

Early Successional Plant Communities

Managing perspective and high-quality habitat for game and non-game species



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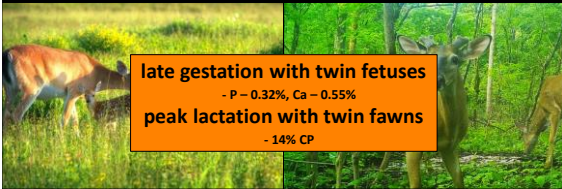
Early successional communities (**old-fields**)

Dominated by a (*diversity of*) disturbance-dependent shade-intolerant annual and perennial herbaceous vegetation (Pyne 1982, Harper 2017)

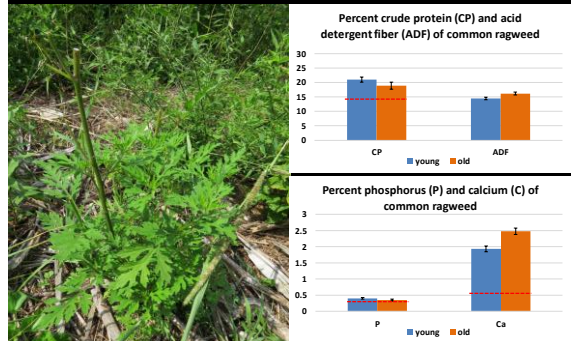


white-tailed deer and **old-fields**

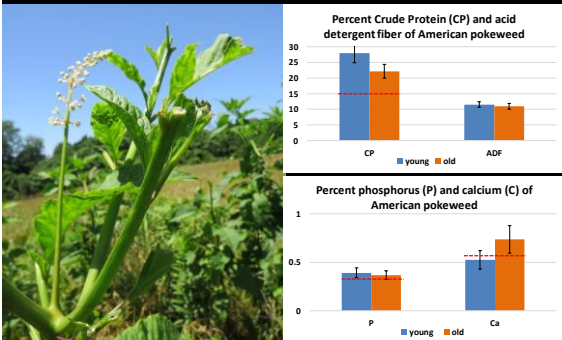
Old-field communities provide many important white-tailed deer forages (forbs) during a nutritionally demanding time (April - July)



Common ragweed (*Ambrosia artemisiifolia*)



American pokeweed (*Phytolacca americana*)



wild turkeys (**and bobwhite**) and **old fields**



Pollinators and old fields



What's the problem?

All the common big picture factors....



What's the problem?

- Old-field communities have been declining throughout the US (Brennan 1991, Noss et al. 1995, Noss 2013)
 - 1982-2017 – nearly 44.2 million acres converted to developed land (USDA 2020)
 - 1982-2017 – 14.7 million acres of old-field communities lost (USDA 2020)



Salt in the wound...

nonnative invasive sod-forming grasses



Biological desert



Much better...right?



FINALLY...perspective...



WHY?



Perspective – the biggest battle



Good news!



Field prep – a key ingredient



Calibrate your equipment 1/128th acre method



Herbicide labels

Group	II	HERBICIDE
Active Ingredient:	glyphosate, N-(phosphonomethyl)glycine,	50.2%
dimethylamine salt.....		49.8%
Other Ingredients.....		100.0%
Total.....		

Contains 5.07 lb per gallon glyphosate, dimethylamine salt (4 lb per gallon glyphosate acid).

Product Information

Accord® XRT II herbicide is a broad spectrum, systemic, postemergence herbicide with no soil residual activity. It is intended for control of annual and perennial weeds and woody plants and brush. It is formulated as a water-soluble liquid containing surfactant; no additional surfactant is needed.

Time to Symptoms: The active ingredient in this product moves through the plant from the point of foliage contact into the root system. Visible effects on most annual weeds occur within two to four days, but on most perennial weeds visible effects may not occur for seven days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visible symptoms. Visible effects are a gradual wilting and yellowing of the plant that advances to complete browning of above ground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity or when translocation is mostly down to the roots, i.e. autumn for perennial plants or woody plants.

Mode of Action: The active ingredient in this product inhibits an enzyme. This enzyme is found only in plants and microorganisms that are essential to forming specific amino acids.

www.cdms.net

Spray grasses - broadcast



Results...



Follow-up herbicide applications spot-spray - be vigilant!



Common problems sericea lespedeza

- nonnative invasive warm-season forb
- trifoliate - 3 leaflets per leaf
- looks like a small "Christmas tree"
- "blunt" ended leaflets



Common problems

Johnsongrass

- nonnative invasive warm-season grass
- spreads by rhizomes and seed
- perennial grass
- white midrib



Common problems

bermudagrass

- nonnative invasive warm-season sod-forming grass
- spreads by stolons
- "fine" blades, seedhead, and texture



Plant ID is important



Early summer



Summer



Late summer



Fall



Fall



Winter

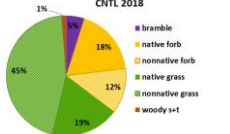


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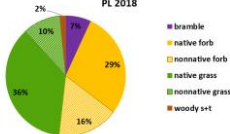


Research results (n=15 | 3 YAT)

Relative percent coverage of vegetation groups,
CNTL 2018



Relative percent coverage of vegetation groups,
PL 2018



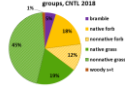
Maintained in tall fescue

- 67% grass (45% nonnative)
- 30% forbs (12% nonnative)
- **TOTAL - 57% nonnative species**

Tall fescue removed AND planted

- ~~39%~~ **35% grass (88% nonnative)**
- ~~35%~~ **33% forbs (16% nonnative)**
- **TOTAL - 26% nonnative species**

Relative percent coverage of vegetation
groups, CNTL 2018





Pollinator food resources

