

Nitrogen rate trial on winter triticale – farmer protocol

Objectives

1. To determine the effect of various N rates and timing on the performance and profitability, forage yield and quality.

Treatments

- The on-farm trial consists of strips with various rates of N applied:
 1. Fall manure applied + 90 lbs of N top dressed in spring
 2. Fall manure applied + 120 lbs of N top dressed in spring
 3. Fall manure applied + 150 lbs of N top dressed in spring
 4. Fall manure applied + 180 lbs of N top dressed in spring
- Three replicates minimum
- Field length strips (minimum 200 m)
- Strips must be randomized (see example below)
- Each strip must be at least one width of the applicator, which must be weighed at harvest.
- Other requirements: all other fertility and crop protection treatments are the same across all plots.

Measurements to be gathered by grower:

- Contact OMAFA staff to arrange forage yield measurements prior to harvest.
- Note any lodging and which treatment(s) it occurs in and take photos. Submit photos to Christine O'Reilly at Christine.OReilly@ontario.ca.

Background information to be gathered by OMAFA and agronomist team from grower:

- Crop information: Variety used, planting date, target population, starter fertilizer program, herbicide use, etc.
- Crop rotation history (past 3 years minimum)
- Soil series or type
- Recent soil test
- History of manure use

- Sample of each treatment in order to conduct quality analysis

Example plot design. Randomization of treatments is just an example and can vary at each site.

Headland	101	Fall manure applied + 90 lbs of N top dressed in spring
	102	Fall manure applied + 120 lbs of N top dressed in spring
	103	Fall manure applied + 150 lbs of N top dressed in spring
	104	Fall manure applied + 180 lbs of N top dressed in spring
	201	Fall manure applied + 120 lbs of N top dressed in spring
	202	Fall manure applied + 150 lbs of N top dressed in spring
	203	Fall manure applied + 180 lbs of N top dressed in spring
	204	Fall manure applied + 90 lbs of N top dressed in spring
	301	Fall manure applied + 150 lbs of N top dressed in spring
	302	Fall manure applied + 180 lbs of N top dressed in spring
	303	Fall manure applied + 90 lbs of N top dressed in spring
	304	Fall manure applied + 120 lbs of N top dressed in spring
Headland		

If you have any questions please contact Christine O'Reilly at Christine.OReilly@ontario.ca or 705-341-4899.