Chapter SIX
GROW ROOMS & GREENHOUSES

Female plants in this Colombian greenhouse are sheltered from daily rains.

This barrel full of water shows that cannabis will grow only as fast as its most limiting factor. Light is most often the factor that limits growth indoors.

Air	**20%**
Temperature	
Humidity	
CO_2 and O_2 content	
Light	**20%**
Spectrum (color)	
Intensity	
Photoperiod (hours of light per day)	
Water	**20%**
Temperature	
pH	
EC	
Oxygen content	
Nutrients	**20%**
Composition	
Purity	
Growing Medium	**20%**
Air content	
Moisture content	

About Grow Rooms

Basement

The best location for a grow room is in an obscure corner of a basement, where the temperature is easy to keep constant year round. Basements are well insulated by concrete walls and soil. A basement room can be enclosed and camouflaged with junk, a double wall, workbench, or shelving.

Added security is afforded by installing a false door in a closet. The grow room is located behind the secret door. Another good secret location, except for the possible heat build-up, is the attic. Few people venture to an attic that is difficult to access. Some growers locate their gardens below a trapdoor covered with a rug.

Law enforcement cannot use the electricity bill as sole grounds for a search warrant. But, they can use it along with other "evidence" such as remnants of indoor growing visible outdoors, thermal image heat signatures, snitch testimony, etc., to secure a search warrant. As long as the marijuana grown is not sold or shown to a snitch, there should be no reason for any suspicion. Thermal image technology is easy to outwit. Just keep the lights on during daylight hours to confuse the technology. Or, cool exhaust air and expel it under the well-insulated grow house so it does not leave a heat trail.

This cutaway basement grow room shows a real scenario. Plants on tables stay warmer and are easy to maintain.

Outbuildings, garages, and barns not attached to homes are some of the worst places to grow cannabis. Thieves and law enforcement often do not regard entering a barn or garage as a crime, though they would not consider entering a home. Security is much better when the garden is within the home.

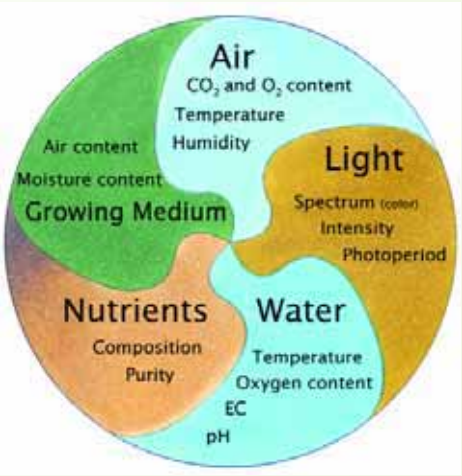
Although less common, there are even grow rooms on wheels! Some innovative growers have remodeled trailer houses and buses into grow rooms. One of my favorite grow rooms was in a tricked-out trailer. Another was in a 60-foot (18 m) sailing yacht!

The grow room's size determines the size and the number of lamps. High intensity discharge (HID) lamps that work well to grow marijuana are available in wattages of 150, 175, 250, 400, 600, 1000, and 1100. Smaller wattages from 150-400, work well in closets or spaces with 9-21 square feet (0.8-2 m^2) of floor space. Use 600-watt and larger bulbs for larger areas.

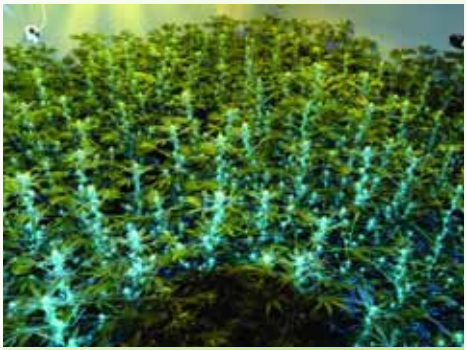
The drawings show several grow room floor plans. As the floor plans demonstrate, there are several basic approaches to grow room design and production. Most growers start out with a crop grown in a single room. After they harvest the crop, they introduce a new batch of clones. The photoperiod is switched back to 18 hours, and the cycle continues.

The most productive setups utilize two rooms. The first room is for vegetative growth, mother plants, and rooting clones. This room should be about one-quarter the size of the flowering room. When the flowering room crop is harvested, plants from the vegetative room are moved into the flowering room.

Super productivity is achieved with a perpetual crop. Several clones are taken every day or every week. Every day a few plants are harvested. For every plant harvested, a new cutting takes its place.



This indoor setup has a big flowering room, a vegetative room, and a clone chamber.



This productive grow room is located in a closed-off corner of the basement.

Take a little time to set up your grow room so all the space is used efficiently.

This closet grow room has everything necessary to grow a crop–lights, fans, and cannabis! A 400-watt HID lights the 3 × 4-foot (90 ×120 cm) flowering room above, and two 55-watt CFLs in one reflector illuminate mothers and clones in this perpetual harvest setup.

A single 1000-watt metal halide can grow enough mothers, clones, and vegetative plants to support 4000 watts of flowering HID light. This design allows pungent odors to waft upward before being evacuated via roof fans. A third area in the attic is used as a heat buffer in hot climates.

Setting Up the Grow Room-Step-by-Step

Set up the grow room before introducing plants. Construction requires space and planning. A grow room under construction offers a terrible environment for plants. Once the grow room is set up and totally operational, it will be ready for plants.

Step One: Choose an out-of-the-way space with little or no traffic. A corner of the basement or a spare bedroom are perfect. A 1000-watt HID, properly set up, will efficiently illuminate up to a 6 × 6-foot (1.8 x 1.8 m) room. The ceiling should be at least five feet (1.5 m) high. Keep in mind that plants in containers are set up at least one foot (30 cm) off the ground, and the lamp needs about a foot (30 cm) of space to hang from the ceiling. This leaves only three feet (90 cm) of space for plants to grow. If forced to grow in an attic or basement with a low four-foot (120 cm) ceiling, much can be done to compensate for the loss of height, including cloning, bending, pruning, and using smaller wattage lamps.

Step Two: Enclose the room, if not already enclosed. Remove everything that does not pertain to the garden. Furniture, drapes, and curtains may harbor fungi. An enclosed room allows easy, precise control of every-

This attic grow room has access via a retractable ladder. The grower uses the dead airspace above the room for his ozone generator to exchange air before expelling.