

Garry Oak Planting Practices in Central WA

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Restoration planting field

Objective: Evaluate the effects of four factors on seedling survival, growth and condition after one growing season.

- Age at planting (1 yr vs. 3 yrs)
- Irrigation (Y vs. N)
- Plastic mulch (Y vs. N; below)
- Tree shelters (Y vs. N; below)

Background: Garry oaks are...

- the only oaks native to the Pacific Northwest
- important food and habitat sources for wildlife (Lewis' woodpecker at right)
- culturally valuable
- threatened by development
- threatened by conifer encroachment



Age: 1 yr old seedlings...

- ➔ root:shoot at planting (4.2 vs. 1.9)
- ➔ survival (51% vs 34%)
- ➤ leaf index
- ➔ diameter growth

Irrigation...

- ➔ soil moisture
- ➤ air temperature
- ➔ humidity
- ➔ survival (57% vs. 28%)

Plastic mulch...

- ➔ soil moisture
- ➔ survival (63% vs. 22%)
- ➔ leaf index
- ➔ condition

Tree shelters...

- ➔ air temperature
- ➤ humidity
- had no significant effects on seedlings
- moderated effects of other treatments