

Oat Cover Crop

Project duration May 2018 – September 2019
Objectives To demonstrate the use of cover cropping strategies
Collaborators Parkland Crop Diversification Foundation

Results

Table 1: Oat Yield by Cover Crop in lbs/ac

Cover Crop	Oat Yield
Oat / Alfalfa	3970.3
Oat / Alsike Clover	5026.5
Oat / Cicer Milk Vetch	5069.4
Oat / Fall Rye	1810.8
Oat / Italian Ryegrass	3418.0
Oat / Persian Clover	4300.1
Oat / Red Clover	5534.2
Oat / Subterr. Clover	5364.9
Oat / White Clover	4313.2
Oat / Yellow Sweet Clover	4746.0
Oat only	4589.4

Cover crop establishment results will be determined in 2019. Biomass for the crops will be taken at flowering, and yield measurements will be obtained at maturity.

Project findings

The success of the oat establishment varied according to cover crop. Establishment (reflected in yield) with clovers was on par with the PCDF site average, but lower for fall rye and Italian ryegrass. This is due to allelopathic compounds produced by fall rye and Italian ryegrass, making the crops very competitive with other plants. There was no lodging in the oats and harvest was very smooth.

Background/References/Additional Resources

Cover cropping as a part soil management is of growing interest to many Manitoba farmers. Cover crops perform a number of significant functions for the soil, including but not limited to: controlling soil erosion after harvest of the cash crop; sequestering and increasing soil nutrients; and, improving water

infiltration. Seeding a cover crop with the cash crop can reduce fieldwork in Year 2, allowing the cover crop to be used as a source of fertility (i.e. green manure), forage crop or cash crop.

Materials & Methods

Experimental Design Random Complete Block Design
Entries 11

Data collected Date Collected

Vigor June 25
Yield Sept 20
Moisture Sept 20

Agronomic info

Previous 2 years crop Summer fallow
Soil Type Erickson Loam Clay
Landscape Rolling with trees to the east
Seedbed preparation Tilled and sprayed
Seeding June 13
Harvest Sept 20

Table 1: Spring 2018 Soil Test

	Available
N	150 lb/ac
P	23 ppm
K	181 ppm

Added Fertility

10lbs/ac actual P and 2.11lbs/ac actual