

Chapter EIGHT

CASE STUDY & GARDEN CALENDAR



Inspect plants carefully every day.

Case Study - Energy Efficient Organic Sea of Green

Growing Statistics

Yield 1: 8.4 pounds (3.8 kg) in ten weeks, initial grow in room half the size of other grows.

Yield 2: 27.6 pounds (12.5 kg) in nine weeks for second grow.

Yield 3: 30.2 pounds (13.7 kg) in nine weeks for third grow.

Cost: First Crop / Initial setup + power: USD \$5647 (Eur \$4500) - USD \$672 per pound (Eur \$1184 per kg)

Second Crop / Improvements + power: USD \$8220 (Eur \$6550) - USD \$298 per pound (Eur \$524 per kg)

Third Crop / Reap the rewards: USD \$1882 (Eur \$1500) - USD \$62 per pound (Eur \$106 per kg)

Space: First grow: 16' 5" × 7' 10" (5 × 2.4 m), **Second and third grows:** 33' × 7' 10" (10 × 2.4 m)

Watts: First grow - 6000 watts, second and third grows - 8400 watts.

Cloning: 100 clones (first crop) and 400 clones (second and third crops) purchased from an outside source and ready for planting. Clones were purchased for USD \$3.15 each (Eur \$2.50 each). The strain supplied was Power Plant.

Vegetative: First crop - 100 clones were planted directly into flowering room and given 18 hours of light per day for a period of 14 days. For the second and third crops, 400 clones were used. Because the number of plants grown per square meter was doubled, only seven days of vegetative growth were needed pre-flowering.

Flowering: The young plants, when acclimatized to their new home and growing well, were switched to a 12-hour light cycle for eight weeks.

Harvest: Mature plants reached an average height of 23 inches (60 cm) with multiple branches.

Nigel & Terry

THE First CROP :-

Nigel and Terry lived together in Central London and worked for the same large British company. When both were offered a transfer to a new firm in Holland, they jumped at the chance. The new company was in the west, near the coast, and in close proximity to some picturesque rural districts. They rented a house in the countryside where they could enjoy the solitude and reduce the stress associated with corporate life.

The house they rented was on a large piece of land, not in direct view of any neighbors. Near the house was a big shed once used to service farm equipment. It had power, water, and a functioning toilet and shower. Interesting?

After settling in at work and making the house comfortable, Nigel and Terry got to thinking. "That shed's just sitting there empty, and wouldn't it be just perfect for a hydro setup?" As it turned out, the property they rented was owned by an elderly woman who lived in Belgium. The rent was paid to a real estate agent in town, and no neighbors had even spoken to them in the six weeks since they moved in, so they figured the place was pretty safe. After a few nights sitting up and discussing their prospects, the lads decided to capitalize on their good fortune, and "go for the grow!!"

At the back of the shed was a storage area that had been partitioned off from the rest. It spanned the entire width of the building, about 33 feet (10 m) and was approximately 10 feet (3 m) wide. This seemed like an ideal place for the new project, but a few questions arose. Exactly how big were they going to make this thing? How much cash were they willing to invest? What were the consequences of success versus failure, or worse, discovery? Being corporate minded, the lads decided to make an executive decision. Seek advice from a professional.

Holland is world-renowned for its indoor weed production; consequently, grow shops

are abundant. Nigel and Terry found the staff at their nearest "grow-op" to be open, professional, and well equipped to deal with their specific inquiries. After an enlightening chat, the boys decided to play it safe and use only half the area of the storage room 16 feet 6 inches \times 10 feet (5 \times 3 m). They figured that organic was the way to go, and the simplest growing method (pots and soil) would be best for starters.

They bought enough timber and other materials to construct two benches 16 feet 6 inches long \times 4 feet wide (5 \times 1.2 m). They bought 100 5-liter plastic pots, ten 50-liter bags of premixed organic potting soil, and enough white, laminated wooden paneling to cover the walls (approximately 36 sq ft [30 sq m]). The idea was to construct the basic room, fill the pots with soil, place them on the benches, and check that the design was solid before progressing further. All went together fine and strong, total expense USD \$780 (Eur \$620).

Next they purchased ten complete 600-watt HP sodium lighting kits (lamp, ballast, reflector), a Hagar multi-output electrical control board with built in timers, a Torin 3200 cu/hr inline fan, an xyz carbon filter, two pedestal fans, some organic xyz nutrient, and 100 clones. Total expense USD \$4405 (Eur \$3500).

This system was relatively easy to set up. The inline fan was installed high up on the rear wall. Its job was to expel hot air from the grow room and create enough draw to pull cool air in through a vent (large gap) between the opposite wall and the grow room floor. When and if smell became a problem, the carbon filter could be connected to the Torin and its fan speed increased to maintain constant odor-free airflow. The two pedestal fans would be incorporated to increase air movement but not until all else was set up. The lamps were arranged to cover an area of approximately 3 feet 3 inches \times 3 feet 11 inches (1.0 \times 1.2 m) each. The reflectors supplied with the lighting kits were cheap, half-octagon, aluminium horizontal hoods. However, they were

lightweight and seemed very bright when the lights were turned on.

Clones were potted and placed on the benches (ten under each lamp). For the first five or six days, the lights were kept about one meter above the plants, then gradually lowered to about half that height as growth became healthy and vigorous. Watering was done by hand, and because the soil was a premixed organic blend, no extra fertilizer was added for the first week.

Nigel and Terry hovered over this first crop like proud fathers. They adhered to a daily schedule of watering, monitoring pH, and inspecting leaves for signs of insect attack and nutrient imbalance. As a result, the plants developed quickly and were ready to begin flowering by the end of the second week. To induce flowering, the lights were set back from 18 to 12 hours per day. About this time, they began to add organic nutrient supplements to the daily soak. As the plants developed further, they worked up quite a thirst; all pots were watered until their individual drip trays nearly overflowed.

The carbon filter was connected around week 6, in an effort to prevent odors escaping the shed. This tactic worked well, but it reduced airflow. As the plants increased in size and density, it became increasingly difficult to keep grow room temperatures below 86°F (30°C). On a couple of occasions, the temperature rose above 91°F (33°C), and bud development definitely suffered. The guys remember one time when every plant stopped growing for three or four days after the room overheated.

As their crop approached maturity, Nigel and Terry noticed something strange going on. Most plants were finishing off nicely, but some (generally the biggest) didn't seem to be maturing properly. The buds on the plants growing right under the lamps were big but didn't seem as solid or as resinous as those on the other plants. This condition became more noticeable as time progressed. By the 8-week mark, the larger plants started to go a bit yellow and drop leaves.

It was time to pull the pin on this caboose!

The crop was harvested a few days later and hung to dry. In general, the smaller plants produced better quality buds than the larger plants. The yield was 8.4 pounds (3.8 kg) of very nice weed, and with that in hand, who was going to complain?

Actually, the boys were very happy with their first result, as everything ran quite smoothly. They had a few problems with heat, but they learned a lot and gained the confidence (and the \$) to expand their room to its full potential, 33 feet × 10 feet (10 × 3 m).

THE SECOND CROP:-

This was a time of change and serious improvement. Over the past three months, Nigel and Terry had visited the local hydro store on many occasions and had struck up a friendship with one of the owners who worked there. He had given them heaps of useful advice, and the boys realized that without his input, the first crop could have easily ended in failure.

The storeowner (we'll call him Bob) offered to help the boys design their new double-sized room, provided they purchase all their new equipment from him, of course. He insisted that the system they were currently running used too much power, generated too much heat, and was too labor-intensive to be successfully doubled in size and maintained by two guys already working full-time jobs. As usual, Bob was talking sense, so Nigel and Terry decided it was a safe bet to play it Bob's way and part with the necessary cash. The total cost of Bob's proposed improvements weighed in at USD \$7552 (Eur \$6000). Calculating at a rate of Eur \$2200/kilo, the first crop paid for itself and more than half the expenses of the proposed expansion and improvements. Cool!

Bob's plan was to: 1) Double the length of the existing two benches and line the walls of the other half of the storage area with white laminated wood; 2) Set up an automatic watering system with a large reservoir to reduce manual