

Habitat Management for Deer: Beyond the Food Plot

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Think Holistically!

Quality Deer Habitat =



White-tailed Deer and Habitat

- Generalist
- Adaptable
- Ruminant
 - Converts native foods to high protein content (17% CP)



Deer Habitat

- Food
 - Nutrition
 - Palatability
- Cover
- Water not limiting
- Seasonality



Seasonal Foods

- **Fall & Winter**
 - Acorns, fruits, evergreen leaves, and green stems
- **Spring & Summer**
 - Legumes, other forbs, fruits, and tender woody growth



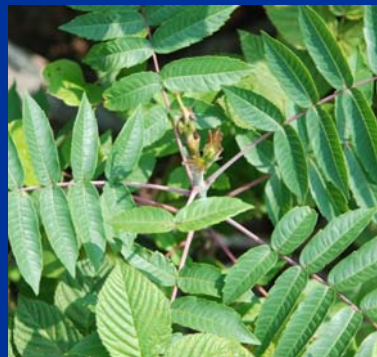
Mountain Browse

- Greenbrier
- Blackgum
- Buffalo-nut
- Strawberrybush
- Hollies
- Blackberry



Browse

- Oak
- Grape
- Sourwood
- Beautyberry
- Poison Ivy
- Red Maple
- Yellow Poplar
- Sumac



Forbs

- Legumes
 - Beggar's-lice →
 - Lespedeza (native)
 - Partridge Pea
- Goldenrod
- Ragweed →
- Geranium
- 3-seeded Mercury



Forbs

- Pokeweed →
- Prickly Lettuce
- Sunflowers
- Water primrose
- Bedstraw
- Old field Aster →
- Stick-tight



Rarely Eat

- Tough woody (high lignin)
- Ferns
- Grasses (warm and cool season)
- Sedges
- Rushes

Tall Fescue



Soft Mast Foods (Fruits)

- Blackberry
- Blueberry
- Plum
- Persimmon
- Dogwood
- Wild grape
- Honeylocust
- Beautyberry
- Holly
- Sumac
- Black Cherry
- Poplar Flowers
- Pokeweed
- Fungi



Acorns

- Critical in fall and winter
- High in carbohydrates
- Annual production varies
 - White oaks mature in 1 year
 - Red oaks mature in 2 years
 - Promote oak species diversity

Southern Red Oak



Seasonal Cover Requirements

- **Summer Thermal**
 - SMZs
- **Fawning Cover**
 - Fallow fields
 - NWSG plots
- **Bedding Cover**
 - Clearcuts, dense pine regen., fallow fields
- **May be limiting in western NC**



Management Practices

Habitat Quality

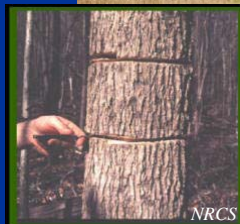
- **Depends on:**
 - **Soil Fertility**
 - **Soil phosphorus a predictor**
- **Piedmont and floodplains best**
- **Address the limiting factor**
 - **Winter and late summer stress periods**

High Habitat Diversity

- Promote interspersion and edge
- Dr. Harper's mix:
 - 45% Oaks and Mast Producers
 - 30% Cover [early-succession]
 - 25% Old Fields and Cropland
 - 2-5% Food Plots

Edge Management

- Soften edges
 - herbicides
- Daylight roads
- Thin timber
- Girdle trees



Protect SMZs

- High acorn and mast production
- Thermal cover and water
- Productive soils
- Travel corridors

SMZs across managed landscape



Early Succession Habitat

- After timber harvests/disturbance
- High forage quantity
- High fruit production
- Disperse smaller (< 40 acre) cuts

Disperse clearcuts



Thin and Burn

- 30% of forest floor receiving sun
- 70 ft² BA/acre or less
- Follow thins with prescribed burn



Prescribed Fire

- ↑ CP, P in browse
- New growth palatable
- Increased mast production
- Dense understory

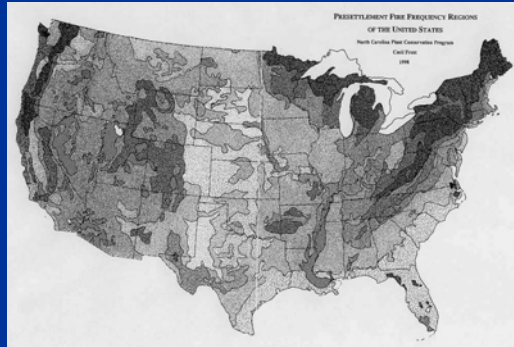


Burning in the mountains

fire VS FIRE

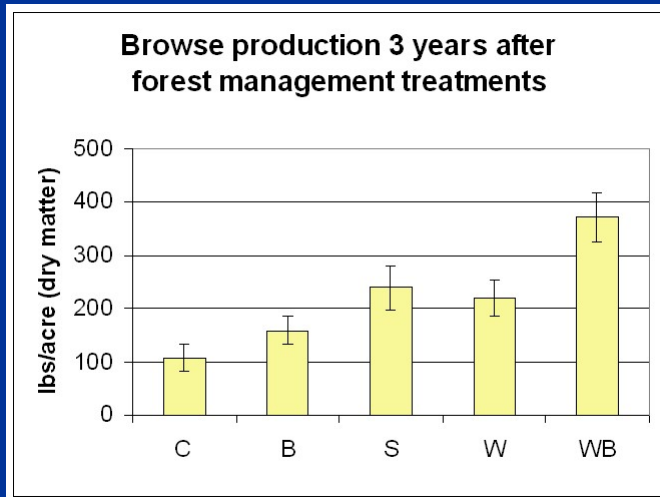
- Must burn repeatedly
- More often - ridgetops and SW slopes
- Best with sunlight

*Mountains burned at
least every 25 years*



CUT TREES & BURN

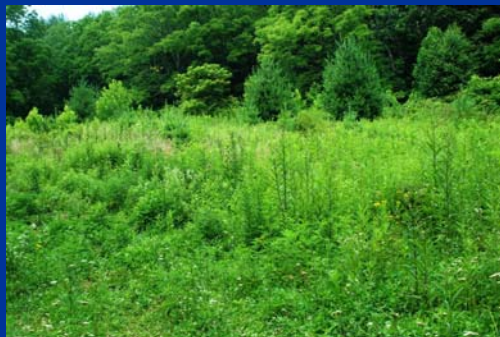




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Old-Fields

- KILL cool-season grasses
- NWSGs, forbs, and shrubs
- Rotate disturbance
- **BURN**
- **Disk**
- Mow



Dr. Harper's Planting Mix

- 2 lb Switchgrass
- 1 lb Big Bluestem
- 1 lb Indiangrass
- 1 lb Broomsedge
- 2 lb Forbs



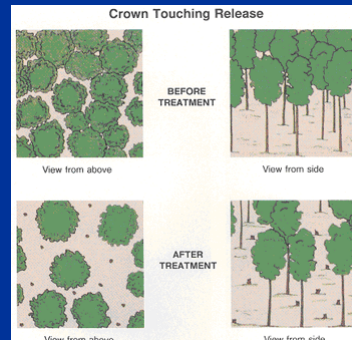
Acorn Production

- 20ft² (or 20% or 45%) mast producers/acre
- Best production from:
 - Productive individuals
 - > 50 year old trees
 - 14-24" dbh trees
 - Large crowns



Oak Management

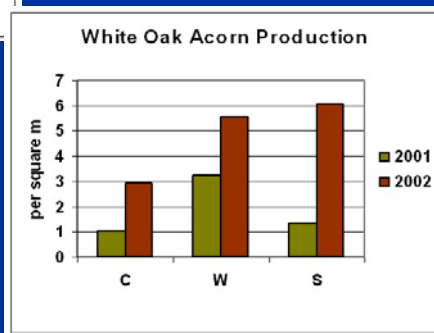
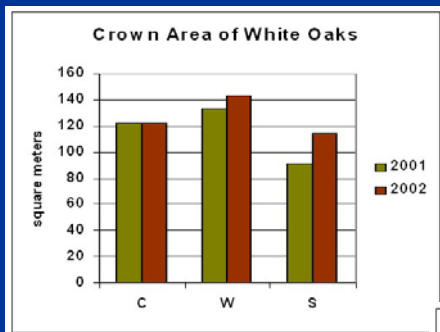
- **Crop-tree Release**
 - Remove undesirable species
 - Favor mix of oak species
 - Release crowns



Before/after C.T.R.

Fertilization – Are You Rich?

- Success varies by soil, rate, etc.
- “More acorns”? “Sweeter acorns”?
- Some evidence for:
 - ↑ forage biomass and nutrition
 - But:
 - Irrelevant where forage present
 - Benefits short-lived



Craig Harper, Univ. Tenn.

Plantations

- Control fescue before planting
- Thin EWP
- Mow less frequently
- Plant between rows



Summary

- Avoid “feel good” practices
 - Ex. Planting Sawtooth Oak
- Manage for plant & habitat diversity
- Thin and Burn
- Release mast trees

*Legumes and forbs dominate
burned hardwood stand*



C. Harper