

Tree Placement on Home Grounds

Trees properly selected and placed can add more in livability and value to the home than any other single landscape feature. They grow continually and are ever-changing. You will never tire of looking at them.

Trees around homes provide beauty, but their more practical function is to fulfill needs and solve problems in the home landscape.

Trees solve landscape problems by providing framing and background. Trees also improve the appearances of our homes. They can help to absorb noise, freshen the atmosphere, serve as windbreaks, provide privacy, protect, shade, shelter and divide grounds into several use areas.

Home landscapes are not, and should not be, identical. Therefore, the same kind of tree cannot be used for the same purpose on every lot. To get the most from your trees, follow these guidelines:

- Determine where trees will serve the greatest benefit.
- Select trees that fit locations and fulfill needs best.
- Properly plant, care for and maintain trees.

Functions of trees

Shade

Trees are most frequently planted for shade. The most important shade tree on home grounds is usually located near the southwest corner of the house. If placed properly, it will shade the house during the latter part of the afternoon in summer. Trees provide better shade than artificial structures. Air passing through the branches is cooled by transpiration from the leaves.

Distance — Depending on the mature size of the tree, the distance it is set from the house will control the amount of shade given in a certain area. A tree 50 feet high with a 30-foot spread will cast a shadow equal to the tree height at 3 to 4 p.m. in midsummer. But in winter, the shadow at the same time of day will be 120 feet long. To get the most useful shade on the house at a practical distance, place the tree 15 to 20 feet from the house. Small trees may be planted closer than 15 feet, but large trees should be planted 20 feet or more away from the house.

Location — If the house faces south, or southeast, maximum shade on the front will come from a tree that is placed to the southwest, or left front. If the house faces

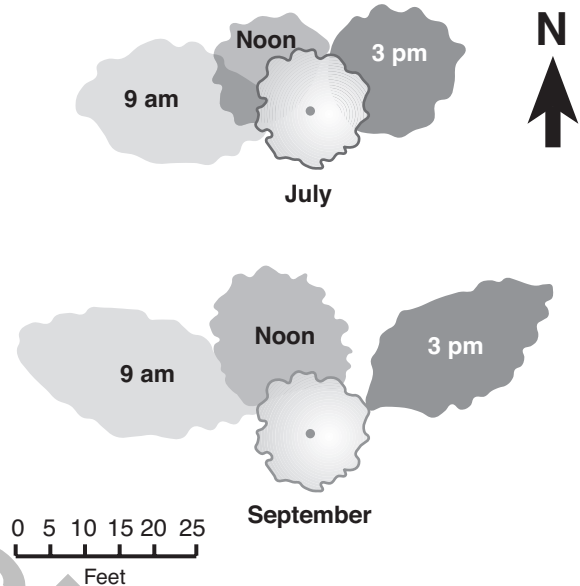


Figure 1. Shade patterns of a 20-foot tree during summer.

southwest, a tree for maximum shade would have to be placed centrally and south of the house (see Figure 1). Make a diagram of your house and sketch trees with their shade patterns to determine the best locations. Do not plant large evergreens directly south of a building, as doing so greatly reduces solar gain in winter.

Front location — If the house is situated so that trees must be planted in the front for maximum shade, select trees that will be high branching so that the outdoor areas can be seen below the branches. This will also permit good air movement. The main shade trees should be deciduous, so that a maximum amount of sunlight can reach the house in winter.

Locating small trees — Medium and small trees tend to be more in scale with modern low homes and therefore are more in demand. Medium-sized trees can be planted 15 feet from the house and generally 35 or more feet apart. Small trees, such as the flowering dogwood, may be planted as close as 6 feet from the house and about 20 feet apart. Where large trees cannot be used, several small trees may be grouped to furnish needed shade.

Shade movement — Determine from sketches and observation where the tree should be for maximum summer shade. Then check the shade movement of this spot. Use a long stake or board and fix it at the selected point. Watch the shadows to determine if your plans are right. If time permits, observe the shade pattern over several seasons.

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Remember that the shade of the house follows the same pattern as the shade of the trees, and areas such as patios may receive a portion of their shade from the house and not always need shade from trees.

Figure 2 shows how the angle and position of the sun change with the seasons. Remember that the angle of the sun changes from about 26 degrees above the horizon on December 21, when it is lowest in the sky, to about 73 degrees above the horizon on June 21, when it is highest in the sky.

In winter the sun moves from southeast to southwest; in summer it moves northeast to northwest.

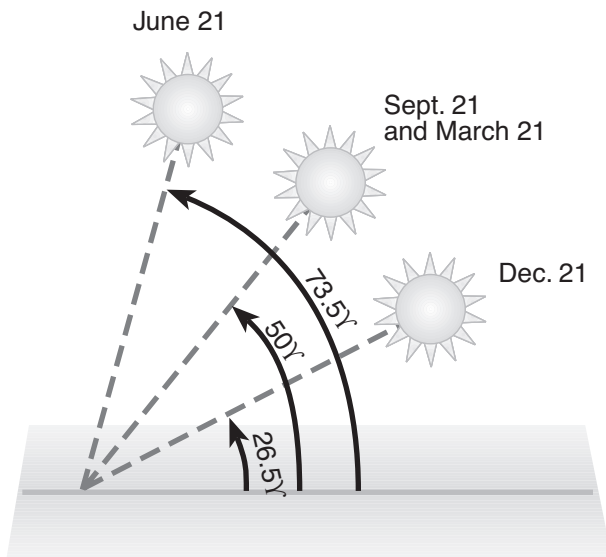


Figure 2. The angle of the sun during all seasons influences shade patterns for positioning trees.

Framing

Trees planted for shade should also serve other functions. One of these might be framing. When a house is properly framed, it appears longer and more settled to the site. On small properties there may be room for only one additional large tree to serve this function, while on large lots or on rural sites, two or many trees may be used. At least two trees should be used if possible.

Tree size — Try to select trees that will be in proportion to the house. A large, two-story house framed with small trees will appear even larger. A low house framed with tall, broad trees will appear smaller than it is. At all times, select plants and trees that are in scale with the lot as well as the house. If there is not enough space for large trees, group small trees; where width is a problem, try a group of columnar trees.

Location — Trees for framing are usually planted on a more or less diagonal line outward from the front corners of the house. This gives more apparent depth to the lot than when trees are planted directly out to the sides on a continuation of the front baseline of the house. The effect is also better when the trees are not planted directly opposite one another and are not of the same type.

Sometimes it is not practical to place trees at the exact spot for best framing. If locations more directly in the lawn area must be used, select trees that can be developed with high branching. Never plant a tree so that it will divide any view into two equal parts or obscure the view of the house from the street.

Background

A background planting of trees should be developed so that when the house is viewed from the front, the treetops can be seen above the roof line. This softens the roof line and makes the house easier to see.

Tree types — When there is space for more than one background tree, do not use the same types of trees. One tree should be used that develops taller than the others. An irregular tree line above the roof line is most desirable. Where possible, trees with relatively fine-textured leaves, such as birch or honeylocust, will provide the most pleasing backgrounds. Medium to fine textures in leaves and branches give the illusion of more depth to limited areas.

If space limitations permit use of only one or two trees that must be centrally located, select trees with tall trunks so that pleasant views will not be hidden.

Location — Placement of trees for background will often be influenced by other needs. If the back of the house faces west or southwest, these trees may be important for shade. In this situation, the trees may be needed fairly close to the house. In other places, these trees may be needed to block undesirable views. Then it may be necessary to place them near the property line. Background trees should serve a dual function as much as possible.

Accent

Small trees with attractive flowers, berries, leaves or bark are often helpful to provide accent and complete the picture. Except on very large properties, an accent tree should be a small one, although any tree provides some accent in the landscape. Small trees may also be used on large properties but should be grouped for a more striking effect.

Location — Specimen trees for accent must be used sparingly. Too many of them will add confusion to the landscape. If planted out from and to one side of the front entrance, a specimen plant can focus attention on the front door.

The small specimen tree can also be useful as a part of entrance plantings when combined with shrubs and groundcovers at a driveway entrance.

In shrub borders of the backyard, accent trees will provide a focal point for different areas. Place them with other features, such as pools or benches, that may terminate a line of sight from the house. In the flower or shrub border, locate them where curves are sharp. At this point, the eye tends to slow as it follows the border and is attracted to the accent. On a small lot, one specimen for accent in the backyard is usually sufficient. On large lots, several can be used, but avoid confusion. When accent trees are included in a border, the mature height of the tree should

be approximately 1½ times as high as the bed is wide. Therefore, a bed 10 feet wide should contain a tree that gets more than 15 feet high.

Because most people use specimen plants for their own enjoyment and to satisfy personal preferences, the positioning should also take into consideration the view from the house. Whenever a specimen is used, place it so it can be seen from inside the house. It should be placed so it will terminate a major line of sight from windows of rooms most used in the house. Trees with decorative bark or berries in winter should especially be used in these positions.

Screens

The view of unsightly areas needs to be blocked from the home. Tree screens can provide needed privacy and at the same time may establish a sound barrier or windbreak. Trees provide more rapid screening than many shrubs. If a year-round screen is desired, evergreens should be used.

Trees do not have to be in a straight line to develop a screen. Often a grouping of trees will provide needed screening without giving a stiff appearance.

Plan the entire planting at one time even though other factors may make it necessary to plant over several seasons. Unless the property is large, tree screens will usually have to be composed of small or medium-sized trees. If space is very limited, columnar trees may be used to make an effective screen with a minimum of width. A screen of trees gives more interest and variety than a fence or other artificial screens. Different types of trees may be blended together to avoid monotony in screening.

Coniferous evergreens are desirable for a year-round screen. Their distinctive shape and texture make them dominant in plantings. For this reason they should be used sparingly.

Other considerations

Always consider the ultimate size of the tree before planting. Failure to do so leads to excessive shading, increased pruning requirements and root problems.

- Do not plant trees near underground pipelines, septic tanks, walks or drives or under overhead wires. Check with your local utility companies for the location of buried utility lines
- Do not plant a tree where it will overhang the house, in front of the front door or where it will obstruct a desirable view from inside the house.
- Do not plant a large tree closer than 5 feet from a sidewalk; it will eventually push up the concrete.
- Do not plant trees closer together than half their total spread at maturity.
- Do not plant trees closer than 25 feet from the corner of a block so that they will not interfere with motorists' vision at intersections.
- Do not plant trees directly on property lines.
- Do not plant trees that give dense shade where you want to grow grass.

Planning with existing trees

When homes are built in a naturalistic setting on a wooded lot, there is often reluctance to remove any of the trees. Failure to select carefully at the time of construction may result in many problems later.

Remove any trees that are diseased, injured or deformed. If trees overhang the house, they present a safety threat and should be removed or pruned. If gardens are desired and the shade is too dense, remove enough trees in the selected gardening site to let in sufficient light. Remember that existing trees grow and will need to be pruned later to keep this space open.

Clean out brush and trim up the trunks of the trees in the front area so that the house can be viewed from the street by looking between the trunks of the trees. Along property lines, shrubs should be allowed to remain or added to develop privacy.

A lot may not have enough trees for a naturalistic effect. Where only a few exist, the first step should again be to remove misshapen, diseased, damaged or poor trees. From those remaining, select the best to fulfill needs such as shade, framing or background.

Selecting the tree

After the need for a tree at a given location has been established, the next step will be to determine what tree or trees would best satisfy the needs. Several characteristics of trees must be considered.

Size

Trees for use in the landscape are usually classified as small, medium and large. Size categories may overlap depending on culture and climatic conditions.

Small — Trees that rarely reach a height of more than 25 feet.

Medium — Trees that mature at about 40 feet.

Large — Trees that mature at heights greater than 40 feet. Some may reach heights of 75 to 100 feet.

In the landscape, large trees are in scale with tall houses but will make low houses seem smaller. Small and medium trees fit well with low houses but will make a tall house appear even taller.

Shape

The natural shape of a tree will influence its appropriateness to many landscape uses. Choose a form that will suit your needs and then find types or varieties with these forms.

Erect, columnar fastigiata — Trees with upright, slender growth that produces a towering effect. These trees are useful as accents in mass plantings and will accent vertical lines of buildings. They are useful for large screens and windbreaks where land space is limited.

Some trees of this type are the pyramidal hybrid oak, columnar red maple, columnar European hornbeam and columnar junipers.

Spreading — Trees with a broad, natural growth and horizontal branching habit. They often form flat tops. They are useful for breaking vertical lines in buildings. Examples of trees with this growth are Winter King hawthorn, golden rain, dogwood, flowering cherry and mimosa.

Open-headed — Trees with a rather indistinct outline and a loose, open structure. Their value in the landscape is a tracery against the sky and light shadow cast on the ground. Large trees in this group make good trees for background planting. Typical examples are honeylocust and mature ginkgo.

Round-headed — Trees with curving or rounded crowns. They are often close-branched and provide dense shade. Trees of this type are dominant and produce a dense textural effect. Examples of this type are the Norway maple, catalpa and saucer magnolia.

Pyramidal — Trees with a single stem, from which branches grow at right angles and appear to be in layers. In outline the tree has a cone-shaped effect. The form is very dominating and therefore these trees are best used as specimens or grouped in mass plantings. Sweet gum, pin oak, American holly and spruce species are examples of trees with this type of growth.

Oval — Trees with a general egg-shaped appearance. Top of the growth comes to a broad point which may be rounded. The overall crown is not as broad as the round-headed shape. Many trees of this type provide dense shade and become dominant landscape trees. Examples are sugar maple and horse chestnut.

Umbrageous (umbrella-shape) — Trees with a rounded top, but open-headed growth to form a canopy that suggests an umbrella. New disease-resistant selections of American elms are an example of trees with this type of growth. Hackberries and zelkova also have this growth habit. They are especially useful in areas where shade is needed but where low-branched trees would obstruct views. This type of growth allows good light penetration beneath the trees.

Weeping — Trees with branches that hang freely toward the ground from the trunk or other branches. The form is rather unnatural and trees of this type should be used only in flat areas where the eye is directed downward toward some interesting feature such as a pool. Their use

should be limited to that of an accent plant. Very popular, although easily broken in storms, is the weeping willow. Weeping forms of many trees have been developed such as the weeping birch, weeping beech and weeping cherry.

Texture

In leaves, stems and twigs, trees possess definite textural qualities. These qualities should be related to surrounding items and plants.

Trees with coarse leaves, large branches and dense growth are dominant. Large trees of this type dwarf things around them. They are best suited to large areas and to large homes and buildings. Small trees of this type make striking accents. Coarse textures give a feeling of closeness. This type of tree is most useful as a noise barrier.

A tree with medium texture can relieve the heaviness of many buildings and give a greater feeling of space. Trees of this type allow light penetration and air movement and still provide good shade and screening.

Fine-textured or filamentous trees are more open and light penetrates them well. Twigs, foliage and branches are usually small and slender. The feathery foliage is valuable for small areas since it helps to produce a feeling of space. Large plants of this type help to give a greater feeling of depth to small areas when used behind plants of coarse texture.

Other characteristics to consider

- Do not select trees to be put close to the house that are rapid-growing but short-lived and prone to breakage from ice, snow or wind.
- Select trees with few or no insect or disease problems. If trees are chosen with known problems, be prepared to give adequate control measures.
- Choose trees that are hardy for the area.
- Choose trees that are in scale with house and site.
- Avoid trees with messy fruit, seed pods and frequent shedding of twigs and small branches.
- Select trees suited to environmental conditions of the area such as summer heat, air pollution, drainage and soil.

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