Windbreak Workshop: Species Selection for Windbreaks

http://csfs.colostate.edu/pdfs/csfsbuyg.pdf

*csfs.colo**state**.edu/districts/**franktown**-district*

Colorado State Forest Service

Species Selection & Points to Ponder

- **What kind of Windbreak?**
- **Tree or Shrub**
- **Deciduous or Coniferous**
- **Elevation**
- **Mature Height and Width**
- **Sun and Shade Requirements**
- **Water Needs**
- **Soils**
- Does it bear Fruit
- Suckering Ability
- Resistance to Insects, Diseases, Cold and Drought
- Rate of Growth
- Flower and Fall Color
- Aspect, if any
- Attraction to Wildlife
- Aesthetics

Caragana

- Growth Form: irregular or hedgelike
- **Crown Density: dense**
- **Size: 8-12 feet high**
- **5-8 foot spread**
- **Drought Resistance: excellent**
- Growth Rate: rapid
- Elevation Range: to 9,500 feet
- Wildlife Value: good: songbirds
- Seasonal Color: yellow spring flowers
- Does well in poor soils

Cotoneaster

- Growth Form: ovoid to irregular
- **Crown Density: dense**
- **Size: 6-8 feet high**
- **3-5 foot spread**
- **Drought Resistance: very good**
- Growth Rate: rapid
- Elevation Range: to 9,500 feet
- Wildlife Value: high: song and game birds
- Seasonal Color: brilliant red-orange foliage

Chokecherry

- Growth Form: ovoid to irregular
- **Crown Density: moderate**
- **Size: 6-20 feet high**
- **6-20 foot spread**
- **Drought Resistance: good**
- Growth Rate: rapid
- Elevation Range: to 9,000 feet
- Wildlife Value: high: song and ground birds; good: small mammals, and browse for deer
- Seasonal Color: golden yellow to orange fall foliage
- Can be poisonous to livestock

Lilac

- Growth Form: round to irregular
- **Crown Density: dense**
- **Size: 8-12 feet high**
- **8-12 foot spread**
- **Drought Resistance: very good**
- Growth Rate: rapid
- Elevation Range: to 8,000 feet
- Wildlife Value: moderately high: songbirds; cover value
- Seasonal Color: fragrant purple or white spring flowers

Native Plum

- Growth Form: irregular
- **Crown Density: open**
- **Size: to 8 feet high**
- **Up to 8 foot spread**
- **Drought Resistance: good**
- Growth Rate: rapid
- Elevation Range: to 8,000 feet
- Wildlife Value: excellent: hoofed browsers; nesting cover and food value
- Seasonal Color: large white flowers in May

Sumac

- Growth Form: irregular
- **Crown Density: dense**
- **Size: to 4 feet high**
- **Up to 8 foot spread**
- **Drought Resistance: excellent**
- Growth Rate: rapid to moderate
- Elevation Range: to 8,000 feet
- Wildlife Value: excellent: many birds
- Seasonal Color: red-orange fall foliage

Nanking Cherry

- Growth Form: round to irregular
- **Crown Density: moderate**
- **Size: to 8 feet high**
- **Up to 8 foot spread**
- **Drought Resistance: good**
- Growth Rate: rapid
- Elevation Range: to 8,000 feet
- Wildlife Value: high: song and game birds
- Seasonal Color: white flowers in spring

Eastern Red Cedar

- Growth Form: pyramidal to irregular
- **Crown Density: dense**
- **Size: 15-20 feet high**
- **10-20 foot spread**
- **Drought Resistance: excellent**
- Growth Rate: slow
- Elevation Range: to 7,500 feet
- Wildlife Value: high: song and game birds; hoofed browsers, good cover
- Seasonal Color: rusty red

Rocky Mountain Juniper

- Growth Form: pyramidal to irregular
- **Crown Density: dense**
- **Size: 15-50 feet high**
- **10-35 foot spread**
- **Drought Resistance: excellent**
- Growth Rate: slow
- Elevation Range: to 9,000 feet
- Wildlife Value: high: song and ground birds, large browsing mammals
- Seasonal Color: evergreen

Ponderosa Pine

- Growth Form: conical to ovoid
- **Crown Density: moderately dense**
- **Size: 40-100 feet high**
- **15-60 foot spread**
- **Drought Resistance: excellent**
- Growth Rate: rapid to moderate
- Elevation Range: to 9,000 feet
- Wildlife Value: high: song and ground birds, small mammals, browsers

Types of Planting Stock from the Nursery

Current sold out stock
See Handout-can go to website to check most current inventory.

Bare Root

- Trees and shrubs
- 1-2 years old depending on species
- Bundles of 25

Small Trays

- Usually 1-2 years old
- Average 3-6” in top height
- Lots of 50

Small Tubes

- Usually 1-2 years old
- Average 3-8” in top height
- Lots of 30

Large Tubes

- Usually 1-2 years old
- Average 5-12” in top height
- Lots of 30

Large Containers

- Usually 1-2 years old
- Average 5-8” in top height
- Lots of 30
- Only aspen, cottonwoods, willows

Extra Large Pot

- Usually 2 years old
- Average 1-2’ in top height
- Sold individually
- Use as replacements

Small Trays

- 21" x 11" x 6"
- 50 Trees

Individual Tube Size

- 6" x 2"
- 190ml.

Colorado State Forest Service

Small Tubes

- Sold in 30 Trees,
- Trays have 98 trees
- 24" x 12" x 9"

Individual Tube Size

- 8" x 1.5"
- 164ml.

Large Tubes

- Sold in 30 Trees,
- Trays have 50 trees
- 24" x 12" x 8"

Individual Tube Size

- 7" x 2"
- 262ml.

Large Containers

- Sold in 30 Trees,
- Trays have 30 trees
- 14" x 11.5" x 8"
- Only Aspen, Cottonwoods, Willows

Individual Tube Size

- 8" x 2"
- 459ml.

Extra Large Pot

- Sold Individually
- 6" x 6.5"
- 2.84L.

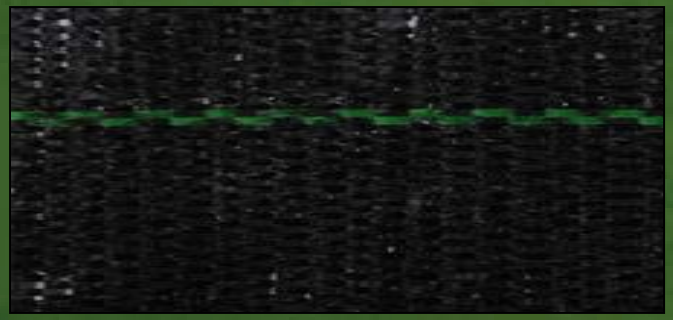
Tree Care

- Polymer
  - Crystal form-use in backfill once hydrated
  - One pound hydrated holds 15-40 gallons of water in soil
  - Essential especially during drought conditions

- Fertilizer Tablets (slow release, 20-10-5)
  - One tablet per tree/shrub
  - Do not put in bottom of hole
  - Keep 1-2 inches away from roots

Tree Care

- Weed Barrier
  - Recommend not using solid black or gray fabric
  - Has woven mesh to allow water to move through



  - Rolls or squares

Tree Care

- Sun/Wind Protection
  - Wood shingles or mesh screen
  - Place on north, west, south side

- Watering
  - First year: 1 gallon/week per tree
  - Second year: 2 gallons/week per tree
  - Third year: 4 gallons/week per tree
  - Fourth year: no supplemental water needed unless drought

Dealing With Wildlife

- Fencing essential with livestock
- Browse will happen
- No plant is resistant

Common Wildlife Issues

- Pocket gophers/voles
  - Girdle trees/roots
  - Clip seedlings

- Deer
- Rabbits
- Mice

Control Options

- Pocket gophers/voles
  - Hardware cloth (1/4” thick) buried at least 6” for voles, 18” for gophers

  - Gopher Getter

- Deer/rabbits
  - Guards, repellants

Thank You! Any Questions?

http://csfs.colostate.edu/pages/seedling-tree-nursery.html