WHY IT MATTERS
Productive pastures are paramount to organic grass-fed, grass-finished beef operations, especially when soil health and regeneration are also important farm goals. To try to further regenerate specific areas of his rotationally-grazed pastures, Tony tested whether addressing micronutrient deficiencies would help pasture growth.

RESEARCH QUESTIONS
Do micronutrient amendments improve pasture growth of rotationally grazed pastures?

METHODS
Tony chose the following organic approved micronutrients based on recent soil tests in consultation with his co-op:

Amendments
1 tonne Sulphate of potash (SOP)  
300 lb Zn sulphate  
200 lb Copper sulphate  
55 lb Boron

On June 4, 2016, Tony applied amendments and no amendment controls in double passes or strips. It was not practical to randomize the location of the amendment strips throughout the field.

RESULTS
- Average biomass in two of three sections was greater in the control than the fertilized strips; there was no effect of the fertilizer amendments on biomass (P=0.75).
- Rather than fertilization, average biomass was different between field sections, with the third section (west) higher than first (east; P=0.002).

![Figure 2. Average biomass in fertilized and unfertilized strips in three of Tony's replicate sections. Red = fertilized; Blue = unfertilized control.](image)

<table>
<thead>
<tr>
<th>Section</th>
<th>Fertilized</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2955.2</td>
<td>3454.1</td>
</tr>
<tr>
<td>B</td>
<td>4547.9</td>
<td>3761.0</td>
</tr>
<tr>
<td>C</td>
<td>5200.3</td>
<td>6948.7</td>
</tr>
</tbody>
</table>

Table 1. Raw biomass data (lb/acre) from Tony's three field sections.

TAKE HOME MESSAGE
- Fertilizer application did not affect biomass estimates in Tony’s pastures 1 year after application. It is possible that yield increases could manifest in future years or in the nutritional quality of the forage.
- Based on these results, Tony sees little value in adding these fertility amendments, which were recommended based on soil testing.
- Biomass growth was most affected by field location, or soil patterning in the field.
Meeting Place Organic Farm Weather Data:
Monthly temperatures and precipitation for 2017 and historical averages.
Fergus Shand Dam was selected as the weather station for Meeting Place Organic Farm. It is located 90.67 km from the farm. Closer weather stations to the farm did not have processed historical climate data.