

Design for your climate

ZONE 1 – During winter, these states face extremely low temperatures and greatly reduced sunlight. Energy efficiency is paramount. Greenhouses should be designed with highperformance insulated glass that allows more light transmission and solar heat gain. In some circumstances, triple-pane glass is recommended. Larger-sized heaters and grow lights are needed for year-round growing.

ZONE 2 – These states experience moderate temperatures that may exceed both the high and low extremes of the plant growing range. Most greenhouses will require insulated glass, and need less light transmission and solar heat gain than in



Zone 1. During the winter, heaters are required for plant survival, with some varieties requiring grow lights. In the summer, an evaporative cooler and/or shades may be needed.

ZONE 3 – High temperatures and extreme sunlight intensity are common in these states. Most greenhouses will require insulated glass, but some may be designed with monolithic (single pane) glass. Specialty glass may be incorporated in

the roof of the greenhouse to reduce light transmission and solar heat gain, especially in the summer. Most greenhouses will require evaporative coolers and/ or shades for the summer season. During the winter, heaters are required for most plant types.

ZONE 4 - Sunlight can be intense in these states. A specialty roof glass will reduce light transmission and solar heat gain throughout the year. Most greenhouses will require insulated glass, but some may be designed with monolithic (single pane) glass. This region can experience fluctuations between winter and summer so an evaporative cooler, heater and shades are recommended.

Note: These are general climate characteristics for regions of the U.S. This information is intended for initial greenhouse design. For best greenhouse performance, location specific data must be used.

Placement considerations

The position of the greenhouse on your property is key to the success of how it will perform. Maintaining proper sunlight, taking advantage of trees and ease of access are all concerns that should be addressed before ground is broken. The position of the greenhouse on your property is key to the success of how it will perform. Maintaining proper sunlight, taking advantage of trees and ease of access are all concerns that should be addressed before ground is broken.

