

IMPACT OF GREEN MANURES AND ORGANIC FERTILIZERS ON CARROT YIELDS AND SAFETY

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INTRODUCTION

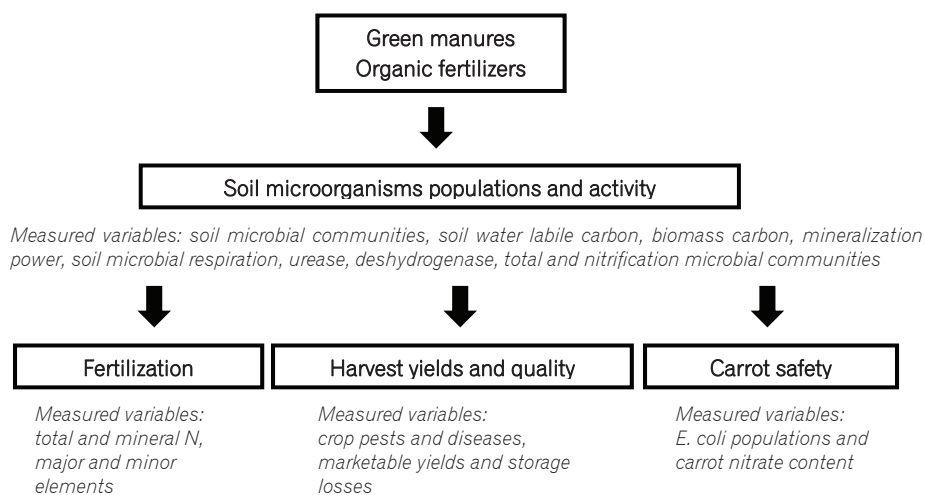
- Canada imported over 1000% more metric tonnes of organic carrots than it produced in 2010, which was estimated at 1,634 metric tonnes.
- Very little research has been conducted to evaluate organic carrot production practices leading to optimum yields and quality.
- The objective of the multidisciplinary project is to evaluate different production systems of organic carrots on nutrients availability and uptake, harvest yields and quality. The fate of human pathogens introduced by organic fertilizers and irrigation water and the impact on soil bacterial communities will also be studied.

MATERIALS AND METHODS

- The experimental design is a split-plot factorial design including green manures as the main plot factor (forage pea, oat, and control) and organic fertilizers (poultry manure pellets, composted bovine manure, and control) as the sub-plot factor. Each treatment is repeated 3 times for a total of 27 experimental plots. Green manures were seeded in the autumn 2014 and carrot will be grown for two years, in 2015 and 2016.

RESULTS

- In 2014, green manures were seeded on August and incorporated on October. Aerial biomass produced by oat and forage pea was 1 724 and 704 kg/ha respectively, representing a nitrogen load of 41 and 27 kg/ha.
- First results on carrot crop yields will be available in fall 2015.



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TO LEARN MORE

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