Dry Bean Fungicide Trial

Trial ID: 2021-DBF06 – R.M. of Swan Valley West

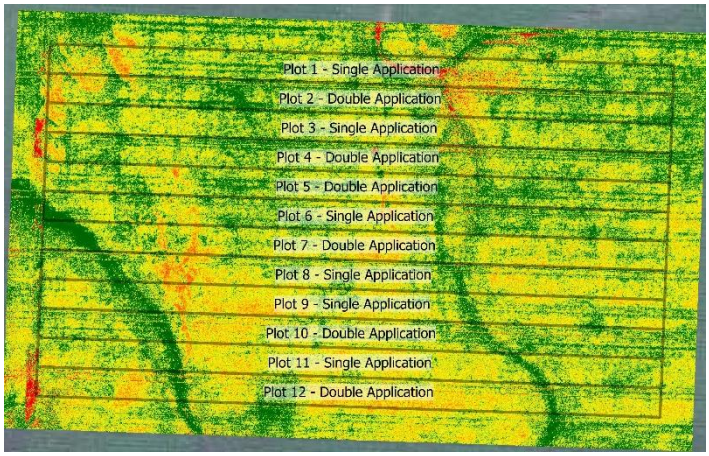
Objective: Quantify the agronomic and economic impacts of a double vs. single foliar fungicide application in dry beans

Summary: There was no anthracnose or white mould pressure at this trial. As a result of low disease pressure, there was no increase in yield with a double fungicide application compared to the single application. As a result, there was a decrease in profit/ac, equivalent to the increased cost of the double fungicide application.

Trial Information

Treatment	Acapela / Dyax
Application Timing	Early Flower / Full Flower
Application Date	July 20 / July 30
Application Rate	350 ml/ac / 0.4 L/ha
Application Method	Broadcast
Soil Texture	Clay Loam
Previous Crop	Canola
Seeding Date	May 28
Variety	Blackstrap
Seeding Rate	75 lbs/ac
Row Spacing	10″
Plant Stand @ R4	91 000 plants/ac
Harvest Date	September 24

Field NDVI Image August 17



Summary of Disease Risk†

	First Application		Second Application	
Category	Rating	Explanation	Rating	Explanation
Weekly total rainfall pre-flowering (up to V4)	3	51-75% (< 18 hrs)	3	51-75% (< 18 hrs)
Average daily high temp. pre-flower	2	0.1-0.5"	2	0.1-0.5"
Humidity (%) or hours of dew on foliage	3	51-75% (< 18 hrs)	3	51-75% (< 18 hrs)
Forecasted/actual rainfall expected (V4-R4)	2	0.1-0.5"	2	0.1-0.5"
Forecasted/actual daily high temp. (V4-R4)	2	22-28°C	2	22-28°C
Susceptible host in the rotation (dry bean or other, ex. canola, sunflower)	2	< 3 years	2	< 3 years
Susceptible hosts and/or fungal apothecia observed nearby (<2km) before flowering (R1)	2	Hosts OR Apothecia Nearby	2	Hosts OR Apothecia Nearby
Timing and amount of N fertilizer applied	1	Planting < 100 lbs/ac	1	Planting < 100 lbs/ac
Plant spacing, canopy density and microclimate conditions	3	Narrow rows, moderate density	3	Narrow rows, moderate density
Varietal reaction to white mould	2	Unknown	2	Unknown
Total Score	**22**	**Moderate Risk**	**22**	**Moderate Risk**

†Based on the foliar fungicide decision making worksheet for managing white mould in dry beans

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Precipitation (mm)

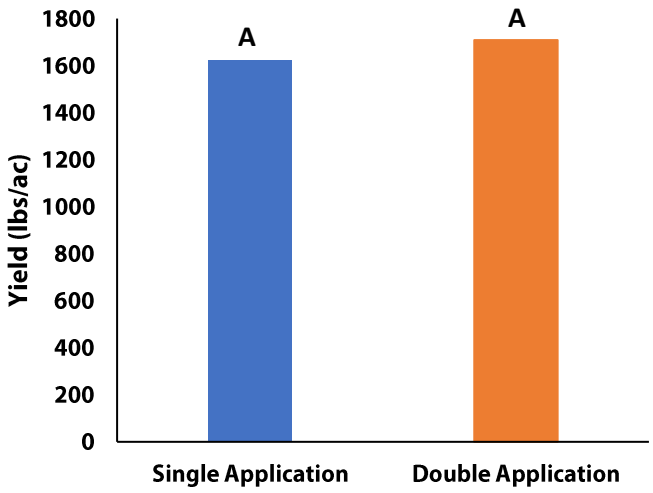
	May	Jun	Jul	Aug	Total
Rainfall	38.5	64.1	56.8	73.7	233.1
Normal	45.4	84.2	85.6	68.3	283.5
% Normal	85%	76%	66%	108%	82%

Summary of Disease Rating (R4)ǂ

	Foliar Anthracnose		Stem Anthracnose		White Mould	
	SGL	DBL	SGL	DBL	SGL	DBL
Incidence	No anthracnose or white mould present					
Severity						

ǂ SGL=single application; Foliar anthracnose 0-9 rating scale, stem anthracnose (presence/absence), white mould 0 – 5 rating scale; bacterial blight present throughout the trial.

Yield by Treatment



Overall Yield & Economics

	Mean (lbs/ac)	Costǂ	Change in Profit/acǂǂ
Double Application	1709	$34/ac	-$17/ac
Single Application	1623	$17/ac	
Yield Difference	86		
P-Value	0.4865		
CV	11%		
Significance	**No**	**Economic**	**No**

ǂ Estimated cost; cost represents product only, does not include application cost

ǂǂ Because yields were not significantly different, there is no increased income to offset the cost of the fungicide. Profit/ac declines by the cost of the fungicide application.

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