



Planting Corn or Soybeans into CRP Sod Ground

SUMMARY

- Soybeans may offer fewer problems than corn.
- Kill sod in fall if planting corn or soybeans.
- Fertilize in spring based on soil test results.

Planting corn or soybeans into CRP sod can work well, but there may be fewer potential problems with soybeans. Soybeans can be planted later, have fewer problems with soil-living insects and rodents, have more post-emergence grass herbicide choices including Roundup with Roundup-tolerant soybean varieties, and have no need for nitrogen fertilizer. The main concern with growing soybeans rather than corn is the greater potential for soil erosion with soybeans. But if soybeans can be planted without tillage, erosion problems can be minimized. It may be wise to inoculate soybeans with rhizobium bacteria, especially if it has been 10 or more years since soybeans have been grown on the field.

Fall Prior to Planting into CRP Ground

Whether planting corn or soybeans into CRP ground, if the field is not going to be spring moldboard plowed, kill the sod in the fall. Results with spring-killed sod have been much more variable. Operations prior to planting would be similar whether the field is going to be no-tilled, or tilled with a tool other than a moldboard plow (disk, chisel plow, etc.). A moldboard plow normally does a good job of killing the sod, so Roundup applications should not be needed.

Although some research has shown that mowing the sod is not critical, mowing in August to knock down old growth may result in improved control of the sod in the fall because younger plant growth can then be sprayed.

Allow eight inches or more new growth to occur before the application of Roundup. Apply Roundup before a killing frost.

Research in eastern Iowa has shown that Roundup rates of 1.0-1.5 qt/A applied in the

fall from mid-September to mid-October can give near complete control of a bromegrass sod. Orchardgrass is somewhat more difficult to control than bromegrass. It may also pay to add 1 qt/A of 2,4-D ester to control alfalfa, thistles, and other perennial broadleaf weeds. Use the low rate technology application (10 GPA or less) to apply the Roundup for best results. The addition of 17 lb. of ammonium sulfate per 100 gallons of spray mixture may improve control. Use any surfactants called for on the label.

Spring

Soil Fertility

Phosphorus, potassium, and lime should be applied according to soil test results. If little alfalfa or other legumes are present, nitrogen fertilizer should be applied for corn based on yield potential as would be done for corn following corn. (See ISU Extension factsheet CRP-5, *Applying Fertilizer and Lime to CRP Land.*)

Spring Sod-kill

If the sod is not killed in the fall, wait until there is about eight inches of new growth in the spring before applying Roundup. Apply at least 1.5 qt/A of Roundup as described above under fall applications. Increase the rate to 2 qt/A for more consistent control. A light disking over gopher mounds may be needed if the ground is too rough for planting. Allow seven days before tillage or planting operations. The seven days allow for better Roundup translocation in the perennial grass. Add 2,4-D for better broadleaf control as described above under fall applications.

Avoid Roundup applications when daytime air temperatures are not expected to exceed 50°F

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

Prepared by Paul Kassel and Jim Fawcett, Iowa State University Extension crop specialists.

and avoid days that are cloudy and overcast. Do not substitute crop oil concentrate for nonionic surfactant. Ammonium sulfate often is described as being an optional addition to the spray tank. Ammonium sulfate reduces the antagonistic effect of minerals in hard water on Roundup activity. Warm season grasses such as switchgrass are more difficult to control than brome grass, and may require 2 to 3 qt/A of Roundup for best control. It is not likely that acceptable control of warm season grasses can be obtained in the spring. Late summer would be the best time to spray switchgrass with Roundup as warm season grasses may not be actively growing in the spring.

Burndown

If planting no-till, a standard burndown application such as 1 pt/A of Roundup plus 1 pt/A of 2,4-D can be used one week or more prior to planting corn or soybeans. If the fall application of Roundup did not give complete control of the sod, the Roundup rate in the burndown can be increased.

Weeds

Many options exist for the control of the annual weeds that may be present in the sod. If there has been a dense healthy sod, there may be less annual weeds present than in a field following corn or soybeans. A system including atrazine in corn can aid in the control of any escaped sod grasses. Roundup-tolerant soybeans allow the option of later applications of Roundup if the sod is not killed completely. Several of the postemergence grass herbicides in soybeans can also aid in the control of escaped sod grasses.

Soil insects

White grubs and wireworms like to feed on the roots of perennial grasses. These insects will feed on the roots of corn once the sod is killed. White grubs and wireworms may also feed on the roots of soybeans, but usually do not cause any significant damage.

For control of white grubs and wireworms when returning CRP land to corn production, consider the use of a soil-applied insecticide. Products that would work include Aztec, Counter 20CR, Force 3G, or Fortress. Other corn rootworm products may help reduce white grub and wireworm numbers, but are less effective than the previously mentioned products. Less is known about the performance of Aztec and Fortress for white grub and wireworm control, but research has shown good results. (See also CRP-15, *Insect Management for Corn and Soybean*.) Recent research has shown that the neonicotinoid insecticides Poncho 250 and Poncho 1250 seed treatments provide good control of white grubs. Other neonicotinoid seed treatments for control of white grubs have not been evaluated at ISU. The effectiveness of the neonicotinoid seed treatments on wireworms has not been evaluated at ISU.

If the sod is tilled in the spring, the decaying organic matter can attract seedcorn maggot flies to the field. A seedbox treatment such as Agrox DL+ can aid in controlling the seedcorn maggot. Most of the soil insecticides also control the seedcorn maggot. The neonicotinoid insecticides would be expected to control seedcorn maggot larvae.