



Low Impact Reseeding of Grass Stands

Conservation Practice Information Sheet

(WAPMC 2011)

Interseeding, fertilizing and/or harrowing are rarely effective in revitalizing old CRP stands. Reseeding requires some common sense and avoidance of short cuts.



Weeds such as yellow starthistle and cheatgrass dominate some old CRP grass stands. Reseeding these fields is a costly practice so it is important to be successful the first try.



Harrowing improves decomposition of surface litter and stimulates weed seed germination. This particular flex tine harrow has high clearance so it would be less likely to collect debris.

Figure 1 Photo courtesy: Remlinger Mfg.

Low Impact Reseeding in a Nutshell:

Unlike no-till, low Impact seeding requires some soil disturbance prior to seeding. Fields are mowed and harrowed prior to chemical fallow applications. Seeding occurs several months later.



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Situation:

Some of the original CRP plantings are in rough shape. Plants have become decadent and the weeds have moved in. Revitalizing old stands via interseeding, fertilizing, and/or harrowing is rarely effective. Some growers are looking to reseed these fields.

Things to Consider:

- Controlling the existing vegetation is paramount. This requires thorough coverage of the leaf surfaces with a systemic herbicide such as glyphosate. Standing dead cover and weed carcasses will greatly reduce coverage.
- Some of the stands might be over 15 years old. Conditions in the field have changed since it was last farmed. Deep cuts might have developed in ravines. Rocks, concrete pieces, rotten fence posts, and metal might have been discarded or unearthed during this period. These are hard on seeding equipment.
- Stands that were planted to species such as tall wheatgrass will be very clumpy. These large clumps will interfere with seed placement and are hard on equipment.
- Plant disease, insect problems and voles or field mice may have resulted in existing stand failure.
- Noxious weed species such as rush skeletonweed, dalmation toadflax, yellow starthistle and leafy spurge are very persistent and require additional control measures.
- Grass debris and weed carcasses degrade slowly if exposed to the atmosphere. Getting the tissue in contact with the soil accelerates breakdown.
- New seedings require firm weed free seedbeds and good seed to soil contact! Seeding into duff will not work.
- In most cases, the earliest one can expect to replant a field is after at least a 9 month fallow period. In many cases (i.e. stands of smooth brome or species that produce high amounts of seed such as crested wheatgrass) it may require two complete growing seasons to completely control existing stands prior to replanting. Consult with FSA when planning your reseeding timeline!

Preplanting Process:

Reduce the standing cover. Flail mowers and rotary mowers do an excellent job of reduce standing cover and chopping the material into smaller pieces that will lay on the ground and degrade faster. Sickle-bar mowing and swathing are less effective. Burning, while very effective, may not be allowable.

Harrowing or a similar practice will probably be needed to expose mineral soil and speed up the debris breakdown process. The goal is to stir the surface and NOT dislodge the old grass clumps. Harrowing with a long flex-tine is less aggressive and also improves weed seed contact to the soil. Weed seedlings and/or volunteer grass seedlings that sprout after harrowing are easily controlled with an application of an appropriate herbicide.



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Rolling in lieu of harrowing will improve debris contact with the surface but fail to expose mineral soil. Chiseling, conventional disking, and undercutting dislodge sod clumps that will interfere with seeding operations.

Herbicides such as glyphosate provide excellent control of existing vegetation. The existing vegetation must be actively growing to acquire good kill so timing of applications is critical. Acquiring good coverage is paramount. Soil active herbicides should be used with caution because of herbicide carryover and effects they may have on new seedings.

Planting Process:

Double-disk drills—determine if the drill you plan to use is suitable for seeding into the conditions that you created. Is it capable of placing the seed in contact with the soil and maintain a shallow seeding depth? Will it handle the debris in the field or will it rake up debris? Will it handle the rough terrain or will the terrain beat it to death?

Hoe drills – hoe drills in general are not good choices. Most hoe drills are designed to place seed 2-6" deep. Grass seed needs to be placed no deeper than ½ inch. Pulling the tubes and wiring them back such that the seed is dribbled behind the openers helps reduce deep seed placement. Harrows that are customarily pulled behind the drill must be removed because the harrows will deep bury the seed.

Air seeders – air drills fall into two categories: those that broadcast seed above the surface (example—Velmar™ granule spreader), and those that deliver the seed below the soil surface (example—John Deere 1890™ no till air drill). Air seeders that deliver the seed below the soil surface are frequently equipped with conventional openers and function similarly. Air seeders that deliver the seed above the surface broadcast the seed and rely on harrowing or rolling to improve seed to soil contact. Broadcast seeding is discussed below.

Broadcast Seeders – Seeders that scatter the seed above the soil surface can be effective IF the seed makes good contact with mineral soil. Seeding rates must be adjusted (1.5-2 times the drill rate) and failure rates can be high. Rolling/cultipacking after seeding should be considered.

Note: Trade names have been used to simplify information; no endorsement is intended.

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