

Full of Beans

New Zealand operation grows bountiful harvest

Story and photos by Rob Smith

This photo of a tropical paradise was taken in Northland just minutes away from the subject of this story.

Entrepreneur Alan Canavan's heart has been in the world of commercial growing for years, but his recent business venture has led him to grow not just a crop but a brand.

After trying his hand at various types of crops, Alan settled on beans as his preferred field and started the business Beanz NZ. Beans are a crop that commands relatively stable returns with almost assured premiums through the colder times of winter – and he selected a site that favors year-round production. The mean average winter temperature in the area is 50 degrees F (10 C.), certainly not what most would refer to as a cold climate.

Once he perfected his production techniques to produce top quality beans year-round, he realized that a 'known brand' quality product that was essentially the same throughout the country would have great appeal to the consumer. He set up a franchise organization known as Beanz NZ.

With growers producing the same variety

to the same high standards, the brand name 'Beans' is now synonymous with a dependable quality product.

Alan has moved on from growing and now looks after the largest hydroponic supply company in the South Island of New Zealand, some 2,700 miles south of his Northland property.

The bean-growing operation is managed by Alan's protege, Rick Fogarty. Rick started as a horticultural apprentice at 15. Now 18 years old and fast approaching his degree in horticulture, Rick is already a very accomplished and extremely dedicated grower.

While Rick may seem young to be managing a significant commercial installation, he is in full control of every aspect of the growing cycle. Rick assisted Alan with many of the site's physical developments, so his understanding is not limited to just the crop.

The bean-growing operation is quite some distance from the

nearest village, a longer way from the closest town and more than one hundred miles (190 km) from Auckland, the closest major city. Thus the site has had to be designed to be fully independent.

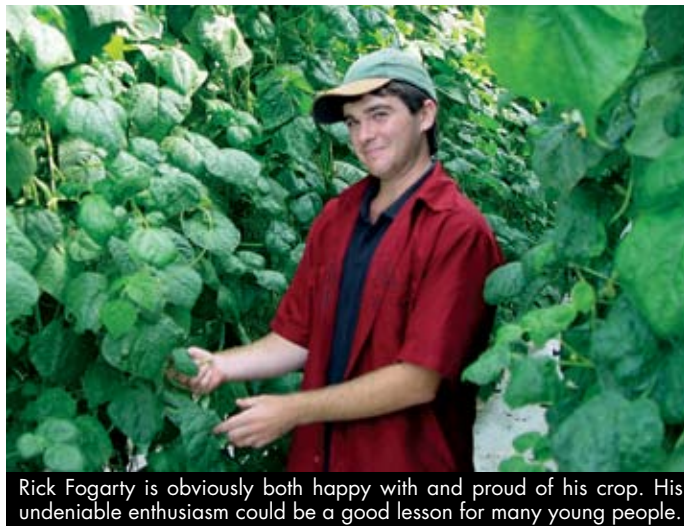
To ensure adequate water, Canavan built a reservoir, which provides clean rain water that is perfect for a sound, uncontaminated hydroponic nutrient.

The structures are covered with horticultural plastic film, have good ventilation and are also equipped with oil-fired, forced-draft hot-air heating systems. Although the temperature does not get critically cold on the site, the crop performs consistently better through the winter with the addition of a small amount of heat on the odd cooler night.

The compacted soil floors are covered with a white reflective material which not only isolates any soil-borne pathogens but also aids in reflecting light back into the crop.



Leaving the consumer in no doubt, the brand name is printed boldly on every carton.



Rick Fogarty is obviously both happy with and proud of his crop. His undeniable enthusiasm could be a good lesson for many young people.



Like 'Jack and the Beanstalk,' the growth at Canavan's Northland facility is almost unbelievable – three months from seed to final harvest.

The plants themselves are propagated on site from seed saved from previous crops. Once every two years 1,000 plants are harvested for seed. When the fruit matures, the stems are cut and the pods allowed to dry naturally in the air. When fully dried, the plants are removed from the greenhouse and the pods stored – a good wet-day job is shelling the pods of their valuable seed, which is then stored in drums to await replanting.

In order to be a year-round production facility, the operation must have several crops at various stages in the three-month growth cycle. This demands an ongoing process of sections of the site being cleared of spent plants, the used, sawdust-filled grow bags being dumped and replaced with freshly filled purpose made plastic grow bags. The site contains some 6,000 bags, each containing

four plants. On average, the crop produces about seven thousand-plus pounds of flat runner bean fruit per month.

The irrigation system is controlled by a solarimeter that measures the quality and quantity of sunlight, adds it up and at a pre-set value of total solar radiation received starts an irrigation cycle. The unit resets at this time and restarts collecting data.

Nutrient irrigation enters the bags via "Dan" dripper stakes. These are all lifted up out of the way during the cleaning and installation of new bags.

Rick has a full time assistant and they are helped by one part-timer. While it is not back breaking work, all three are busy keeping the production schedule up to date.

As in the "Jack and the Beanstalk" story, the rate of growth under the ideal conditions

provided is almost unbelievable. In just a couple of weeks the plants are well on their way towards the top wire. From planting to first flowers is from seven to eight weeks and then picking is full on for the following month – so three months from seed and it's all over for that particular planting.

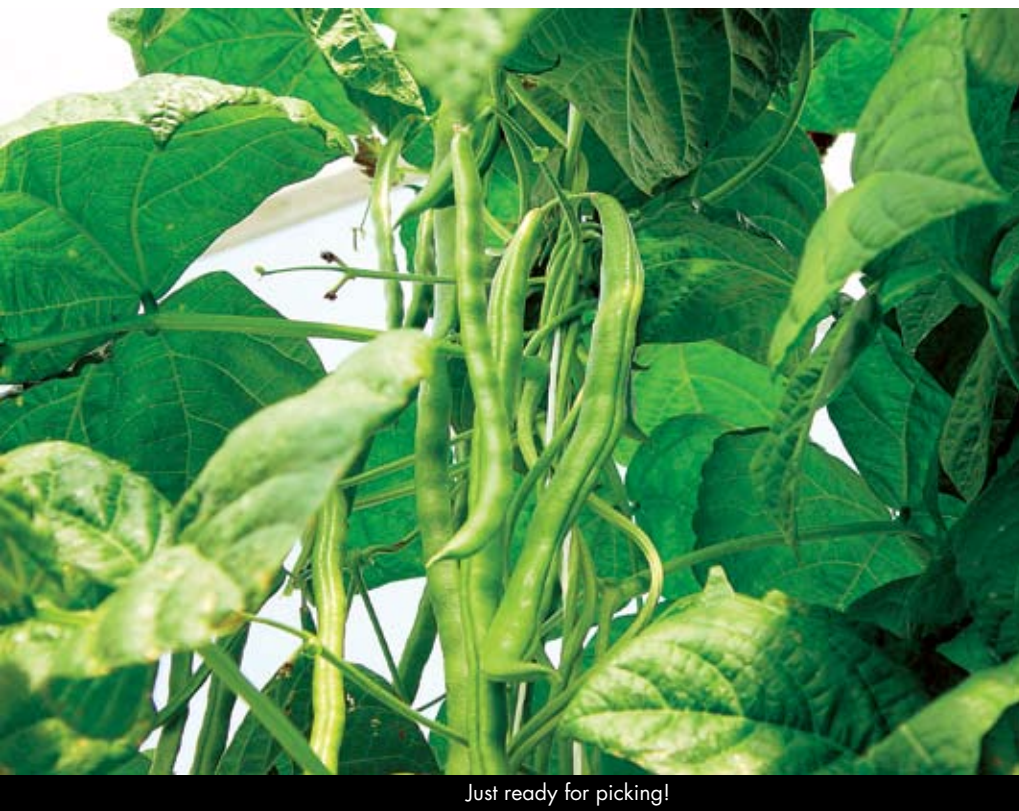
Keeping protective fungicide spraying to a minimum is essential for maintaining a clean crop, and occasionally airborne pests such as whitefly need to be combatted.

The conductivity value of the nutrient is adjusted to suit conditions and will vary from 12CF (1.2EC) up to 20CF (2.0EC). With the Dan dripper system metering reasonably precise volumes of nutrient into the bags, the runoff from this system is negligible. Further, the system almost completely eliminates the threat of soil-borne pathogens entering the bags, which many believe can result with recycled systems. Rick measures the runoff from sample bags and adjusts the pH value at the batching tanks to keep pH runoff at plus or minus 6.0 pH. When the plants are in full production this may mean introducing the nutrient as low as 4.3pH in order to maintain the desired runoff value.

Rick plans each days operations to ensure that nothing important gets missed and that customers receive their orders, which have been picked at the peak of development and stored in a cool room until ready to travel in the best condition possible.

I took a sample handful home and can assure you these beans are chock full of flavour and not a bit of string – the proof of the pudding, as they say. 🍴

Rob Smith is a veteran in the field of hydroponics and a longtime contributor to The Growing Edge.



Just ready for picking!