



Herbicides: When? Why?

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Herbicides: When? Why?

- Herbicides 101
- Herbicide Programs for Timber Management
- Prescription Factors
- Product Strengths and Weaknesses: Which Product Do I Use?
- Invasive Species

Herbicides 101: Benefits of Herbicides

- More Cost Effective Than Mechanical Methods
- Controls Undesirable Vegetation
- Increases Growth Rates of Crop Trees
- Reduces Fire Susceptibility
- Improves Wildlife Habitat
- Improves Aesthetics
- Easier Access To Timber Stands
- Improves Planting Conditions

Herbicides 101: Herbicide Activation

- Foliar active
- Soil active
- Dual

Herbicides 101: Herbicide Types

- Pre-Emergent Herbicide: Applied to the soil before the undesirable vegetation can germinate. Disrupts the germination process or kills the vegetation as it germinates from its seed
- Post-Emergent Herbicide: Applied to the foliage and/or the soil. Used when undesirable vegetation already exists on the tract. Herbicide moves from site of absorption to other areas of the plant

Herbicides 101: Herbicide Treatment Methods

- Most common
 - Broadcast-usually aerial, treats entire area
 - Banded-more focused, usually with motorized ground equipment or backpack
 - Basal Bark-very specific, backpack sprayer
- Cut Surface, Hack & Squirt, And Injection

Herbicide Programs for Timber Management

- Site Preparation
- Herbaceous Weed Control
- Early Release
- Mid Rotation Release

Site Preparation

- Eliminates undesirable vegetation in order to increase the survival and growth rate of desired trees
- Prevents competition from resprouting
 - Residual Effect
- Timing: Mid June to Leaf Drop

Herbaceous Weed Control

- Critical time for pines
 - 1st & 2nd growing seasons
- Controls weeds & grasses that compete for moisture, sunlight, nutrients, and rooting space
- Decreases seedling mortality
- Increases growth rates
- Limited on LL/Slash Pine
- Timing: Late February to May

Early Release

- No site prep treatment
- Controls hardwood brush competition
- Increases growth rate of pine stands
- Enhances wildlife habitat
- Timing: Mid July to leaf drop

Mid Rotation Release

- No previous herbicide treatments
- Post thinning operations
- Controls hardwood brush competition
- Enhances wildlife habitat
- Timing: Mid August to leaf drop

Prescription Factors: Site Prep

- Previous stand characteristics
 - Target species: P,HW, or both
- Residual pine
 - 2 options: Rx or fire
- Resprout status and Soil type
 - Determine usage rate or GPA

Prescription Factors: Site Prep

- Early or late season
 - Burning window, harvest timing, HWC(Aug 15)
- Soil active product issues
 - SMZ
- Future Plan
 - More options if planting LL/slash

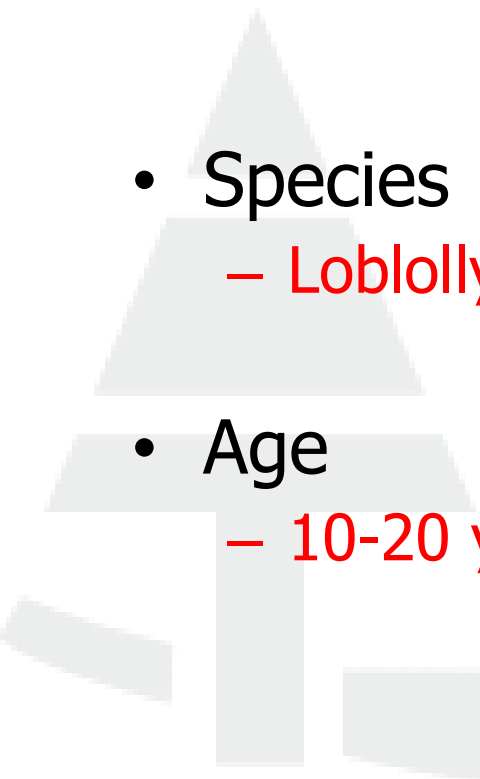
Prescription Factors: HWC

- Species
 - Loblolly or LL/slash
- Bare ground
 - Lower GPA
- Old field conversion
 - Higher GPA

Prescription Factors: Early Release

- Species
 - Loblolly: 1 yr, higher usage rates with no previous SP
 - LL/slash: 2-5 yr only, lower usage rates required, never use surfactant, after Aug 15

Prescription Factors: Mid Rotation Release

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- Species
 - Loblolly only, over the top(aerial)
 - Age
 - 10-20 yr

Product Strengths & Weaknesses: Which Product Do I Use?

- Oust Extra (DuPont)
- Escort XP (DuPont)
- Oustar(DuPont)
- Arsenal AC (BASF)
- Chopper GEN2 (BASF)
- Accord XRT II (DOW)
- Forestry Garlon XRT (DOW)
- Milestone (DOW)
- Surfactants (RRSI)

Oust Extra (DuPont)

- Used in site prep, woody release, & HWC
- Broad spectrum grass & broadleaf control
- Foliar and soil active
- Commonly used in late season SP for HWC

Escort XP (DuPont)

- Used in site prep, woody release, & HWC
- Great on legumes and broadleafs
- Elm suppression
- Briar control
- Kudzu
- Foliar and soil active
- Release application: Loblolly only

Oustar (DuPont)

- Used in HWC
- Broad spectrum grass & broadleaf weed control
- Use early on exposed soil
- Primarily soil active

Arsenal AC/Chopper GEN2 (BASF)

- Arsenal-Used in site prep, woody release, & HWC
- Chopper G2-site prep only
- Broad spectrum grass, weed, & hardwood control
- Weak on elm, blackberry, redbud, and locust

Arsenal AC/Chopper GEN2 (BASF)

- Foliar and soil active
- Arsenal AC 4# Active
- Chopper G2 2# Active (better for waxy species)

Accord XRT II (Dow)

- Used in site prep
- Surfactant added
- Better browning
- Great on most HW, pine, & grasses
- Weak on water oak & red maple
- Foliar active

Forestry Garlon XRT (Dow)

- Used in site prep
- Excellent on waxy species (gallberry, yaupon, wax myrtle)
- Good additive for pine control
- Safe on grasses
- Foliar active

Milestone (Dow)

- Guaranteed pine control when used with Accord XRT II and Arsenal AC
- Great on kudzu & mimosa
- Safe on grasses
- Foliar and soil active

Surfactants (RRSI)

- Increases deposition of spray droplets
- Increases penetration of active ingredient

Invasive Species

- Kudzu
 - Over the top of pine: Escort XP (DuPont)
 - Site Prep application: Milestone (Dow)
 - Under hardwoods: Transline (Dow)
 - Another option: Tordon (Dow) RU herbicide
 - 6 months post spray when planting pines
 - Aerial application: not preferred method
 - Water volume: Higher GPA
 - Spot application
 - Usually 3-4 yr process

Invasive Species

- Cogongrass
 - Arsenal AC/Chopper GEN2 (BASF) + Accord XRT II (Dow)
 - Timing: Late Summer to Fall
 - May require spot treatment in Spring
- Privet
 - Arsenal AC/Chopper GEN2
 - Timing: Late Summer to Fall

Conclusion

- No universal prescription
- Site specific based on species to be controlled, soils, proximity to streams and sensitivity of adjacent vegetation
- Tank mix of herbicides usually do a better job than a single herbicide
- Always read and follow label directions for use



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