



Methods for interseeding legumes into CRP sod

SUMMARY

Seeding legumes into existing pastures is not new; now the practice can earn points in CRP applications.

Many of the re-enrolled acres during the 15th Conservation Reserve Program (CRP) sign-up that ended in March are subject to legume interseeding agreements signed by the landowners. It is likely that acreage accepted in future signups also will have this feature.

CRP contracts were accepted based on their payment bid and their ranking in the Environmental Benefit Index (EBI). For example, 20 extra EBI points were awarded if the CRP landowner agreed to establish a 20 percent stand of legumes into a bromegrass sod. This practice would benefit wildlife because it increases the number and kind of insects and provides seeds, a food source for many birds and small mammals. One drawback in legume establishment in CRP grass stands is a

potential increase in gophers because they like to chew on legume roots.

Seeding legumes into existing pastures is not new. There are many ways to do this, some of which are summarized in the following tables along with herbicide products. Choose and use herbicides carefully. Their proper use can be helpful but improper choices can be a hindrance. Variations of these methods can and probably will be used; weather will have the most impact on what is successful. Whatever method you choose, get prior approval from your local Natural Resources Conservation Service (NRCS). Rules about mowing, seeding, and herbicide applications on CRP ground are subject to change and interpretation by each county NRCS office.



At least 6-8 inches of bromegrass regrowth is recommended in the spring before application of translocated herbicides for burndown. This practice helps promote the establishment of interseeded legumes.

Prepared by Jack Van Laar, extension education director in Decatur County; Mike White, extension crops field specialist, and Steve Barnhart, extension agronomist.

IOWA STATE UNIVERSITY
University Extension

Table 1. Summary and evaluation of legume interseeding methods.

<i>Method</i>	<i>Timing</i>	<i>Success rating</i>	<i>Comments</i>
No sod pre treatment followed by:			
Frost seeding	Late January to early March	Good	All commonly grown legumes. Red alsike, ladino clover best, then alfalfa, crownvetch, and birdsfoot trefoil.
Broadcast seeding	April to early May	Poor	Early April best; frequent rains needed for 2–3 weeks after seeding.
No-till drill seeding	Late March to early May	Fair	Best done early.
Clipping for sod suppression followed by:			
Frost seeding	Late January to early March	Excellent	For frost seeding, no-till drill & broadcast: Mow grass in the fall and again 1–2 months after seeding to reduce grass competition. One or two summer mowings also may be needed.
No-till drill seeding	Late March to early May	Very good	
Broadcast seed	April to early May	Fair	
Light tillage for sod suppression followed by:			
Broadcast or drilled seeding	April to early May	Fair	Better chance than broadcast alone. Frequent rains needed after seeding. Rolling or cultipacking after seeding helps establishment. Mow grass 1-2 months after seeding to reduce grass competition.
Spring broadcast herbicide suppression with:			
No-till drill seeding	April to early May	Excellent	Burndown sod with Paraquat or Gramoxone, or a reduced rate of Roundup Ultra ¹ or Touchdown ¹ 1 week prior to 3 days after seeding. Mow grass in the fall and again 1-2 months after seeding to reduce grass competition. One to 2 summer mowings also may be needed.
Broadcast seeding	April to early May	Fair	
Light tillage then seeding	April to early May	Very good	
Fall or spring strip sod killing with:			
Frost seeding	Late January to early March (fall spraying)	Excellent	Strip spray 30–50 percent of area with killing rate of Roundup Ultra or Touchdown in 1–2-ft. strips ² .
Broadcast seeding	April to early May	Fair	Paraquat or Gramaxone recommended 1 week prior to 3 days after seeding.
No-till drill seeding	March to early April (fall spraying); April to early May (fall or spring spraying)	Excellent	Roundup Ultra or Touchdown recommended for spring or fall application. Fall application only for frost seeding.
Light tillage then seeding	April to early May	Very good	Mow grass 1-2 months after seeding to reduce grass competition. One to 2 summer mowings also may be needed.

¹ CAUTION: This option is risky and may permanently injure sod. Neither Roundup Ultra nor Touchdown sod suppression is backed by Monsanto or Zeneca, respective manufacturers of these products.

² Achieve with 15-degree narrow pattern nozzles on 30-inch centers or plug 2 of every 3 nozzles on boom with original nozzles 15–20 inches apart. Wait until grass is 6–8 inches tall for spring spraying.

Table 2. Herbicides options to consider for CRP sod suppression or broadleaf weed control in preparation for seeding legumes or warm-season grasses into existing CRP or sod sites.

<i>Herbicides</i> ¹	<i>Use</i>	<i>Weeds controlled</i>	<i>Comments</i>
Fall broadleaf weed control to prepare for spring legume seeding			
2,4-D, Banvel	Alone or in combination. Best in fall prior to seeding.	Broadleaves, especially biennials like musk thistle and wild carrot.	Spray before ground freezes.
Banvel, Roundup Ultra, Touchdown, Tordon 22K	Fall spot treatments prior to spring seeding.	Canada thistle and other perennial broadleaf weeds.	Spots treated with Tordon 22K may kill legumes seeded within them in the following spring.
Fall or spring sod suppression			
Roundup Ultra	Fall or spring. Broadcast or strip killing burndown.	Non-selective. Full rates kill all; reduced rates may only suppress.	Broadcast rates: 1–1.5 qt./acre for fall and 2–2.5 qt./acre for spring
Touchdown	Fall or spring. Surfactants always must be used.	Non-selective. Full rates kill all; reduced rates may only suppress.	About 2/3 rate of Roundup Ultra. Only 1 application per year.
Spring sod suppression to prepare for spring legume seeding			
Gramaxone Extra	Perennial grass suppression 1 week before to 3 days after interseeding in spring	Some annuals; perennial cool-season grasses only stunted for 3-4 weeks.	Rate: 24–48 oz./acre
Spring treatments for use with spring seedings of warm-season grasses			
Aatrex 4L	Establish switchgrass with special 24C label	Cool-season grasses and many broadleaves.	Must have Iowa 24C label in hand while applying.
Plateau	Establish bluestem, Indian grass, sideoatsgrama, many wildflowers; NOT switchgrass	Over 70 grasses and broadleaf weeds on label.	Rate: 4–12 oz./acre; NOT for pasture or hay (Apply dormant season, during establishment or post-emergence).

¹ Trade name products shown; parent companies are as follows (in parentheses): Banvel (BASF); Roundup Ultra (Monsanto); Touchdown (Zeneca); Tordon 22K (Dow Elanco); Aatrex (Novartis); Gramaxone Extra (Zeneca); Plateau (American Cyanamid). Listing in no way implies endorsement. Herbicides may be tank-mixed for more broad spectrum and residual control. Make sure to read and follow all label directions.

This bulletin is part of a series to help CRP contract holders assess the land-use options available to them when the contracts expire. The series was funded in part by the Leopold Center for Sustainable Agriculture. Other bulletins in the series and additional information are available at county ISU Extension offices.



LEOPOLD CENTER

Table 3. Herbicide persistence, carryover concerns for interseeding or returning to row crops.

Product ¹	Crop	Minimum rotation level (MRI)	Comments
Ally (metsulfuron)	Red, white, sweet clover	12 months	High pH = longer persistence.
	Bluegrass, orchardgrass, brome, timothy, ryegrass	6 months	
	Fescue	18 months	
	Corn, soybeans	34 months	
Curtail (clopyralid & 2,4-D) or Curtail M (clopyralid & MCPA)	Grasses, corn	30 days	Bioassay strongly advised before planting sensitive broadleaves.
	Alfalfa	12 months	
	Soybeans	12–18 months	
Stinger (clopyralid)	Grasses, corn	0	Bioassay strongly advised before planting sensitive broadleaves.
	Alfalfa	10.5 months	
	Soybeans	10.5–18 months	
Tordon 22K (picloram)	Most legumes and broadleaf crops	36 months or use field bioassay	

¹ Common name in parentheses (): parent companies are as follows (in parentheses): Ally (DuPont); Curtail, Stinger and Tordon 22K (Dow Elanco). Listing in no way implies endorsement. More information on rotational restrictions or how to do bioassays available by calling Dow Elanco, (800-258-3033) or DuPont, (800-574-4769).

