Nebraska On-Farm Research Network

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

Study ID: 131131199401

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: 1994 - May 11

Fertilize: 1994 - 100 pounds nitrogen per acre.

liquid nitrogen (28%) banded 3" from seed with planter versus *sidedress anhydrous ammonia* in 72" knife spacings (June 11)

LOW RATE

Treatment:

Field Cultivate

Plant: 1994 - May 11

Fertilize: 1994 - 40 pounds nitrogen per acre.

liquid nitrogen (28%) banded 3" from seed with planter versus *sidedress anhydrous ammonia* in 72" knife spacings (June 11)

Nebraska On-Farm Research Network

Preplant vs. Sidedressed Liquid (28%) and Anhydrous Ammonia Fertilizer - Corn
Page 2

Comparative cost (per acre) 1994			Comparative cost (per acre) 1994		
	Liquid	Anhydrous Ammonia		Liquid	Anhydrous Ammonia
Fertilizer	$19.64	$12.20	Fertilizer	$ 7.87	$ 4.88
Anhydrous Rig	$ 0.00	$ 6.00	Anhydrous Rig	$ 0.00	$ 6.00
Planter Fertilizer Attachment	$ 1.23	$ 0.00	Planter Fertilizer Attachment	$ 1.23	$ 0.00
Total	**$20.87**	**$18.20**	**Total**	**$ 9.10**	**$10.88**

Nebraska On-Farm Research Network

Preplant vs. Sidedressed Liquid (28%) and Anhydrous Ammonia Fertilizer - Corn
Page 3

VARIABLE	1994 CORN
Moisture (%)	
High Liquid (28%) at planting	15.0
High Anhydrous sidedress	15.0
Low Liquid (28%) at planting	14.9
Low Anhydrous sidedress	15.0
Means for Liquid	15.0
Means for Anhydrous	15.0
Means for High Rate	15.0
Means for Low Rate	15.0
Test Weight (pounds/bushel)	
High Liquid (28%) at planting	59.8
High Anhydrous sidedress	60.2
Low Liquid (28%) at planting	59.7
Low Anhydrous sidedress	60.1
Means for Liquid	59.8**/1
Means for Anhydrous	60.1
Means for High Rate	60.0
Means for Low Rate	59.9

**/1 source signifcant at 95% confidence level

Nebraska On-Farm Research Network

Preplant vs. Sidedressed Liquid (28%) and Anhydrous Ammonia Fertilizer - Corn
Page 4

VARIABLE	1994 CORN
Yield (bushels/acre @ 15.5%)	
High Liquid (28%) at planting	134
High Anhydrous sidedress	138
Low Liquid (28%) at planting	123 ***/3
Low Anhydrous sidedress	134
Means for Liquid	129 ***/1
Means for Anhydrous	136
Means for High Rate	136 ***/2
Means for Low Rate	128

***/1 source significant at 99% confidence level
***/2 rate significant at 99% confidence level
***/3 rate by source interaction significant at 99% confidence level

Summary: In 1994, anhydrous ammonia sidedress fertilized corn yield was significantly higher than liquid (28%) nitrogen treatment. High rate treatments of both anhydrous ammonia and liquid (28%) nitrogen yielded significantly higher than low treatment rates. The interaction among fertilizer sources and rates was also significant to yields. The low rate of liquid (28%) yielded poorly.