

# 6-Year Rotation of Integrated Soil Management

## Green Manure Year

**Project duration** May 2018 – October 2018  
**Objectives** To examine the potential benefits of a six-year crop rotation using herbicides and green manures for fertility management  
**Collaborators** James Frey – Diversification Specialist, Manitoba Agriculture  
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### Results

A biomass sample was taken at flowering at the end of July providing a yield of 6100 lbs/ac (dry weight). Following the fieldwork of Martin Entz’s organic crops laboratory, we assume 2.5% nitrogen content of the green manure, which equates to 152 lbs/ac N. The crop was disked at the end of July, and some regrowth occurred, helping to sequester the N.

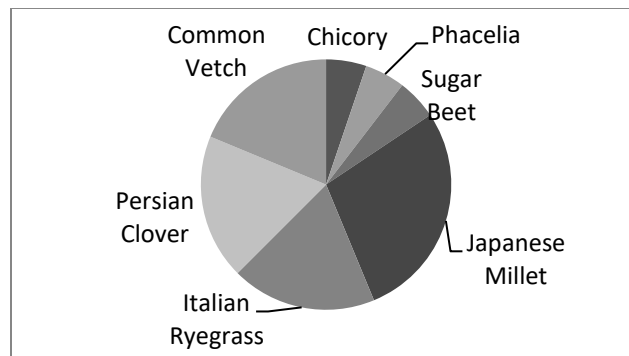
### Background

Growing green manures to provide nitrogen to the cropping system is a key element of organic crop production. This project compares using green manures for nitrogen production in a system with and without herbicides, granular phosphorus and tillage. The project will compare overall production costs between the treatments and conventional production.

The 2018 season was a green manure year. In 2019, wheat plots will be established.

### Materials and Methods

Figure 1: 2018 Green Manure Blend Breakdown



### 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 Rate	11 lbs/ac blend plus 30 lbs/ac oats plus 40 lbs/ac legume

Termination                      Disked July 28

Table 1: Spring 2018 Soil Test

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

**Added Fertility**

Fertilized with 10 lbs/ac P