

Choose Plants Wisely



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To create and maintain a healthy landscape, choose plants that are suited to the conditions in your yard. Plants placed in a location that meets their requirements usually thrive without requiring a lot of attention. Plants in a location that does not suit them will be stressed, vulnerable to attack from pests and diseases, and may require more care.

For example, rhododendrons are popular landscape plants because they are evergreen and offer a spectacular display of flowers in the spring. Most rhododendrons require good soil drainage, some shade, and acid soil conditions. If planted in a poorly drained area, they are likely to develop root rot diseases. In full sun, they often become infested with lace bugs and other insects. If they are planted in an alkaline soil, they are likely to weaken and die. If the conditions in your yard are not right for rhododendrons, you should consider choosing another plant.

Follow the steps below in selecting new plants for your yard. When you have gathered the information described in these steps, you also will be able to evaluate problems of existing plants in your landscape.

1. KNOW THE CONDITIONS IN YOUR LANDSCAPE

How cold does it get during the coldest winters? How hot does it get in the summer? What is the average rainfall in your area? Observe how many hours of sunlight each particular site receives and the direction of the prevailing winds. Determine your soil's texture and drainage, and have the soil tested through your local garden center or extension office. The soil test will determine your soil's nutrient level and pH, a measure of acidity or alkalinity.

2. KNOW THE REQUIREMENTS OF LANDSCAPE PLANTS

Learn the specific needs of a new plant before you buy it. Will the plant be able to survive the winter at your location, or will it need protection? Does it require more rainfall than occurs in your area? Does this plant require soils to have a

pH within a narrow range? How much space will this plant require at maturity? Does it have a shallow root system that will interfere with your sidewalks or lawn? Does it shed pollen or fruit, or does it have thorns that will be a nuisance in the location where you plan to place it?

Some insect pests and diseases occur when certain plants are grown near each other. One common example happens when eastern red cedar (*Juniperus* spp.) is grown near apple or crabapple trees. Cedar-apple rust is a disease caused by a fungus that requires two different host plants to complete its life cycle. It overwinters on the red cedar and releases spores in the spring that infect apple leaves. In the fall, it produces spores that infect cedar. When either host plant is absent, the fungus cannot complete its life cycle. A similar disease problem occurs when junipers are planted near quince, hawthorne, or serviceberry. Thorough research and questioning will enable you to avoid such troublesome plant combinations.

Identify existing plants in your landscape. If any are not doing well, find out what their preferences are. You may discover that they need to be moved to a more compatible site or removed altogether.

3. CHOOSE PLANTS THAT ARE WELL ADAPTED TO YOUR SITE

Of all the choices you make in selecting plants, this is the most important. Create a landscape that does not depend on irrigation, special seasonal protection, and constant artificial control of diseases and pests.

Native plants occur naturally in a region without being introduced or planted there by humans. Trees, shrubs, and other plants native to a particular locality usually can be relied upon for their cold tolerance and longevity in the area. Even though a plant is native, however, it still may have problems, especially if it is placed in a location that does not meet its requirements. For example, white pine is a beautiful native pine, but if it is planted in an area with poor drainage, it probably will not thrive in that site. Also, white pine is very susceptible to injury by salt, so it

should not be planted along a highway that is treated with de-icing salt in the winter.

Exotic plants are those introduced from another area; however, the growing conditions of that area might be very similar to those of your location. Before choosing an exotic plant, make sure your growing conditions will meet the plant's requirements. Sometimes, exotic plants are more resistant to pests than are their native relatives. For example, *Cornus kousa*, an exotic dogwood that was introduced from the Far East, is less susceptible to infestation by the dogwood borer than is *Cornus florida*, the flowering dogwood, one of our native species.

Your local extension office can provide lists of plants recommended for a specific area and advise you if plants you are considering have problems.

4. SELECT RESISTANT VARIETIES

If a plant is highly susceptible to a certain disease, plant breeders work to develop varieties with built-in resistance. Many disease-resistant varieties, or cultivars, are available at your local nursery. Even if you have to search farther to find them, you will be rewarded in the long run because resistant varieties, when managed properly, will thrive where susceptible ones will not.

Flowering crabapple (*Malus* spp.) is a popular small tree for residential landscapes, mainly because few other trees or shrubs approach its beauty when in full flower. The species is plagued with disease problems such as scab, fireblight, cedar-apple rust, and powdery mildew. Disease-resistant flowering crabapples have been developed; a list is available from your local extension office.

You may have a favorite shrub or tree that is susceptible to problems, but for which no resistant variety has been developed. In this case, you usually can find a more rugged substitute with a similar bloom color, bloom time, fall foliage, bark, or whatever characteristic attracts you to the plant.

5. SELECT HIGH-QUALITY PLANT MATERIAL

Once you have become familiar with your landscape's conditions and have learned about the plants that you plan to install, the next step is to purchase them. Buy healthy, robust, thriving plants. They will become established more easily and will be less likely to introduce a pest or disease problem into your landscape. Remember that "bargain" plants may have a lower rate of survival. These plants usually have been sitting around for months and may have been neglected.

Choose healthy plants that have no signs of harmful insects or their damage. The bark should be free of defects, splits, or soft areas. The soil surrounding the roots should be moist but well drained, and the roots should not be growing in circles around the root ball or protruding from the drainage holes. The root ball should be big enough to support the plant.

Before you buy new plants, make sure you are ready to plant them as soon as they arrive. Use proper planting methods for your new plants and water them regularly until the plants become established, at least through their first season. For current planting recommendations, see fact sheet #3, "Plant With Care."

RESOURCES

Your local library, garden center, and bookstore are good sources for books about plants.

Lists of recommended shrubs and trees for sites with acid or alkaline soil, poor drainage, dense shade, full sun, etc., are available from your local extension office.

FOR MORE INFORMATION

Penn State Cooperative Extension, Delaware Cooperative Extension, and the Southeast Pennsylvania IPM Research Group have been working together to provide information and educational materials on IPM and landscaping.

This fact sheet, "Choose Plants Wisely," is part of a series of educational fact sheets about understanding and using Integrated Pest Management. Other topics in the series include:

- Creating Healthy Landscapes—Introduction
- Plant With Care
- Promote Plant Health
- Keep Plants Well Groomed
- Monitor Pests and Keep Records
- Pest Management Methods

Copies are available from your local extension office.

The Southeast Pennsylvania IPM Research Group is a collaboration of university and industry horticulture professionals who are inspecting landscapes across the region to monitor pest populations and share current IPM data. The group is partially supported by the Pennsylvania IPM Program (PAIPM). For more information about the research group, contact: Penn State Cooperative Extension, Montgomery County, 1015 Bridge Road, Suite H, Collegeville, PA 19426-1179; telephone: (610) 489-4315.

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