Grasses

Most Americans value lush green lawns, parks, school playgrounds, and athletic fields for aesthetic reasons. But there are other benefits. Grass absorbs water, which helps reduce storm runoff and improve water quality. Lawns also have a significant cooling effect, provide oxygen, can trap dust and dirt, promote healthful micro-organisms, prevent erosion, and filter rainwater contaminants.

In Minnesota, producing grass seed and sod suitable for northern climes is a growing industry. University of Minnesota developments of sustainable, environmentally friendly alternatives to intensive, high-maintenance turfgrass are in high demand. Many grass species popular in other states, such as perennial ryegrass, lack the hardiness to survive a winter of harsh temperatures or little insulating snow. University grass breeders use genetic material from old turf areas in Minnesota, collections from other parts of the world, and materials from research institutions in other states to develop improved hardy turfgrass varieties.

Current efforts in perennial ryegrass breeding focus on improved winter hardiness, and researchers have recently made significant advances, especially for resistance to snow mold disease. Researchers continue to test several species that include Kentucky bluegrass, perennial ryegrass, tall fescue, fine fescue, and a few native grass species. In addition to winter hardiness, they evaluate quality of color, density, texture, mowability, growth habit, seed production, multiple pest resistance, efficient water and nutrient use, and drought tolerance.

Genetic improvement of native grasses such as prairie junegrass into top-performing turfgrass varieties should reduce water, fertilizer, and pesticide inputs, resulting in environmental benefits and reduced costs.

Learn more about research on low-maintenance plant materials and best management practices for lawns and turf with a visit to the research plots on the St. Paul campus and the Minnesota Landscape Arboretum.