

## Single Treatment, 45 years after juniper establishment

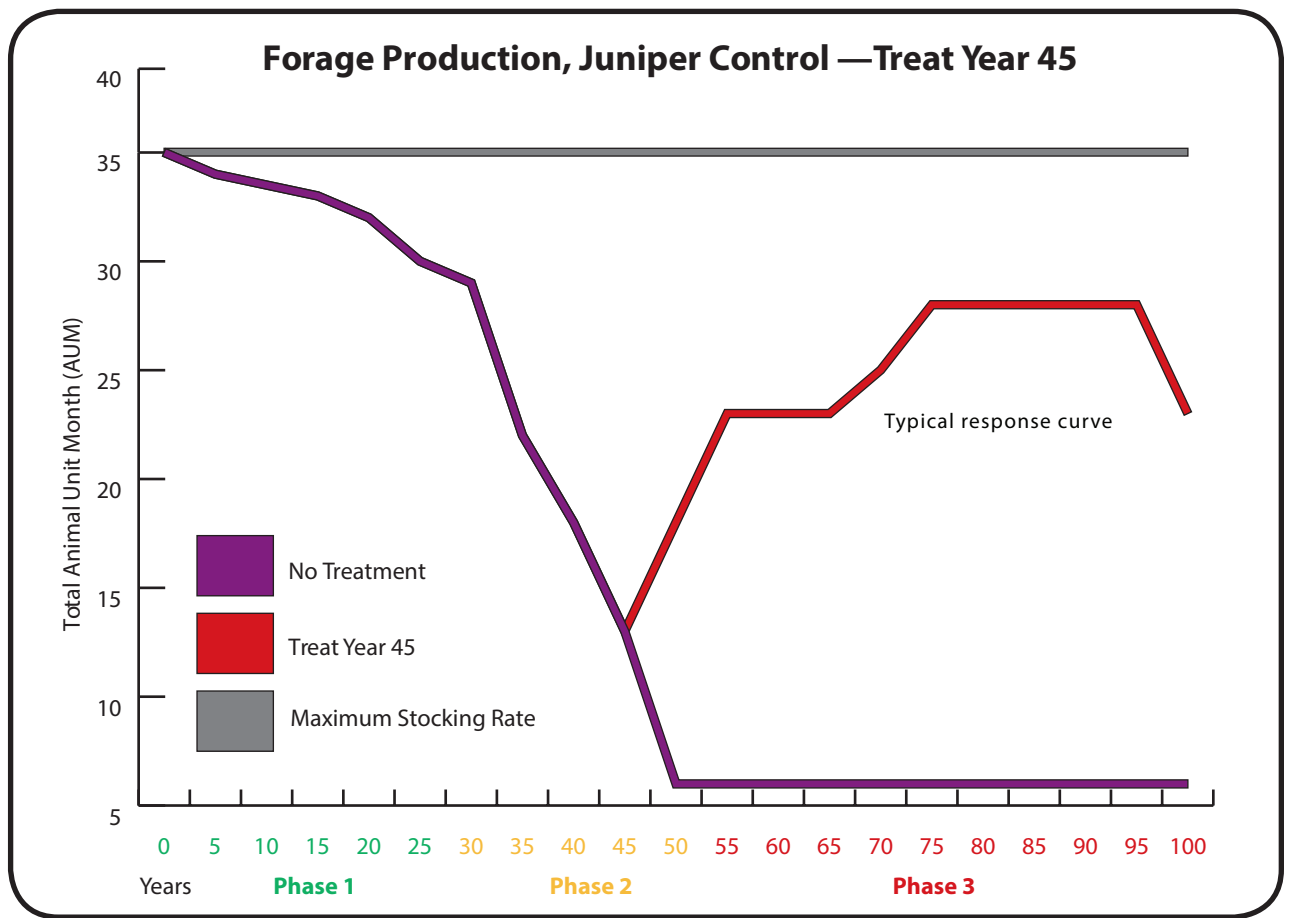
- **Total Treatment Cost (\$/acre): \$200**
- **Evaluation Period: 75 years**
- **Increased Carrying Capacity (average AUMs/acre/year): 0.159**
- **Cost per AUM (\$/AUM): \$24**
- **Annual Net Benefits (\$/acre/year): -\$2.92**

### Phase III Juniper:

Trees are the dominant vegetation and the primary plant layer influencing ecological processes on the site. Grasses and forage production is inhibited or may be removed completely by dense juniper stands.

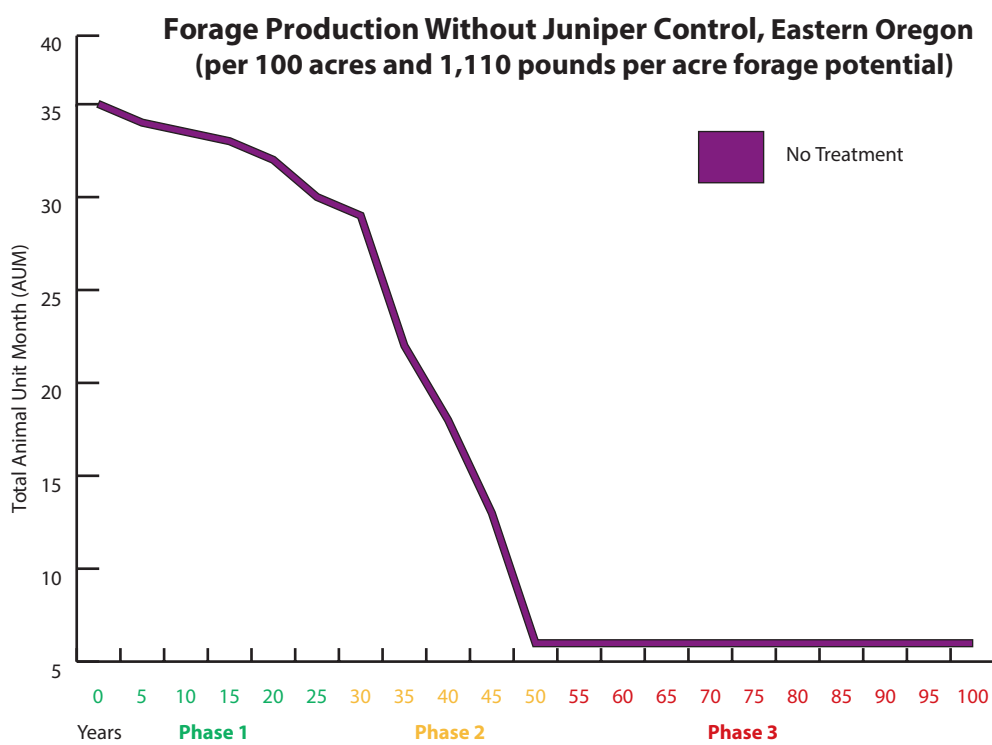
### Treat During Year 45:

- Treat dense juniper, re-establish understory
- Mechanical treatment cut/pile, weed control, drill seed, defer grazing two years
- Forage production has the chance to increase above pre-treatment levels but may never reach site potential amounts
- Net forage benefits are -\$2.92 per acre/year



Graph: On JD Clayey ecosite per 100 acre and 1,100 pound/acre forage potential "Year 0" represents juniper establishment.

## PHASE III JUNIPER



### Not Treating Juniper

**Evaluation Period: 75 Years**

**Decreased Carrying Capacity (Avg. AUMs/Ac/Yr): -0.17**

**Annual Net Lost Benefits (\$/Ac/Yr): -\$2.27**

### Phase III Treatment Benefits:

- Potential increase in forage quality and quantity
- Reduced erosion
- Improved soil health
- Potential to increase in-stream water
- Increased water infiltration
- Potential to reduce wildfire hazard
- Reduced probability of damaging fire
- Increased real estate value
- Increased recreation/hunting
- Improved wildlife habitat
- Harvested wood products

### Phase III Treatment Risks:

- Short term costs of treatment
- Long term cost of re-treatment
- Labor and time commitment
- Potential failure of treatment
- Fire treatment and liability
- Potential for annual grass invasion
- Potential for high fire severity
- Loss of forage production
- Potential low return on investment

**Recommendations (Phase III):** The optimal treatment period for treating juniper has passed and a threshold has been crossed once the juniper is considered Phase III. Restoration work will require a large amount of capital and activities that have a low rate of success. Treatments may have to be repeated multiple times for success, and the likelihood of juniper re-invasion is high. Typically, it will take a relatively juniper-free restored range site about 30 years to enter Phase II. Note: Juniper treatment costs, forage response, timelines and actual numbers will vary with specific site conditions.