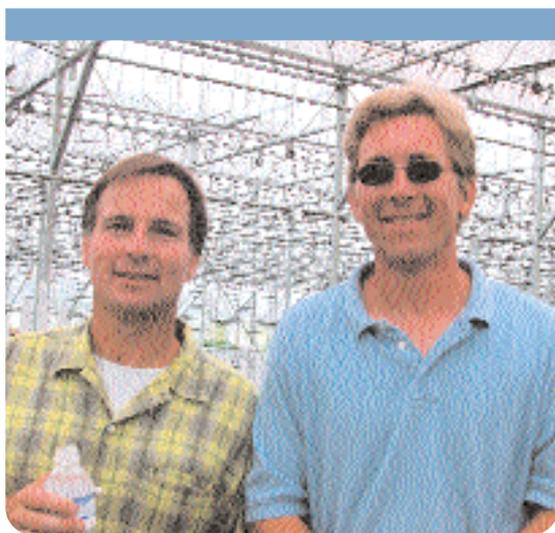
as soon as possible.

“These houses are great for starting plants and we use them to start our hanging baskets.”

They are very strong but did start to show signs of buckle when over-loaded, but this, Mark admits, was when he was suspending hanging baskets from hanging baskets.

Like on all his Quonsets, the double skinned polyethylene covers, which are inflated with air for insulation, usually have to be replaced every three to four years.

After this came a Van Wingerden house with rigid polycarbonate sides and polyethylene roof covering 37,000 ft². It has roof and side wall vents and inside are



Mark Foertmeyer (left) and Ron Dubena, of Foertmeyer & Sons Greenhouse, Delaware, Ohio.





Mark Foertmeyer erected the first three Quonsets himself with the help of some friends. Good for starting the spring crops he then moves everything outside as quickly as possible.

Lennox heaters and shade and energy curtains. The house has Echo hanging basket lines which work excellently, he says.

Open roof structure

After this Foertmeyer wanted an open roof structure and eventually invested in a Nexus open roof greenhouse which covers some 17,500 ft² and has a polyethylene curtain-type retractable roof.

"We wanted an open roof because we wanted as much light to come in as possible and because we like to grow crops cold.

"We try to grow crops cold and put them outside as quickly as possible because customers put them outside so by doing it this way they get a better

product.

"We looked at everything on the market and preferred this above a roof which opens upwards because that seemed to have too many metal parts which could obstruct the light," said Mark.

"The advantage of our roof is that we can convert it to a solid roof glass or polycarbonate - if we want to in the future," he said.

It has not been built to be high tech so we can fix anything that breaks, he says. It does have Priva automatic controls although these aren't used to maximum potential. The sides and doors slide open for cross ventilation.

The greenhouse has not been built to hold heat so in future, they are likely to install a thermal curtain and a Holland heater for those times when it is necessary to heat the house. It can easily be freezing outside in the winter although there has not been any significant snowfall during the last couple of years.

Another solution would be floor heating provided by hot water running through flexible pipes that just lie on the ground.

Foertmeyer mostly grows hanging baskets in this house that is just under 4m (15 ft) at the gutter. The baskets are irrigated by Netafim drip lines and are managed with the help of a Westbrook trolley transport system.

Manual operations

The last house to be built, and finished Spring 2002, is an Atlas Rt Muscle Quonset, measuring 10m x 44 m (30ft x



Retrieving the hanging baskets.

132 ft), this being the area of land which was available. It has a polyethylene cover, roll-up side walls and a manually-operated roof vent because Mark says he wanted it to be simple. It allows plenty of light penetration and air movement, the floor is covered with black cloth, under which is a layer of gravel for drainage, and a concrete path runs down the middle.

"We put in the side air vents to allow us to grow in it during the summer.



A retractable polyethylene curtain allow the roof to become fully open.



The latest addition, an Atlas Quonset with manual controls.



The loading bay has saved a lot of time and labour.

“We also wanted the house to be manual-operated because we have had a few

problems with automation in the past and it had to be economical as well as being strong.”

He says he is very pleased with the results so far and would put up more of these if he expands in the future. The manufacturer had this one delivered within a week of Foertmeyer placing the order.

The house also includes a Holland Heater which also generates CO₂. Its advantage is that it produces a soft heat throughout the house according to the temperate set on the thermometer. A disadvantage, however, has been some initial

leaf burn which Ron Dubena suspects it due to CO₂ toxicity. After the burn the

plant do not suffer any subsequent problems. The manufacturer of the heater has suggested installing an additional small fan outlet to solve the problem.

A feature highly recommended by Foertmeyer for anyone loading/unloading lorries at least once or twice a day is a loading bay. It saves a huge amount of time and labour because one man can do the job instead of two previously, says Mark. It is also a much easier job because they no longer have to lift everything into the lorry.

Foertmeyer bought the land in 1989 when, Mark says, it was all he could afford. Since then this area of Ohio has developed significantly so he finds himself in an ideal position for business and judging by the projected growth will remain so. ■