

# Western Illinois University/Allison Organic Research Farm

## Organic Corn Fertilizer Experiment

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### Introduction:

Commercial fertilizers derived from manure and animal/plant proteins are allowed within the USDA National Organic Program and are commonly used to supply N to organic horticultural crops but are less common in organic grain systems. One source of N for organic feed grade corn.

### Methods:

During the 2008 growing season, *Nature Safe*<sup>®</sup> 13

All side-dress fertilizer was applied on June 17<sup>th</sup> and 18

Note: Each 8 row round/ treatment on the map above is represented by alternating colors and each treatment by a letter ID.

Treatments: A = control (no fertilizer), B = 100#/ac N side-dressed when corn was 12-16" tall, C = 50#/ac N

Table 2, below, illustrates the economics of using this organic fertilizer in organic corn production.

Table 2: Economic impact of Nature Safe (13-0-0) treatments

Organic Fertilizer Treatment	Corn Yield (Bu/ac)	Gross Corn Sales per Acre @ \$10.50/bu *
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Table 4: Nitrogen value of legumes

Legume	\$/lb seed	Seeding rate lb/acre	Total management costs/acre	Typical lbs of N fixed per acre –	Cost of 1 lb of N/acre fixed
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In conclusion, the best return on investment in a relatively expensive fertilizer product like Nature Safe (13-0-0) is likely to occur when relatively low rates of N are applied in combination with lower cost N sources. The treatment with the lowest rate in this study was the one profitable treatment but it is quite possible that an even lower rate would have been more profitable.