Manhattan
Plant Materials Center

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Plant Terminology

Do you know the difference between a native and naturalized species? What about ecotype versus cultivar? Hopefully the following definitions will shed light on these and other commonly used plant terms.

Alien Species – A species introduced and occurring in locations beyond its known historical range. This includes introductions from other continents, bioregions, and also those not native to the local geographic region.

Annual Plant – A plant that completes its life cycle from seed in a single year or growing season.

Biennial Plant – A plant that completes its life cycle in 2 years. The first year produces leaves and stores food. The second year it produces fruits and seed.

Cool Season Plant – A plant that makes its major growth during the cool part of the year, mainly in spring and fall.

Ecotype – A population of plants that become genetically differentiated in response to the conditions of a particular habitat. One ecotype differs from another in specific morphological and physiological traits such as height, hardiness or growth rate.

Germ plasm – Genetic material that determines the morphological and physiological characteristics of a species.

Introduced Species – A species not part of the original flora of the area in question, but introduced from another geographical region through human activity. Introduced should not be confused with invasive.

Invasive Species – A species that demonstrates rapid growth and spread, invades habitats, and displaces other species.

Native Species – A native plant species is one that occurs naturally in a particular region, state, ecosystem, and habitat without direct or indirect human actions.

Naturalized Species – A plant introduced from other areas that has become established in and more or less adapted to a region by long, continued growth there. Does not require artificial inputs for survival and reproduction, and has established a stable or expanding population. Examples are cheatgrass, Kentucky bluegrass.

Perennial Plant – A plant that lives more than two years.

Cultivar (Variety) – An ecotype that has been selected for specific characteristics such as rate of growth, disease resistance, forage yield, or seedling vigor. Most are developed through breeding programs and have specific areas of adaptation.

Warm Season Plant – A plant that completes most of its growth during the warm part of the year, generally in late spring and summer.

Emerald Ash Borer

During the summer of 2002 a new exotic insect was detected in six southeast Michigan counties. This pest, known as the Emerald Ash Borer, is an invasive species originally from Asia and previously unknown in North America. It has also been detected in Windsor, Ontario. To date, it has killed or damaged millions of ash trees in these affected areas. The Emerald Ash Borer belongs to a group of insects known as metallic wood-boring beetles. Adults are dark metallic green in color, ½ inch in length and 1/16 inch wide, and are only present from mid May until late July. The creamy white larvae are found under the bark of ash trees. The borers host range is limited to white, black and green ash trees. Usually the pest's presence goes undetected until the trees show symptoms of infestation. Typically the upper third of the tree will die back the first year, followed by

the rest the following year. The adult beetles typically make a D-shaped exit hole upon emergence from the tree. Diagnostic S shaped tunnels are produced by the larvae under the bark of affected ash species.

Since these pests are highly destructive the Michigan Department of Agriculture has instituted a quarantine on all ash trees and ash wood products in the affected counties to prevent the spread of the ash borer. At this time treatment options for ash logs and lumber include fumigation or kiln drying.

Additional treatments may be permitted once there is evidence of effectiveness in controlling the borer.

Little information is available on the biology and life history of the beetle, thus very limited control or management recommendations exist to date. Aggressive and comprehensive research projects are currently underway to learn more about this pest's biology and develop appropriate management, control and eradication options. In the interim, plant health officials recommend an integrated, comprehensive approach of proper sanitation, diversity in new plantings and practicing sound tree care techniques.

Tribal Outreach in Tahlequah

Pat Broyles, PMC Soil Conservationist, presented two power point programs on March 18, 2003, for the training session entitled "Pesticides and Health: Recognition, Management and Illness Prevention Among Oklahoma Tribes." Environmental staffs from more than a dozen tribes from three states attended the session. Other presenters were from the Environmental Protection Agency, Oklahoma State University, George Washington University, Oklahoma Department of Agriculture, Oklahoma Poison Control Center, the Inter Tribal Environmental Council, the Delaware Nation and Absentee Shawnee Tribe. The first power point program was "Overview of NRCS Programs" with much of the information for that presentation coming directly from the national NRCS web site. NRCS programs discussed included EQIP, CRP, WRP, WHIP, SIP, RAMP, RC&D, PL-566, Conservation Technical Assistance and the Plant Materials Program. A handout listing all Oklahoma tribal liaisons was handed out and Pat emphasized that the tribes should work initially with their local NRCS representative on all programs. A second power point program entitled "Be Careful What You Pick (Up)!", illustrated and discussed the unpleasant ramifications which can occur when you are in the field and work around poison ivy, Canadian wild ginger, trumpet creeper, Virginia creeper and stinging nettles. Additionally the program emphasized practical points that should be followed when working around pesticides, such as wearing proper protective clothing and practicing good hygiene. The long lasting health affects of exposure to pesticides were also discussed.

2002 Commercial Seed Production of NRCS Releases

The Plant Materials Program, in cooperation with a variety of public and private conservation partners, selects and produces improved plants for conservation. Once these plants are distributed to commercial seed growers, those growers then produce large amounts of seed for sale to landowners and land managers. Not only is the produced material used to address local resource concerns, but also provides a significant impact to the local economy.

Nationally, the commercial seed production from Plant Materials Program releases during 2002 was estimated at 17,156,000 pounds of seed. This is enough seed to plant approximately 3.8 million acres. The economic value of this material to growers, distributors, and retailers was estimated at $79,840,000.00.

PMC Trivia

Did you know?

Seed of aromatic sumac, collected just over two miles from the PMC, by Robert D. Lippert, PMS, on September 30, 1958, was later named and released as ‘Konza’ aromatic sumac.

The oldest seed collection archived at the PMC was collected by William R. Kneebone on August 5, 1959. A wild collection of giant dropseed (*Sporobolus giganteus*) was made near Ft. Supply Lake in Woodward Co., Oklahoma.

The number of seeds per pound for sand lovegrass is about 1.5 million while that seems like a lot of seed, consider Lehmann lovegrass with over 6.5 million seeds. In stark contrast the number of seeds in a pound of eastern gamagrass is only around 7,000.