

## **Spring is a Great Time to Plant a Diverse Mix of Tree Species**

### *Finding the Right Tree for the Site is Essential*

Trees within communities provide many benefits, such as greater beauty, improved water and air quality, increased energy savings, property values, and wildlife diversity and habitat, noise reduction, and the creation of a better place to live. Over the years a number of pest problems have caused significant tree losses, and there are strong indications that new pest introductions will allow this trend to continue into the future.

At first glance, the future of many community forests in Iowa and the Midwest looks bleak, but with proper planning and management the negative impacts of new pest problems can be significantly reduced. The best way to minimize the potential losses from insect and disease problems and thereby improve the sustainability of the community tree resource is to plant a diverse mix of tree and shrub species in your community or landscape.

In the early to middle 1900's communities all over the Midwest had significant populations of trees that lined streets, business districts, parks, and neighborhoods. In the late 1960's and early 70's all this changed when a problem called Dutch Elm Disease devastated many community tree populations. The fungus that causes this disease killed elms very quickly, and in Des Moines alone it is estimated that as many as 100,000 elms died on public and private property. Elm was such a significant part of many community tree populations that this loss left an immediate void.

Many communities responded to the loss of elms by planting significant amounts of green ash, silver maple, Norway maple, and sugar maple as replacements. Studies of Iowa communities have shown that in some towns over 50% of the tree population consists of ash and maple. If a disease or insect problem is introduced in some communities we could have similar tree loss and devastation to what happened with the elm trees in the 1960's and 70's. Currently, this lesson is being learned by citizens in several states to our east, where an insect called the Emerald Ash borer has decimated ash populations. The Emerald Ash borer is just the tip of the iceberg, however. Other pests such as the Asian Longhorned beetle, Gypsy moth, and the disease oak wilt have the potential to become significant problems in the United States.

What can a community or an individual do to reduce the risk of tree loss caused by insect and disease pests?

- When selecting tree and shrub species select those that are adaptable to local growing conditions and specific site conditions (i.e. soil type, drainage, available light, and growing space).
- Consider tree and shrub species that are native to Iowa whenever possible.
- When selecting specific varieties of trees or shrubs choose those that have good tolerance to potential problems. For example, there are selections of crabapples that have good tolerance to a crabapple disease called apple scab.
- In a community, avoid allowing any one trees species (i.e. green ash) to account for more than 10% of the total tree population, and avoid allowing any one tree genus (i.e. elm, ash, maple, oak, etc.) to account for more than 20% of the tree population.

- In your own project or backyard, the more diversity you have the better. This is important because many disease and insect problems are specific to a particular species or group of trees or shrubs. This way if one specific tree group has a problem, the chance of it impacting other tree groups or species is limited.
- Install the selected plant(s) correctly.
- Utilize proper care and maintenance techniques throughout the life of the plant(s) to maintain good health and vigor. A healthy plant is often more tolerant to potential disease and insect problems.

In summary, there have been a number of pests that have had a significant impact on tree populations throughout Iowa and the Midwest, and there are new pests being introduced all of the time. The best way to reduce the potential impacts of future pest problems is to continue to diversify the plant selection in our communities and home landscapes.