

Northeast Colorado RC&D

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Utilizing Liquid Beet/Cane Molasses for Nematode Control and an Alternative Organic Nitrogen Source

Project Narrative:

This three year project will look at the use of liquid beet/cane molasses in conjunction with lower rates of commercial fertilizers to reduce nematodes and improve soil quality. The molasses will be mixed with the commercial fertilizer and applied in one of two ways; strip tilled or top dressed during the growing season.

The expected benefits from this project are to reduce the amount of commercial fertilizer used by replacing it with liquid beet/cane molasses which will also assist in nematode control and improving soil quality. By reducing the amount of commercial fertilizer use, this will lead to a reduction in the use of fossil fuel produced commercial fertilizers along with improving air quality with the use of an organic liquid beet/cane molasses.

Soil samples will be collected to measure nematode counts along with basic and micronutrient levels pre and post application of products. Nematode cyst and egg counts will be measured in the spring (pre-application), summer and fall (post-harvest). Soil nutrient availability will be monitored using soil test results (cation exchange capacity) in the spring (pre-application) and fall (post-harvest). Crop yield will be measured and correlated back to the different levels of commercial fertilizer, liquid beet/cane molasses, application method and number of treatments.

Nematode counts and soil quality will be monitored to see if the application of the liquid beet/cane molasses needs to be applied yearly or can it be applied bi-annually?