

What separates the greenhouse from other kinds of growing is the need for artificial heat. In more temperate regions, heat built up from a full day of sun will be enough to carry plants through dips in temperature during the night. The sun, of course, is a critical heat source in northern locations, but cloud covers and drastic drops in temperature at night make supplementary heating necessary. Some greenhouse buffs further protect their collections with a battery-operated alarm system that sounds when the temperature becomes too low or too high. In addition, many keep a backup oil heater on hand should the power fail or regular heater malfunction.

Traditional methods of getting heat to the greenhouse include tapping the home heating system or using a gas-fired space heater or an electric heater. Because keeping plants warm is by far the most expensive aspect of greenhouse gardening, the lean-to design is especially attractive. Once attached to the house, it's simple to add a separately controlled heating extension--provided the present home system is not already operating at peak capacity.

Gas heaters are efficient, compact, and fairly inexpensive to operate, but the exhaust must be vented outside. Uncombusted fumes can be deadly to plants and humans. Electric heating is more than adequate but may be expensive in those areas where rates are high.

Solar heating relies exclusively on the tremendous energy flow from the sun. With proper collection and storage, it's possible to heat part of your home, as well as the greenhouse.

Heating a greenhouse, whether lean-to or freestanding, is a tricky business. Mistakes in planning may lead to unplanned expenses later, not only in the form of high fuel bills, but also in lost plants. For best results, get expert advice from a greenhouse manufacturer.

Whatever system you choose, keep greenhouse management chores from causing headaches by installing the proper thermostatic controls. Specially designed thermostats will keep conditions at almost the exact levels you want. Remember to place the thermostat in a central location and keep it shaded from the direct rays of the sun. For economical operation, settings should be maintained at the minimum night temperatures required for the plants you plan to grow. If the frigid winds of winter make heating difficult, take steps to insulate wherever possible.