

## Windbreak Workshop: Species Selection for Windbreaks

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

[csfs.colostate.edu/Franktown/](http://csfs.colostate.edu/Franktown/)



## Species Selection & Points to Ponder

- **What kind of Windbreak?**
- **Tree or Shrub**
- **Deciduous or Coniferous**
- **Elevation**
- **Mature Height and Width**
- **Sun/Shade Requirements**
- **Water Needs**
- **Soils –**  
<https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>
- 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

## Buffaloberry



- Growth Form: round to irregular
- **Crown Density: dense**
- **Size: 10 feet high; spreading**
- **Drought Resistance: good**
- **Cold Hardiness: excellent**
- Growth Rate: moderate
- Elevation Range: to 7,500 feet
- Soil Conditions: tolerates alkaline
- Wildlife Value: good: food value: excellent: cover for small game and songbird nesting
- Seasonal Color: not conspicuous
- Miscellany: native: edible fruit for jellies; forms thickets

## New Mexico Forestiera Or Privet



- Growth Form: irregular
- **Crown Density: dense**
- **Size: 10 feet high**
- **Drought Resistance: excellent**
- Cold Hardiness: good
- Growth Rate: moderate
- Elevation Range: to 7,500 feet
- Soil Conditions: moist; alkaline tolerance
- Wildlife Value: good: fruit valuable to quail, songbirds; excellent: cover
- Seasonal Color: not conspicuous
- Miscellany: native; bluish-black fruit

## 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  
go to website

<http://csfs.colostate.edu/seedling-tree-nursery/seedling-nursery-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



## Tree Care

- Polymer
  - Crystal form-use in backfill once hydrated
  - One pound hydrated holds 15-40 gallons of water in soil
  - Essential especially in sandy soil and during drought conditions
- Fertilizer Tablets (slow release, 20-10-5)
  - One tablet per tree/shrub
  - Keep 1-2 inches away from roots



## Tree Care

- Weed Barrier
  - Recommend not using solid black or gray fabric (heat)
  - Has woven mesh to allow water and air to move through



- Rolls or squares



## Weed Barrier Pointers

- Cut an X shape in barrier when planting
- Walk the fabric down
- Lethal heat can develop
- Examine and enlarge holes as seedlings grow
- Girdling of the tree can happen if barrier is too tight against tree trunk



## Tree Care

- Sun and Wind Protection
  - Wood shingles or mesh screen
  - Place on north, west, south side
  - A benefit to all conifers
  - Recommended for Fir and Spruce plantings



## Tree Care

- 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.

## Tree Care

- Winter Watering
  - Water one to two times a month in the winter during extended dry periods without snow cover
  - Water only when air temperatures are above 40 degrees Fahrenheit
  - Apply water at mid-day so it will have time to soak in before freezing night temperatures

## Dealing With Wildlife



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- 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>