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## Results of 2009-2011 Sugar Beet Plots in the Snake River Plains - Idaho

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This is short summary of the continuing set of studies at the University of Idaho, USDA-ARS in sugar beets with Orthman Mfg. The field scientists have been working for 3 years to demonstrate the effects of tillage, high small grain residue issues and beet production. Their research is to determine beet quality, sugar content, soil N, beet tonnage and residue effects on stand and beet yield.

The sugar beet industry is of significant acreage proportion in the Snake River Plains, over 170,000 acres from Ontario, OR to American Falls, ID. With strip-tillage farmers can gain fuel savings, advantages to less soil moisture loss, less time in the field, considerable reduction in wind erosion losses. The fuel savings alone has been near 50% of what is used conventionally farmed.



0 lb N/acre



47 lb N/acre



124 lb N/acre



Visual differences in top growth of strip-tilled beets as affected by N application rates in 2011

### Effect of N fertilizer rate on strip-tilled sugar beet production in 2011 averaged across application method and residue level.

#### N Application Method

Rate	Soil + fertilizer N (lbs/acre)	Yield (ton/acre)	ERS (lb/sugar/ac)
0	82	24.4	8025
47	129	28.2	9263
124	206	30.6	10043

#### SUMMARY

- Residue cover, N application method, and N application rate can impact sugar beet production
- Lowered yields at residue levels above 6.9 ton/acre and in cases of high N rates
- Broadcasting significantly reduced stand in both years, suggesting that shanking in N may prevent stand, and in some cases, yield losses
- Shanking in N at rates of 140 lb N/acre or higher may cause yield losses



#### Orthman Agronomy Team...

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