your vines may become a thicket, providing too much shade from the bare winter branches. Try extensive summer pruning each year to keep the vines from growing too large.

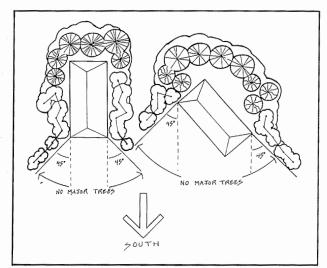


Figure 5.10 Trees planted along the south wall can give unwanted shade in winter. For the best effect, plant trees outside the area marked "no major trees."

## Pruning for Winter Light and Summer Shade

Summer shade and winter sun are not incompatible, but to have both requires careful study and the removal of some lower branches. Figure 5.12 shows how to calculate the shade cast by existing trees during the heating season. Use graph paper, and draw everything to scale.

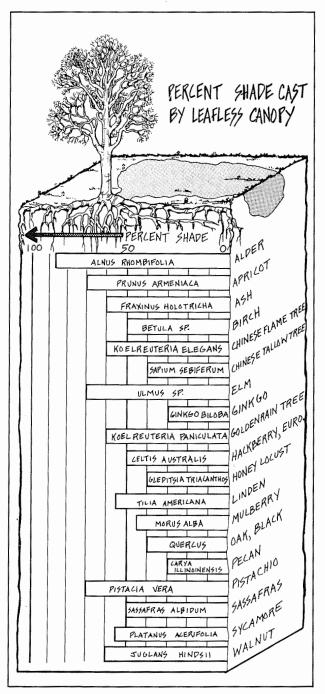
Pick the top of the highest window on the south side of your home as your point of reference for drawing the angles of the sun's altitude. Use the chart for your latitude in Appendix 2. (San Francisco, St. Louis, and Washington, DC all lie close to 38° latitude.) The area below the dotted lines indicates which branches to remove to let the sun strike the window and wall.

This method uses the figures for noon and works only for trees near the house. Early and late in the day, more distant objects can shade the house and garden, and you will have to "eyeball" their impact by standing in the landscape—it cannot easily be done on paper.

Chances are you will have to compromise between winter sun and summer shade. Notice how limbs that provide shade through October 21 begin to block the sun in mid-February, before the heating season is over. But cutting branches to admit sunlight till April 21 exposes the south wall to sunlight as early as August 21, when you still need the shade. There are alternatives to making a scale drawing of your house and trees. You can use the solar devices described in "The Climate in Your Yard" to determine which limbs to remove.

## **Shady Results**

Once your living shade is in place and growing, it is time to stretch out and enjoy some of the benefits of your edible landscape—cool mint tea, refreshing fruit and berries, chilled three-bean salad



**Figure 5.11** Bare winter branches cast a surprising amount of shade. For more winter sunlight, prune the canopy extensively in summer.