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Demonstrating the Response of Lower Wheat Classes to Various Inputs for Improved Economic Returns

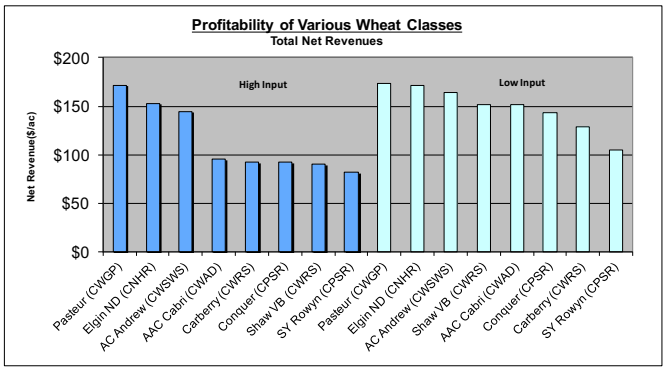
In 2017 a trial was established to demonstrate to producers how the lower wheat classes like CPS, CWGP and CWSWS respond to various levels of inputs to improve economic returns and compete with high quality wheat classes like CWAD, a wheat class that is quickly losing its appeal due to its susceptibility to fusarium. With high input costs and low commodity prices for poor quality grain, profits are not always realized in the cereal phase of a rotation. Fortunately, producers recognize the importance for a cereal, like wheat in their rotations.

Input Levels:

1. **Low Inputs**; minimal seeding rate of 200 viable seeds/m^2,
   no seed treatment,
   base fertility (70 kg/ha N and 25 kg/ha P2O5),
   no fungicide.

2. **High Inputs**; 300 viable seeds/m^2,
   Cruiser Maxx Vibrance seed treatment,
   enhanced fertility (110 kg/ha N and 35 kg/ha P2O5),
   Caramba Fungicide applied at 75% head emergence to 50% flowering.

Some producers are growing CWGP wheats, otherwise known as “special purpose” because of the consistent increased yield, which may not appear to have improved profitability, but involves less risk for producers in terms of added inputs in the field. Growers are finding it increasingly difficult to achieve the desired high grades from their cereal crops and wheat acres are declining because the return isn’t there. Producers want to grow high-quality and high-yielding crops desired by consumers, but must also consider variety based on characteristics including, protein content, disease and insect resistance.



The benefit of a high-yielding soft wheat variety compared to a high-quality durum is mitigated by lower prices, as larger yielding crops with lower input costs may result in the highest economic return. Yields under high input management were greater than yields from the low input management, however did not translate to an increased net return on input investment. The high input CWGP Pasteur treatment resulted in the highest yield at 56.3bu/ac, with a 10bu/ac increase compared to the low input, but the net return was not significantly different. In terms of a higher quality wheat variety, Shaw VB performed the best in terms of yield, with the low input treatment showing a much greater net return.

Since producers are not getting paid for protein premiums above 13.5% for spring wheat and 12.5% for durum wheat, increasing inputs to achieve 16% protein is no longer economical unless that producer can blend with a lower protein inventory to bring it above 13.5%. This was evident in this study, where we see low economic returns on CWAD, CWRS, and CPSR even though protein levels were higher. In 2017, under drought conditions, CWGP, CWSWS, and CNHR classes had a greater return on input investment than CWAD, CWRS, and CPSR under both input management scenarios. The availability of new wheat varieties and input level options provides producers an opportunity to diversify their crop choices each year, while keeping wheat in their rotation and get similar or greater revenue per acre.

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