

# Pea Inoculant Rate Trial

**Trial ID:** 2021-P1IN01 – R.M. of Grassland

**Objective:** Quantify the agronomic and economic impacts of granular inoculant rates for field peas.

**Summary:** Nodulation ratings were very similar between treatments, and agronomically sufficient. There was no significant yield difference between rates of inoculant. Due to the lack of yield response, there was a decrease in profit/ac in the 2x rate area of the trial, equivalent to the cost of increased inoculant rate.

## Trial Information

<b>Treatment</b>	Nodulator Granular 3.2 vs 6.4 lbs/ac
<b>Last Pea Crop</b>	2009
<b>Soil Texture</b>	Loam
<b>Previous Crop</b>	Wheat
<b>Tillage</b>	Conventional
<b>Seeding Date</b>	May 8
<b>Variety</b>	AAC Carver
<b>Seeding Rate</b>	180 lbs/ac
<b>Row Spacing</b>	12"
<b>Plant Stand @ V4</b>	216 000 plants/ac
<b>Harvest Date</b>	August 8

## Precipitation (mm)

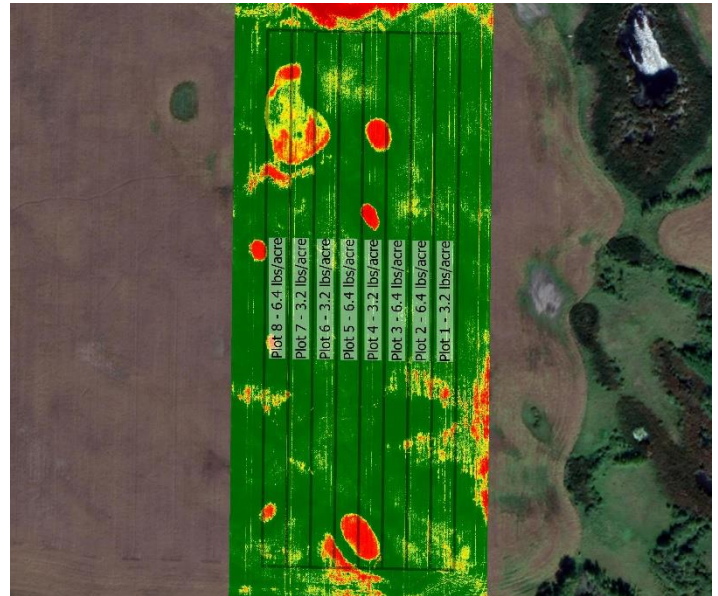
	May	Jun	Jul	Aug	Total
<b>Rainfall</b>	28.1	89.9	22.3	103	243.4
<b>Normal</b>	61.1	89.8	68.3	72.3	291.5
<b>% Normal</b>	46%	100%	33%	143%	83%

## Nodulation†

	Average Nodulation Rating @ R2
<b>1x Rate</b>	4.3
<b>2x Rate</b>	4.7

† 0 = no nodules OR nodules with green/white colour, 1 = <3 clusters of nodules, 3 = 3-5 clusters of predominantly pink nodules, 5 = >5 clusters of pink nodules

## NDVI Field Image July 12



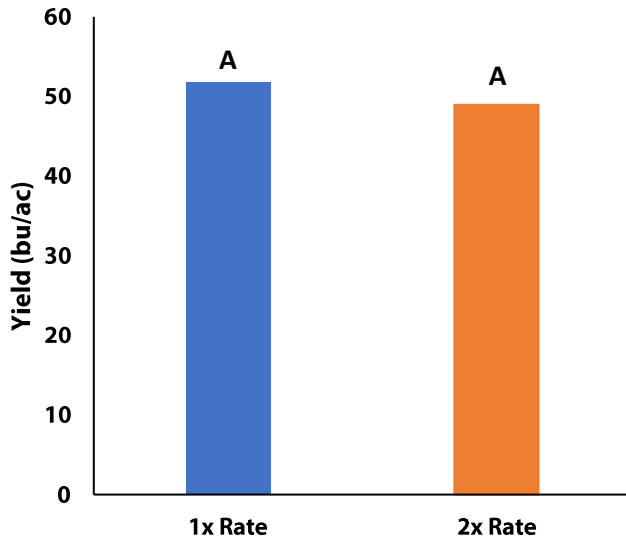
## Nodulation Observations



Nodulation was excellent in most areas of the trial, at R2. As indicated by the average nodulation ratings by treatment, nodulation was very similar between inoculant rate treatments.



### Yield by Treatment



### Overall Yield & Economics

	Mean (bu/ac)	Cost <sup>†</sup>	Change in Profit/ac <sup>††</sup>
2x Rate	49.0	\$20/ac	-\$10/ac
1x Rate	51.8	\$10/ac	
Yield Difference	-2.8		
P-Value	0.1873		
CV	9.3%		
Significance	No	Economic	No

<sup>†</sup> Based on an estimated cost for granular in-furrow inoculant

<sup>††</sup> Because yields were not significantly different, there is no increased income with the 2x rate to offset the increase in price. Profit/ac decreases by the increased price as a result.