

WINTER COVER CROP PROGRAM: Program Overview and Co-operator Guidelines

Purpose of the Winter Cover Crop Program

Cover crops consisting of grasses, legumes and/or grain crops are grown between annually planted cash crops for the purpose of protecting and enhancing the soil. The most common cover crops in Delta are late summer- or fall-seeded wheat or barley. Other cover crop options include ryegrass and other perennial forage crops, oats or clover.

There are many agronomic advantages of using cover crops. For instance, they can:

- **reduce soil loss due to water erosion;**
- **maintain soil surface infiltration;**
- **improve soil tilth;**
- **provide valuable organic matter to the soil when ploughed down in the spring; and**
- **scavenge nutrients that otherwise may leach from the field.**

In Delta, cover crops also provide feeding habitat to large numbers of over-wintering waterfowl such as Snow Geese, Trumpeter Swans, American Wigeon, Mallards, and Northern Pintail.

Growers are challenged to develop farm management strategies that integrate or reduce the impact of intense waterfowl grazing on winter cover crops and perennial forage fields, particularly from Wigeon. Cover crops, when carefully planned and seeded, can withstand or recover from repeated grazing events *and* act as effective lure

crops to draw waterfowl away from perennial forage fields.

The benefits of soil conservation/improvement and wildlife habitat values combined with typically mild winters make cover crops particularly suitable for Delta farms. This document provides details on cover crop seeding rates and methods, subsequent management practices and cost share information for farmers operating in Delta. If you are interested in establishing cover crops under our program please, carefully read through this document.

Planting a winter cover crop is a cost effective method of providing winter cover to cash crop fields when they are planted well. The type of cash crop and time of cash crop harvest are important factors in deciding which cover crop variety to use and how to plant it. Many planting techniques and cover crop varieties can be used to achieve benefits for both soil and wildlife conservation.

Carefully read the following guidelines and requirements to ensure that a successful cover crop is planted and that you remain eligible for a cost share under our program. Table 1 shows important program deadlines.

Winter Cover Crop

Delta Farmland and Wildlife Trust, in collaboration with the University of British Columbia, conducted cover crop screening trials and continues to monitor cover crop management practices in Delta. Many different types of cover crops have been evaluated and **Table 1** presents cover crop planting date and seeding recommendations based on field results.

Table 1: Seeding rate recommendations and planting date deadlines.

COVER CROP SEEDING RATE RECOMMENDATIONS			
PLANTING DATES	Before	Between	After
	Aug. 31	Sept. 1 and Sept. 15	Sept. 15
<u>Minimum*</u> Seeding Rates (lbs/ac)			
COVER CROP VARIETY			
Spring Barley	100	125	135
Oats	100	125	135
Spring Wheat	100	125	135**
Fall Rye	100	125	135**
Annual Ryegrass	20	25	30
Winter Wheat	100	125	135

* these are minimum seeding rates, higher rates are recommended if broadcast, particularly late in the season
 ** best crops to plant in late fall in areas likely to be heavily grazed by waterfowl

Timing: The earlier a cover crop is established, the greater its soil and wildlife conservation benefits will be. A well established cover crop by mid September will provide excellent soil cover and may withstand or recover from repeated waterfowl grazing events over the winter. ***Ideally, the cover crop should be seeded either before (relay cropping in corn, underseeding grain or pea crops) or immediately following cash crop harvest.*** Growers may wish to try underseeding an early-planted spring cereal or pea crop with clover, leaving an established cover crop after the harvest. Cover crops can also be relay cropped with silage or sweet corn. Italian ryegrass (Tetron) has been shown to provide excellent results here in Delta.

If the cover crop is planted after a late harvested crop, seed should be drilled if possible and/or applied at a higher rate. Cover crops seeded in early October or into poorly structured or drained soil will have little capacity to provide good soil cover or to recover after grazing. Appropriate cover crop varieties can be seeded up to September 30 through our program.

Drainage: Prevention of standing water on fields through good drainage management practices will not only promote better productivity for most cash crops, it will also encourage the best possible winter cover crop. Although not an absolute requirement of the cover crop program, farmers should attempt to improve soil drainage or level fields to prevent winter water ponding. Cost-share funding for field laser leveling is available from our office. Please contact us for more details if you are interested.

Seeding Methods: Although we recommend that only a minimal amount of soil preparation for cover crop establishment be practiced at all times, adequate soil cover for seed is necessary to promote good germination and growth.

If cover crop seed is **broadcast** after cash crop harvest then the seed must at least be lightly disced in for good soil cover. This **is necessary** for both vegetable and grain crops. More intensive soil preparation such as light tillage, subsoiling or mulching can be done but is not absolutely necessary. Seed that is broadcast late in the season should be spread at a higher rate.

The preferred seeding method is drilling. By drilling cover crop seed soil contact is assured, and in most cases no additional soil preparation is needed. Grain stubble or standing corn stalks provide some soil surface protection and valuable habitat for wildlife over the winter and it may not be necessary to plant a cover crop in such fields. Growers who are interested in planting a cover crop into stubble should do so with the least amount of soil disturbance as possible (e.g., a light discing or no-till seed drills).

Relay cropping Italian ryegrass in corn can be done by planting seed between corn rows using a no-till drill. These relay crops can further benefit the environment by significantly reducing the amount of nitrogen lost through leaching or to the atmosphere by absorbing it after corn is harvested.

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Nutrient and Management Considerations: For growers who wish to have early spring access to their land for planting cash crops, we recommend a spring cereal cover crop which will die down over the winter, such as spring barley or oats, planted by the end of August. These crops are often winter killed and will release nutrients early in the spring when they can be used by the subsequent crop.

For later planted cover crops, winter wheat may also be an option. Because of its relatively slower and shorter growing characteristics, winter wheat can be plowed down in the spring relatively easily, provided the grower does so as early in the year as possible. Winter cereals may require additional discing or mowing in the spring in order to chop the crop and make it easier to incorporate.

Winter Cereal Production: For growers who are seriously thinking about taking their fall planted winter wheat to grain, we recommend that planting occur close to the second week of September, seeded at approximately 125 lbs/ac. The use of “certified” seed is recommended and the variety “Monopol” is one that has been shown to be quite successful in Delta.

Cover Crops Planted After Grain Harvest: Certain conditions apply when planting a cover crop after a grain crop. When a grain crop has been harvested, seed spilt/blown from the combine is NOT eligible as a cover crop. Grain that has been planted but not harvested is an eligible cover crop.

Cover Cropping Program: Growers in Delta can participate in the DF&WT cover cropping program by planting any of the crops listed in Table 1, in addition to well-established clover. Only winter cover crops that are seeded after a cash crop is removed are eligible. After verification of acreage, co-operators will be reimbursed.

There is no limit to the number of acres for which a co-operator can apply. The planting deadline for spring cereals (oats and spring barley), as well as for winter cereals (spring wheat, fall rye, annual ryegrass and winter wheat) is September 30.

Planting agreements must arrive at the DF&WT office by October 12 for this year.

DF&WT Cover Crop Program Planting Agreements and additional information are available at the DF&WT office.

If you have any questions or concerns, please contact our office.