

Nitrogen Rate Effects on Popcorn Production

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Objective

To evaluate nitrogen rate effects on popcorn yield.

Background

Cooperator:	OARDC NWARS	Plot Length:	80 feet
Nearest Town:	Hoytville	Planting Date:	4/26/04
Major Soil Type:	Hoytville Silty Clay Loam	Harvest Date:	10/22/04
Previous Crop:	Soybean	pH:	6.4
Hybrid:	Schlessman 30-26	Soil Test P:	91 lbs/A
Planting Rate:	30,000 seeds/acre	Soil Test K:	360 lbs/A
Row Width:	30 inches	C.E.C:	20.6

Methods

The plots were established in a randomized complete block design with four replications. Plots consisted of 4 rows, 80 feet long, with measurements taken on the center 2 rows. Nitrogen (N) in the form of urea-ammonium nitrate solution (UAN; 28%) was sidedressed 42 days after planting at rates of 0, 80, 120, 160 and 200 lbs N/A. Plots were harvested using a 2-row plot combine.

Results

Nitrogen rate effects on popcorn yield and % grain moisture, Hoytville, OH, 2004.

Nitrogen Rate	Yield	Yield	Grain Moisture
----lbs N/A----	----lbs/A----	-----Bu/A*-----	-----%-----
0	2601	40.0	20.5
80	4032	62.1	20.3
120	4171	64.2	19.9
160	4599	70.8	20.8
200	4746	73.0	21.2
LSD (0.05)	407	6.3	NS

* Based on 15% grain moisture and 65 lb/bu

Summary

Nitrogen rate affected yields of popcorn, with a low yield of 2601 lbs/A with no nitrogen applied to a high yield of 4746 lbs/A with 200 pounds of nitrogen applied. There was no significant yield response to nitrogen above 160 lbs N/A. Nitrogen rates did not affect % grain moisture at harvest.

For additional information, contact:

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