INVESTIGATING THE EFFECT OF REV APPLIED FOLIARLY TO HARD RED SPRING WHEAT

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In the spring of 2017 DAKOTA set out to determine the effect of REV's ability to increase yield on hard red spring wheat. The quarter-section field, located in northern North Dakota, was divided up into sections which were 90 feet wide by 2,270 feet long. The entire field was seeded on 5/5/17 and a starter fertilizer was used. REV was applied 39 days later on 6/13/17 at the four leaf stage to every-other section. The field was visually inspected 14 days later on 6/27/17 to determine any possible difference in plant health between treated and untreated plots. Figure 1 is a picture taken during visual inspection on 6/27/17 which shows wheat plants in the treated plot standing taller, leaves standing straighter, and heads more exposed indicating an advanced stage of maturity.



Figure 1: Treated plot vs Untreated plot

Again, on 7/17/17 the field was visually inspected to determine any difference in height, health, or maturity. It was noted at that time that the treated heads appeared to be larger and more developed.

On 8/20/17, 108 days after planting, the field was harvested. Two passes with a 30 ft wide header were made down the middle each 90 ft wide plot in order to ensure there was no cross-contamination between plots in sampling. Grain harvested from each plot was placed in a grain cart equipped with a scale to determine the weight of the harvest which was then translated to bushels harvested per acre.

The results show that plots treated with **REV tended to increase crop yield**. To account for variability across the field at large it was determined that treated plots would only be compared to the untreated plots immediately next to them. Of the eight plots we studied (4 treated, 4 untreated) **two plots showed significant increases in bushels per acre**. The first plot sampled showed a **5 to 6 bushel per acre increase** as compared to the untreated plots next to it. The last two plots sampled showed a **1-2 bushel per acre increase**. Moisture and protein was tested for, however the sampled volume was not large enough to infer any valuable data from the total population. In general, the moisture ranged from 12% to 12.3% and protein ranged from 11.3% to 11.8%.



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