

Q: I need to heat my small PVC greenhouse. It is small, about 8x8. What kind of heating is recommended?

A: Small greenhouses can be a challenge to keep warm in the winter months, as they lose heat rapidly. Small hobby greenhouses can be heated using a variety of methods, but you will need to take into account the initial cost, operating costs and maintenance. There are gas, oil, wood and electric heaters available, however gas, wood and oil varieties must be properly vented for human and plant health. Space, forced air or radiant heaters can also be used. If you have tropical plants, consider radiant heat lamps overhead with soil heating cables beneath the containers. Getting a heater with a programmable thermostat can save you time and money.

Solar heating will help if your greenhouse is situated so that it gets as much winter sun as possible. Passive solar systems use black painted water-filled containers to capture solar heat in the daytime and radiate it into the greenhouse after dark, but in a small greenhouse you won't have much room for storage containers. If you have space, consider installing a Trombe wall. These are low walls placed inside your greenhouse on the south-facing side, consisting of an 8- to 16-inch thick masonry wall coated with a dark, heat-absorbing material and faced with a single or double layer of glass placed from 3/4" to 6" away from the masonry wall to create a small airspace. Solar heat passes through the glass and is absorbed by the dark surface. This heat is stored in the wall, where it is conducted slowly inward through the masonry. If you apply a sheet of metal foil or other reflective surface to the outer face of the wall, you can increase solar heat absorption by 30-60% (depending on your climate) while decreasing the potential for heat loss through outward radiation. For more information on solar greenhouse plus building instructions go to <http://www.attra.org/attra-pub/solar-gh.html#Basic>.