

Bin-Run, Certified and Seed Treatment evaluation for Winter Wheat

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www.kartaonline.org

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- Crop production on the High Plains involves more no-till management and more cropping intensity today. Consequently, more acres of wheat are planted every year in less than ideal conditions (as compared to traditional fallow wheat).
- Specifically, wheat is often grown behind wheat, soybeans and corn today and often these rotations involve more challenges and sometimes result in delayed wheat emergence, sometimes delayed all the way through the spring.
- The longer wheat germination and emergence is delayed, the higher the probability of stand loss due to seed loss from soil pathogens

Project Questions & Goals

- Most University research suggests that certified seed varieties and seed treatments typically increase yield enough to pay for themselves on average.
- For this project we are evaluating four different seed options
 1. Straight bin run Tam111 (cleaned)
 2. Certified Tam111
 3. Certified Tam111 with Awaken ST seed treatment
 4. Certified Tam111 with Dividend seed treatment

Project Thoughts

Straight bin run Tam111

- Traditional approach, germ tested in house, cleaned

Certified Tam111

- Becoming more common to use certified seed

Certified Tam111 with Awaken ST seed treatment

- Awaken ST is considered a micro-nutrient so no pesticide label
- "stimulates" root development

Certified Tam111 with Dividend seed treatment

- Fungicide treatment

PULL HERE TO OPEN ►



DividendExtreme®
Fungicide

syngenta.

A seed treatment for control of diseases of barley, cotton, sweet corn, wheat and triticale.

Active Ingredients:	
Difenoconazole*	7.73%
Mefenoxam**	1.83%
Other Ingredients:	90.34%
Total:	100.00%

*CAS No. 118487-68-3
**CAS No. 78662-17-5

DividendExtreme contains 0.77 lbs. difenoconazole and 0.18 lbs. mefenoxam per gallon product.

CAUTION KEEP OUT OF REACH OF CHILDREN.
See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1141
EPA Est. 100-NE-001
SCP 1141A-L1E 0809
305026

2.5 gallons
Net Contents

Seed Treatment

NOW AVAILABLE IN 2.5 GALLON CONTAINERS

AWAKEN ST

Product Overview
Awaken ST is a complex of zinc, ammonium acetate with polish and a balanced micronutrient seed treatment package including boron, copper, iron, manganese, molybdenum and zinc.

Key Benefits

- A larger more robust root system
- Makes root system more efficient to absorb water and nutrients
- Better overall plant health and vigor
- Increased ability to deal with stressed conditions
- Increases the speed of emergence
- Boosts the plant's ability to capture and utilize sunlight, fueling and encouraging growth

Key Features

Application Rate: 1.6 oz/bu for barley, corn and wheat
 Ready to Use: No need to add water
 Easy to Use: Non-dusty formulation that readily coats the seed
 Compatibility: Ideal Seed Treatments
 Labeled Crops: Wheat and Barley (see label for other crops)
 *Always refer to product label for specific use rates.

Contact Your Local Representative for More Product Information

Loveland
Always Feed and Fertilize Smart
www.lovelandproducts.com P.O. Box 1280 - Greeley, CO 80632
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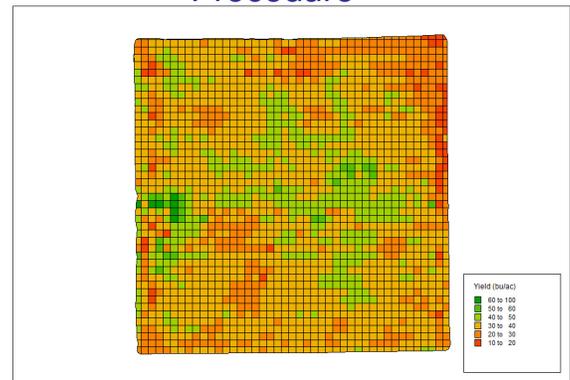
Methods

- Bin run wheat came from Kastens Inc. Farms while the other three versions were purchased from a licensed seed dealer.
- Wheat seed was then planted using a JD 1890 drill
- As-Planted data and yield monitor data was collected with JD GreenStar 2 systems
- Areas of applied / not applied were evaluated using MapInfo software package and internal pre-processing algorithms (like MPGM). Final analyses were run in Excel.

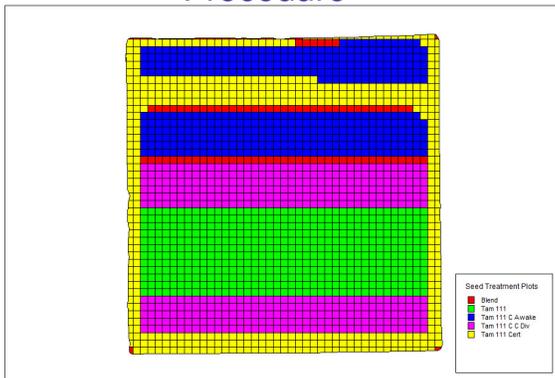
Field Location & Plot Details

- Field was located in central Rawlins County, KS
- 2010 crop on this field was Field Peas
- After pea harvest in 2010, this area suffered extreme water deficit conditions until may of 2011.
- Consequently, yields were suppressed at this location in 2011

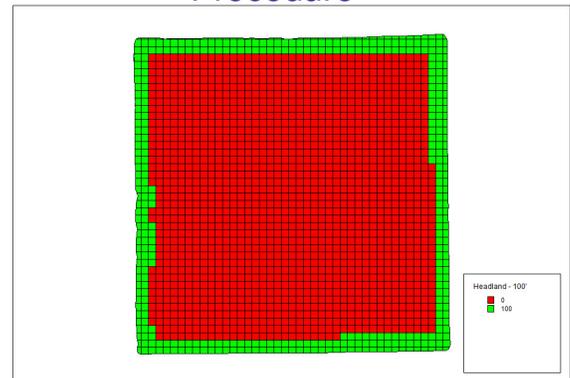
Procedure



Procedure



Procedure



Analysis

Yield (bu/ac)	Tam 111	Tam 111C AWST	Tam 111C DivXT	Tam 111C
No Headland	36.28	34.46	37.26	34.95

Conclusions

- Not a lot of difference between treatments
- Bin run, cleaned and untreated Tam111 had higher yields than either the Certified Tam111 and the Certified Tam111 treated with Awaken ST.
- Only the Certified Tam111 treated with Dividend Extreme had higher yields, but by less than one bushel per acre.
- I expected to see more yield variation between treatments especially in the presence of very challenging growing conditions in 2011.

Conclusions

- Perhaps more yield advantages would have been accomplished in a high yielding environment.
- This is our second research effort looking at seed treatments and neither were very compelling
- Perhaps our long notill rotations (wheat, corn, milo, peas) suppresses many of the problems addressed by seed treatments.
- In the case of Certified vs Bin-Run.
 - A very sharp wheat grower told me in conversation: "Why would you assume that XXX wheat seed grower down the road does a better job than you do in growing quality wheat seed!"

Conclusions

- Probably need to continue to evaluate this since published research still supports both the use of certified wheat and seed treatments.



Thanks to the KARTA group for funding this project