



# What's Working:

## Vegetation Establishment & Maintenance

February 2015

### Containerized and Bare-root Plant Use

- With scarce seed supplies for some of the less common native species, the production of plants can be maximized by starting plants in trays. When starting plants from seed or cutting, the regular 36 to 72 cell trays work well, especially when the clear covers are used. The plugs develop alright for fibrous rooted plants although the plugs aren't deep enough for good survival when planting into dryer soils. But with plants that develop tap roots, their roots will zig-zag and ball up as they try to go down beyond the bottom of the cell (Martin SWCD).
- The University of Northern Iowa, working on the "Iowa Ecotype Project" has been using trays with cone shaped inserts. The 1.5" diameter inserts are 8.25 inches deep and 98 fit in a 1 foot by 2 foot tray. 1" diameter inserts, with a 6.34 inch depth fit a 1 foot by 2 foot tray that holds 200 inserts. This system allows for straighter tap root formation and when transplanted, allows roots to reach deeper, into better moisture conditions than conventional plugs. A dibble bar can be made or purchased that conveniently pokes a cone shaped hole to drop the plugs into. Then all that is needed is to crimp the soil in around the top of the plug (Martin SWCD).
- Tree mats have been useful to suppress weeds when planting bare root conifers, avoid monocultures, select specifications suitable to the site and native plantings hardy to the area (Redwood SWCD).
- It is important to select the right plant for the right location, in particular, selecting plants for the right moisture levels (pictured right). It is beneficial to group species that are found in the same plant community (Shawn Tracy Association of Metropolitan Soil and Water Conservation Districts).
- Planting as early in the season as possible to utilize early season moisture.
- Breaking dormancy of woody species (hackberry, oak, ironwood) before planting.
- Using plants that are healthy and fully rooted in containers.
- Breaking up compacted root systems with a garden weeder.



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- Keeping bare root plants wet/moist until planting.
  - Using craft paper under wood mulch to suppress weeds around containerized plants.
  - Applying approximately 10 layers of newspaper before spreading double shredded hardwood mulch to inhibit weeds. Mulch is pulled aside for planting and a planting hole cut into the newspaper (Rusty Schmidt, Washington Conservation District).
  - Digging planting holes large enough to accommodate the entire root system of bare-root plants.
  - Digging holes 2.5 the width of a container when planting containerized trees and shrubs.
  - Ensuring that root flairs are not deeper than 1-inch below the ground surface when planting trees.
  - Using water holding gels as part of planting when little watering will occur.
  - Using methods to exclude deer and rabbits from damaging newly planted trees and shrubs methods can include solar powered electric fence, bud caps, exclosures, and repellent sprays.
  - Adding wood chips to plantings every two to three years minimizes weed competition.
  - Plants for Stormwater Design is a publication that was designed to aid plant selection for a wide range of stormwater project types, it can be found at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/stormwater/stormwater-management/plants-for-stormwater-design.html>