



# Nebraska On-Farm Research Network

**Years:**

2009-2011

**Title:**

Using Biosolids

**Crop:**

Soybeans/Corn

**Study ID:**

065053200901M3

**County:**

Dodge

**Objective:**

To determine & document the profitability of using Biosolids as a nutrient in a corn/soybean rotation.

**Treatments:**

No Biosolids vs. Biosolids

## Nebraska Soybean & Feed Grains Profitability Project



Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln cooperating with the Counties and the United States Department of Agriculture.

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Results: 2009

Soybeans (Hoegemeyer 303NRR)

Variables

|  | None | Biosolids | Prob >/T/ |
|--|------|-----------|-----------|
|--|------|-----------|-----------|

|                    |       |       |             |
|--------------------|-------|-------|-------------|
| Yield, bu/ac @ 13% | 42    | 64    | <0.0001 *** |
| Moisture, %        | 11.9  | 12.1  | 0.0107 **   |
| Test Wt, lbs/bu    | 56.2  | 55.9  | 0.3392 ns   |
| Plants, 1000/ac    | 135.6 | 135.0 | 0.9229 ns   |

Planting Date:

Harvest Date: 11/6/09

Soil Test: 10/8/09

Check: Org. Matter 1.7, Bray P, 4.4, Zn 1.1

Biosolids: Org. Matter 1.8, Bray P, 16.0, Zn 2.0

Results: 2010

Corn (Hoegemeyer 80412)

Variables

|  | Check | Biosolids | Prob >/T/ |
|--|-------|-----------|-----------|
|--|-------|-----------|-----------|

|                      |      |      |          |
|----------------------|------|------|----------|
| Yield, bu/ac @ 15.5% | 152  | 160  | 0.112 ns |
| Moisture, %          | 14.5 | 14.9 | 0.0834 * |
| Cost/ac              |      |      |          |

Planting Date: 5/7/10

Harvest Date: 11/1/10

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| Results: 2011         | Soybeans              | (Hybrid)  |            |
|-----------------------|-----------------------|-----------|------------|
| Variables             | None                  | Biosolids | Prob >/T/  |
| Yield, bu/ac @ 13%    | 46                    | 58        | 0.0003 *** |
| Moisture, %           | 9.0                   | 9.0       | ---        |
| Cost/ac               |                       |           |            |
| Planting Date: 5/7/11 | Harvest Date: 9/30/11 |           |            |

**Summary:** The application of Biosolids during the 2009 growing season resulted in a significant increase in seed yield; however, moisture content at harvest was higher where Biosolids had been applied. The increase in seed yield is likely due to phosphorus in the Biosolids applied to this low phosphorus soil. In 2010, corn yields were not increased significantly; however, grain moisture was increased slightly. Plot was very variable due to excess rain. The 2011 soybean yields were significantly higher for the biosolids treatment.

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