

HEATHER BYERS
NE. CERTIFIED NURSERYMAN
GREAT PLAINS NURSERY
WESTON, NE





# Survival in nature requires genetic diversity & adaptability to environmental changes.





## Genetic Diversity

• Seed grown vs. clones



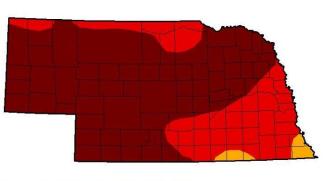


### Adaptability

- Temperature Swings
- Flooding
- Drought

Site	Temp/Dewpoint Before Heat Burst	Temp/Dewpoint After Heat Burst
Grand Island Airport ASOS	73/67 (2:53 a.m.)	99/41 (5:10 a.m.)
Hastings Airport ASOS	73/66 (1:53 a.m.)	97/39 (3:53 a.m.)
Holdrege Airport AWOS	77/68 (12:35 a.m.)	88/47 (2:35 a.m.)
Kearney Airport AWOS	75/66 (12:55 a.m.)	97/43 (3:15 a.m.)
Lexington Airport AWOS	79/68 (11:55 p.m.)	87/48 (2:15 a.m.)
Aurora Airport AWOS	73/63 (5:37 a.m.)	91/46 (6:38 a.m.)

June 2013



Source: http://droughtmonitor.unl.edu/

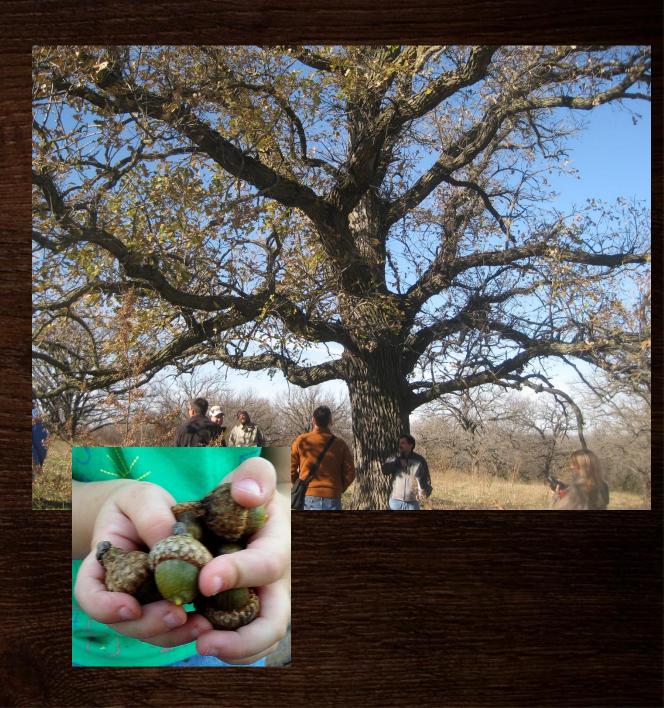
Figure 1. U.S. Drought Monitor Map of Nebraska on September 18, 2012



#### Native Trees

- Utilize native trees that have evolved in our conditions
- Seed source??





#### Tree Selection

- Oaks White group
  - Bur Oak
  - Chinkapin Oak
  - Dwarf Chinkapin
  - White Oak
  - Gambel Oak
  - Shingle Oak
  - Overcup Oak
  - Chestnut Oak
  - Hybrids

- Oaks Red group
  - Red Oak
  - Black Oak
  - Hill's Oak
  - Shumard Oak

#### Relict Bur Oak

Burr Oak Canyon – near McCook, NE





Characteristics of both Post Oak and Gamble Oak

The name refers to the ecology form meaning a plant that exists as a remnant of a formerly widely distributed group in an environment.

#### Tree Selection

- Kentucky Coffeetree
- Boxelder Maple
- Sugar Maple Table Rock, NE
- Ohio Buckeye
- Niobrara Paper Birch
- Northern Pecan
- Black Walnut
- Northern Catalpa
- Hackberry
  - Leeman Springs (Hackberry Hollow)

- American Sycamore
- Prairie Gold Aspen
- Cottonwood
- Ironwood
- Pawpaw
- Black Cherry
- American Plum
- Chokecherry
- American Linden
- American Elm

## Birds, Bees & Butterflies

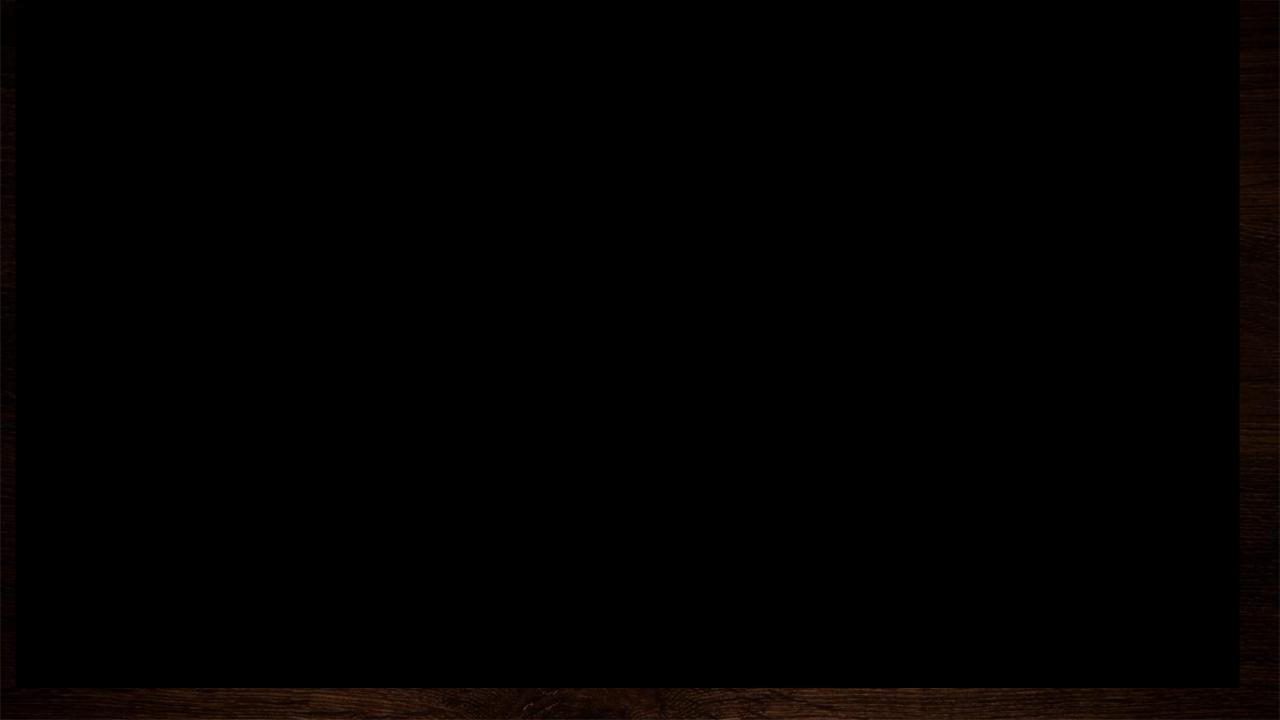


Oaks support 534 species of caterpillars











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