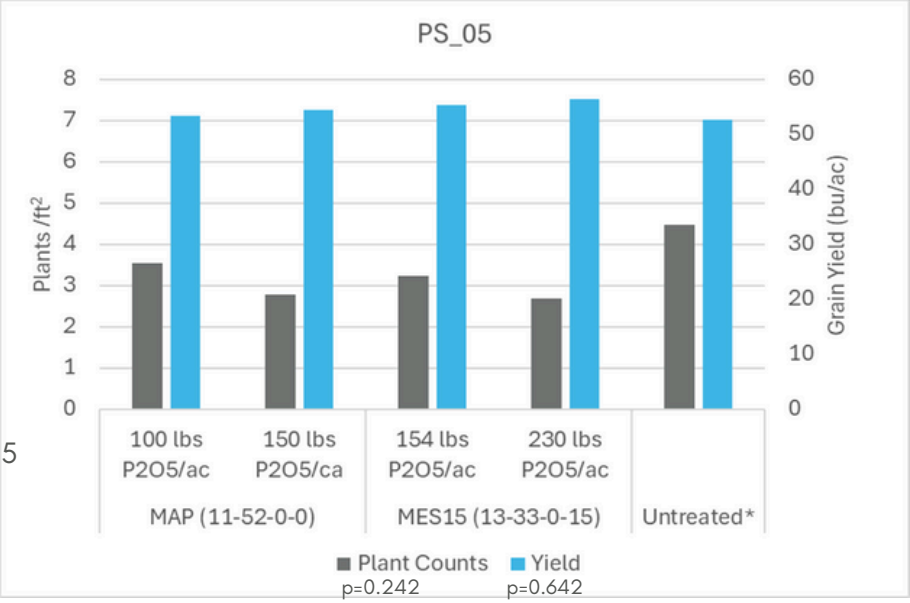
Phosphorus Source Trial

PS _05

Site Info

Trial ID: PS_05
Rural Municipality: Morris
Seeding Date: May 14, 2025
Soil Residual P (0-6in): 25 ppm
Seeding Equipment: John Deere N560 Disc Drill
Opener Type: Disc
Row Spacing: 10 in
Seedbed Utilization: 7.5
Seeding Rate: 3.8lb/ac (TKW 5.4)
Variety: BY 7204LL
Harvest Date: September 10, 2025



Within each data type, treatments with different lowercase letters are significantly different at 95% confidence level ($p < 0.05$). Data types with no lowercase letters listed indicate an insignificant treatment effect
*indicates unrepeated check strip

Results Summary

Plant Establishment: Plant counts at the 4-leaf stage were not significantly different across these P sources and rates.
P Tissue and Biomass: The rates and sources of P utilized did not cause significant differences in plant biomass or P tissue content at rosette stage.
Grain Yield: P sources and rates had no significant influence on grain yield in this trial.
Profitability: Relative to the standard P source and rate, the use of alternative P sources and rates increased costs by $43/ac to $142/ac without producing significantly greater yields.

Treatment	Phosphorus Source	Rate	Total P @ Rosette	Grain Moisture
		(lbs. P_2O_5/ac)	(%)	(%)
1	MAP (11-52-0)	100	0.35	5.2
2	MAP (11-52-0)	150	0.36	5.2
3	MES15 (13-33-0-15)	154	0.36	5.3
4	MES15 (13-33-0-15)	230	0.46	5.0
p-value			*0.276*	*0.445*

PS_05 Continued

PS_05 Weather

	Apr	May	June	July	Aug	Sept	Total
Rainfall (mm)	23.8	36.4	33.7	39	46.1	70.3	249.3
Avg Daily Temp (°C)	4.66	14.18	17.77	18.99	18.85	15.71	

PS_05 Economic Analysis

P Source and Rate	Mean yield (bu/ac)	P Fert Cost [1]	Change in Profit from Farm Standard [2]
MAP: 100 lb/ac P_2O_5	53.33	$85/ac	-
MAP: 150 lb/ac P_2O_5	54.42	$128/ac	-$43/ac
MES15: 154 lb/ac P_2O_5	55.32	$152/ac	-$67/ac
MES15: 230 lb/ac P_2O_5	56.32	$227/ac	-$142/ac
P-value	0.642		
CV	6.05		

[1] Based on 2025 MB Cost of Production: estimated cost of MAP ~ $1,140 / mt P_2O_5 ($0.851 / lb P_2O_5) and cost of MES15 ~ $1322 / mt P_2O_5 ($0.987 /lb P_2O_5)

[2] Change in profit is calculated as the difference in grain sales income (based on estimated canola sale price of $13.25/bu) and treatment costs, relative to the standard farm practice. Yields were not significantly different in this trial, therefore there are no differences in grain sales income.

Agronomic Support for this Trial Provided by:

T·A·C TONE AG CONSULTING LTD.