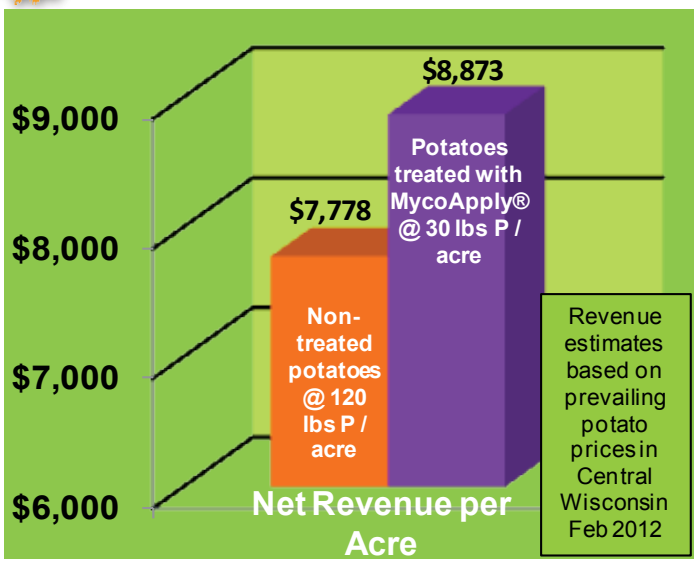
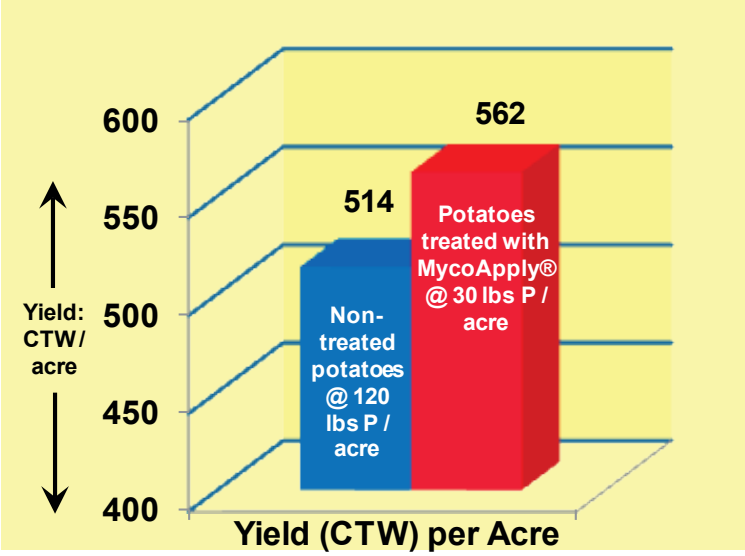
Mycorrhizal Applications, Inc.®

U. of Wisconsin at Hancock Research Station 2011 Potato Evaluation





Influence of MycoApply® on yield response to phosphorus fertilizer in Russet Burbank potato

AJ Bussan, Nick Goeser, Bill Schmitt, and Mike Drilias, University of Wisconsin, Hancock Research Station

Summary of 2011 results:

- MycoApply® treated plots averaged higher yields at all input levels of phosphorus.
- Yield increases were greatest @ 25% of conventional phosphorus inputs (30 lbs /acre vs 120 lbs / acre.)
- Yields from MycoApply® treated plots shifted significantly to higher grade potatoes (which bring higher prices)
- Net savings on phosphorus alone = at least $81.00 / acre with MycoApply® vs standard conventional P inputs.
- Net revenue increases ranged from $319 to $1,095 per acre on MycoApply® treated plots, depending on phosphorus inputs.

Methods

"MycoApply® is an inoculum for mycorrhizae, a naturally occurring fungus in soils. Mycorrhizae are believed to be beneficial. The fungus infects host plants and increases the root surface area dramatically with potential to increase uptake of soil nutrients. Phosphorus uptake is particularly important role for mycorrhizae as it tends to be immobile. A side effect of fumigation is that it kills the native mycorrhizae population in soils. The hope is that MycoApply® could serve as an effective means to inoculate soil and lead to infection of potato with mycorrhizae. Potato field was prepared for hand planting. Different blends of starter fertilizer were applied to the bottom of the open furrow so that common N, K, and other nutrient rates remained the same, but P was adjusted to deliver 0, 30 ,60, and 120 lb P2O5/acre. After fertilizer application, the field was planted with the iron age offset from the original rows by 2 to 4". The goal was to place seed pieces adjacent to starter fertilizer and minimize direct contact. Visual inspection suggested this was quite successful."