Nebraska On-Farm Research Network

Preplant vs. Sidedressed Liquid (28%) and Anhydrous Ammonia Fertilizer - Corn

Study ID: 131131199501
Study Year: 1995

County: Otoe

OBJECTIVE: To determine and document the profitability of two liquid nitrogen application rates at planting and two sidedress anhydrous ammonia rates.

HIGH RATE

Treatment:

Field Cultivate

Plant: 1995 - Early June

Fertilize: 1995 - 100 pounds nitrogen per acre. *liquid nitrogen* (28%) banded 3" from seed with planter versus *sidedress anhydrous ammonia* in 72" knife spacings (early July)

	Liquid	Anhydrous Ammonia
Fertilizer	$28.55	$18.25
Anhydrous Rig	$ 0.00	$ 6.67
Planter Fertilizer Attachment	$ 1.23	$ 0.00
Total	**$29.78**	**$24.92**

LOW RATE

Treatment:

Field Cultivate

Plant: 1995 - Early June

Fertilize: 1995 - 40 pounds nitrogen per acre. *liquid nitrogen* (28%) banded 3" from seed with planter versus *sidedress anhydrous ammonia* in 72" knife spacings (early July)

	Liquid	Anhydrous Ammonia
Fertilizer	$11.42	$ 7.30
Anhydrous Rig	$ 0.00	$ 6.67
Planter Fertilizer Attachment	$ 1.23	$ 0.00
Total	**$12.65**	**$13.97**

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VARIABLE	1995 CORN
Moisture (%)	
High Liquid (28%) at planting	16.4
High Anhydrous sidedress	16.4
Low Liquid (28%) at planting	15.7
Low Anhydrous sidedress	16.1
Means for Liquid	16.0
Means for Anhydrous	16.3
Means for High Rate	15.9**/2
Means for Low Rate	16.4
Test Weight (pounds/bushel)	
High Liquid (28%) at planting	54.5
High Anhydrous sidedress	53.8
Low Liquid (28%) at planting	55.2
Low Anhydrous sidedress	54.5
Means for Liquid	54.8**/1
Means for Anhydrous	54.2
Means for High Rate	54.2 **/2
Means for Low Rate	54.8

**/1 source signifcant at 95% confidence level
**/2 rate significantly different at 95% confidence level

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VARIABLE	1995 CORN
Yield (bushels/acre @ 15.5%)	
High Liquid (28%) at planting	93 *
High Anhydrous sidedress	85
Low Liquid (28%) at planting	86
Low Anhydrous sidedress	88
Means for Liquid	89
Means for Anhydrous	86
Means for High Rate	89
Means for Low Rate	87

* rate by source interaction at 90% confidence level

Summary: In 1995, yields were increased by higher rates of liquid nitrogen, but not by anhydrous ammonia. Nitrogen loss was observed during the high rate application of anhydrous ammonia.