**Sugarbeet response to Insure Organics’ soil enhancement**

**Investigators**: Carrie Eberle and Caitlin Price Youngquist

**Issue**: Wyoming farmers need sustainable soil health programs to improve field productivity. New biological soil amendment products require testing for effectiveness and affordability for Wyoming agriculture.

**Goal**: Compare the effect of Insure Organics’ biological soil amendment program on irrigated sugarbeets in Wyoming with the standard fertilizer programs recommended to growers.

**Objectives**: Measurement of stand establishment, uniformity, crop yield, sugar content, and economic cost and gains will be evaluated as well as soil health parameters.

**Expected Impact**: Learn if Insure Organics’ program works in Wyoming to improve crop performance and soil health and if it is cost effective. Provide growers recommendations on application rates and frequency to maximize effectiveness.

**Contact**: Carrie Eberle at carrie.eberle@uwyo.edu or 307-837-2000.

**Keywords**: soil amendment, sugarbeet, sustainable farming

**PARP**: II:2

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**Dry bean soil-borne disease management with an integrated approach of tillage, variety, and in-furrow fungicides**

**Investigators**: William Stump and Kyle Webber

**Issue**: Soil-borne dry bean diseases such as Rhizoctonia and Fusarium root rot are typically a perennial issue in dry bean production. Disease severity is dependent on environmental conditions, soil compaction, variety, and cropping history, with growers having limited options for control.

**Goal**: Determine if an integrated approach of a single in-furrow fungicide application at planting, varietal selection, and deep tillage to alleviate soil compaction is sufficient to protect the dry bean crop until harvest from soil-borne disease impacts.

**Objectives**: Evaluate an integrated approach combining different tillage options, up to five locally adapted cultivars, and in-furrow fungicides to compare the efficacy of disease control on Rhizoctonia and Fusarium.

**Expected Impact**: Results should assist growers in selecting the best cultivars to use in the presence of soil-borne disease, deciding whether a prescription deep tillage operation is worthwhile, and determining the most effective in-furrow fungicide treatments for season-long control.

**Contact**: William Stump at wstump@uwyo.edu or 307-766-2062.

**Keywords**: soil-borne disease, tillage, fungicide

**PARP**: I:11

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**Figure 1.** Fall field application at the Powell Research and Extension Center. The barely visible dark bands in the field (middle and background) are where the soil amendment was applied.