

Factsheet: Evaluating the Cost-Benefit of Canola Input Recommendations

Objective:

This objective of this project was to demonstrate to producers the economic value of canola inputs that are readily available to aid in decision making.

Methodology:

The demonstration was arranged as a randomized complete block design (RCBD) with four replicates at Scott, SK 2016. The demonstration consisted of seven treatments that focused on five various aspects of canola inputs strategies. Prior to seeding, soil samples were collected at three depth increments (0-15 cm, 15-30 cm and 30-60 cm) in order to determine fertilizer rates recommendations. The trial was sown on wheat stubble using an R-tech drill with 10-inch row spacing.

Table 1: Treatment list including description of each treatment for canola production

Treatments	Description
1 Control "Basic"	"Basic": seeding rate (100 seeds m ²); fertilizer based on soil test recommendations; one in-crop herbicide
2 Foliar Fertilizer	Basic + additional foliar fertilizer application
3 Boron	Basic + boron application
4 Additional Seed Treatment	Basic + Lumiderm
5 Seeding Rate	Basic (seeding rate of 150 seeds m ² vs. 100 seeds m ²)
6 Fungicide	Basic + fungicide application @ 2-4 leaf + 20% + 50% flower
7 Stacked	Seeding rate (150 seeds m ²) + basic fertilizer soil test recommendations + additional foliar fertilizer + boron + additional seed treatment+ fungicide applications + one in-crop herbicide application

Key Findings:

- The application of both foliar fertilizers and fungicides, while not statistically significant, provided slightly greater yields compared to treatments with boron, additional seed treatment and higher seeding rates.
- However, compared to the untreated "basic" check, neither of these options resulted in an economic benefit.
- The "stacked" treatment resulted in a 10 % yield boost compared to treatments that received a boron application, additional seed treatment, and a higher seeding rate
- A significant difference was detected between the "stacked" treatment and the treatments of boron, additional seed treatment and higher seeding rates, as well as resulted in a 6 % yield boost compared to the untreated "basic" check.
- However, due to the high input costs associated with the "stacked" treatment, the returns were 7 % less compared to the untreated "basic" check.

- Overall, it appears that the simplest, yet efficient management strategy that most producers follow may provide the best profit return.

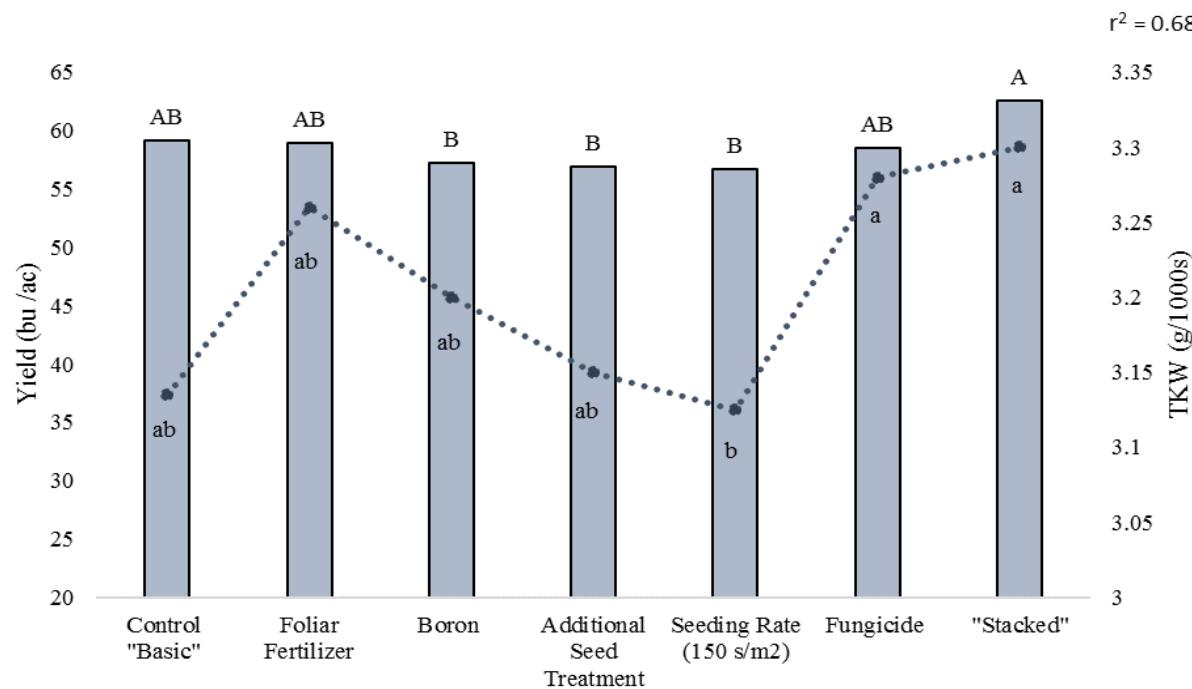


Figure 1. The effect of treatments on canola yield (bu/ac) and thousand kernel weight (TKW) (g/1000seeds) at Scott, SK in 2016 growing season. Different lettering indicates significant difference between treatments, respectively).