

EVALUATION OF PHOSPHORUS-SOLUBILIZING INOCULANTS ON CANOLA

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A trial was conducted at the North Dakota State University Carrington Research Extension Center to evaluate P-solubilizing inoculants on canola. Seed of the Roundup Ready hybrid 'Hyola 357 Magnum' was inoculated and immediately sown on 30 May 2003. Plots were installed on a Heimdal loam soil, which tested 12 lbs. P₂O₅/acre (Olson) in the fall of 2002. The 5' x 25' plots were arranged in a randomized complete block design with six replicates. Soil nutrients other than P were brought up to recommended levels. Weed control was good and no problems with insect or disease pests were observed.

The weather in May was abnormally rainy, resulting in late planting. Reduced stands in this and other canola trials were presumed to be due to

soil crusting. However, the plant population was uniformly reduced across all treatments. Despite these limiting factors, canola yields were good. Although no statistically significant differences were observed in yield, test weight, or seed weight, all inoculant treatments numerically increased yield over the uninoculated control (Table 1). PSB Experimental A + Experimental D resulted in the highest yield.

The results of this trial are quite encouraging. Under the conditions of more optimum planting date and plant population, yields would have been higher, which would probably have resulted in a better separation of treatment effects

Table 1. Canola performance in the Becker Underwood evaluation of P-solubilizing inoculants, NDSU Carrington Research Extension Center, 2003.

Treatment	Yield (lb/acre)	Test Weight (lb/bushel)	Seed Weight (g/200)
Untreated	1509	52.1	0.59
JumpStart	1592	51.7	0.60
Becker Underwood Exp. Phosphate Solubilizer	1591	52.0	0.60
Becker Underwood Exp. Phosphate Solubilizer + Subtilex	1863	51.7	0.59
Becker Underwood Exp B1 Phosphate solubiliser	1664	51.9	0.59
Becker Underwood Exp B2 Phosphate solubiliser	1763	51.9	0.60
Becker Underwood Subtilex	1717	51.9	0.59
Mean	1671	51.9	0.59
C.V. (%)	9.4	0.5	3.1
P-value	0.076	0.451	0.865
LSD (0.05)	NS	NS	NS