

2015 ON-FARM EDIBLE BEAN FUNGICIDE TRIAL



on-farm network

From the recent dry bean survey conducted by MPSG (page 28), white mould in dry beans was identified as the number one concern for dry bean farmers in Manitoba. MPSG's On-Farm Network collaborator, Brent VanKoughnet of Agri-Skills Inc., conducted On-Farm fungicide trials from 2013 to 2015 to assess the seed yield response of pinto beans to various fungicide products in central Manitoba.

2015 UPDATE

Windbreaker certified pinto beans were planted on 30-inch rows, at 75,000 seeds per acre on May 21st at Carman, Manitoba. A base fertilizer application of 60 lbs N, 40 lbs P, and 1 lb Zinc per acre was applied to all treatments and weeds were controlled using Viper, Centurion, and Basagran Forte. All fungicide treatments were applied July 11th, at reproductive growth stage R-2 (early pin bean) just prior to a large rainfall event on July 12th (43mm). Growing season precipitation and growing degree days (base 5°C) were near normal for the area (Table 1). In general, there was concern for disease pressure in edible beans in 2015, which resulted in fungicide being applied to the majority of acres, according to the 2015 disease survey.

Average seed yield across all treatments was 2915 lbs/ac in 2015, 799 lbs higher than the provincial average for pinto beans (2116 lbs/ac).

The untreated beans had the lowest yield (2740 lbs/ac), while Lance applied with Serenade and Lance applied alone produced the highest yields at 3074 lbs/ac and 3024 lbs/ac, respectively (Table 2). In previous pinto bean fungicide research with the MPSG On-Farm Network, similar results were found in 2013 with Lance producing the highest grain yield. There was no statistical yield response to fungicide treatments in 2012 (navy beans) or 2014 (pinto beans).

COMBINED RESULTS

A significant yield response to fungicide in edible beans has occurred in two out of the past four years at Carman. Where there was a statistical yield difference among treatments (2013, 2015), an economic analysis was performed using the suggested retail price (SRPs) for each fungicide, an application cost

of \$7/acre, and pinto bean price of \$0.30/lb. The yield increase needed to break even (red bar) ranged from 83 lbs/ac for Acapela to 175 lbs/ac for Propulse (Figure 1). Generally, when foliar fungicide significantly increased seed yield compared to the untreated control, the application was economical (all except Propulse in 2015 – Figure 1). The pinto bean fungicide trial will be repeated in 2016. ■

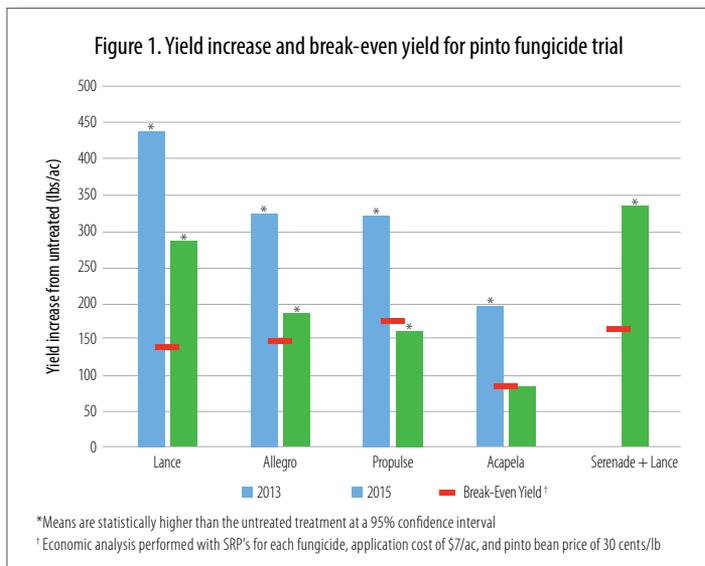


Table 1. 2015 growing season weather summary – Carman, MB

Month	Heat [†] (GDD)	Normal [†] (GDD)	Rainfall [†] (mm)	Normal [†] (mm)
May	183	183	99	76
June	374	338	75	87
July	461	442	109	90
August	413	427	47	51
Total	1431	1390	331	304

[†] Manitoba Ag Weather Program

[†] Farmzone