Objective

1. Determine if NEB-26 increases the yield of corn.
2. Reducing nitrogen fertilizer 50% was NOT tested in this research. An equal amount of fertilizer was applied to both the control and the treated areas.

Research

The study was conducted by I.C. Anderson, PhD, Research Agronomist at Iowa State University.

Method

Liquid NEB-26 was incorporated into the soil. The study was a randomized Latin block design. The purpose of this study was to measure increased yield, not to reduce nitrogen fertilizer application. Equal amounts of fertilizer were applied to both the control and the treated areas.

Results

	Control	NEB-26	Increase
Yield (bushels per acre)	158.6	174.6	110.1%

Comments

The objective of significantly increasing the yield of corn was successfully accomplished.

Conclusions

Quote from I.C. Anderson, PhD, Research Agronomist at Iowa State University:

> *"NEB-26 did influence corn production. The most significant effect was a yield increase of 10.1% with an application rate of one gallon per 13 acres. Based on this study NEB-26 can effectively be applied in the spring to increase the yield of corn."*

AGMOR

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A yield trial on corn was conducted with NEB during 1995. The trial was conducted at the agronomy farm of Iowa State University located near Ames, Iowa. A summary of the study is presented in the abstract with the results available in the conclusion section.

ABSTRACT:
NEB was spray applied to the soil surface and incorporated in a randomized Latin block design study. Control plots were incorporated. Immediately following incorporation all plots were planted with Pioneer 3394 variety of corn. All plots were harvested on October 16, 1995 by mechanical harvester and the corn seed from each plot weighed.

CONCLUSIONS:
NEB did influence corn production. The most significant effect was a yield increase of 10.1% with an application rate of one gallon per 13 acres. Based on this study NEB can effectively be applied in the spring to increase the yield of corn.

For additional information regarding this study, please refer to the complete report.

Sincerely,

I. C. Anderson, PhD
Research Agronomist

CORN STUDY

WITH

NEB-26

IOWA STATE UNIVERSITY
AMES, IOWA

I. C. ANDERSON, PhD
RESEARCH AGRONOMIST

ABSTRACT

NEB-26 was spray applied to the soil surface and incorporated in a randomized latin square block design study. Control plots were incorporated. Immediately following incorporation all plots were planted with Pioneer 3394 variety corn.

All plots were harvested on October 16, 1995 by mechanical harvester and the corn seed from each plot weighed. The optimum rate of NEB-26 produced a yield increase of 10.1%.

INTRODUCTION

Purpose of the study

NEB-26 has demonstrated yield increases in various crops by promoting microbial activity and thereby increasing the availability of nutrients including nitrogen. NEB-26 is recommended to be applied pre-planting or at the time of planting.

This study was established to determine, under normal growing conditions, if NEB-26 would influence the yield of corn. The secondary objective of this research was to determine the most effective rate of application.

MATERIALS AND METHODS

Experimental Design

A randomized latin square complete block study consisting of five replicates was designed to test the effects of NEB-26 on Pioneer 3394 variety corn. The study was conducted by Iowa State University near Ames, Iowa. The study included a multi-rate design evaluating four rates of NEB-26.

History

The field, which is part of the agronomy farm located west of Ames, Iowa, was utilized in the production of corn during 1994 followed by corn in 1995. Stubble was evident but tillage incorporated most of the residue.

Fertilization

Urea in granular form, at the rate of 125 lbs. per acre, was applied and incorporated by harrowing on May 16, 1995. Phosphorous and potassium was adequate to produce a typical crop thus no additional units were applied.

Application

NEB-26, at the recommended rate, was spray applied to the random plots on May 17, 1995 and immediately incorporated.

Planting

Pioneer 3394 variety corn was planted in the study area immediately following incorporation of NEB-26 on May 17, 1995. Variety 3394 was selected based on the planting and projected maturity dates. The seeding rate was 27,700 plants per acre with 30" row spacing.

CORN TRIAL WITH NEB-26
IOWA STATE UNIVERSITY - 1995
VARIETY - PIONEER 3394

RATE	TREATMENT	YIELD	NET CHANGE
CHECK	NONE	158.6 bu/ac	N/A
10 oz/ac	NEB-26	174.6 bu/ac	+10.1%

APPENDIX

Credentials of I. C. Anderson

Education

Ph.D. Botany 1956 North Carolina State University
M.S. Soil Fertility 1954 North Carolina State University
B.S. Agronomy 1951 Iowa State University

Employment

Iowa State University Agronomy Dept.	1958-present	Professor
Brookhaven National Lab, Upton, NY	1956-1958	Postdoc

Experience

Graduate teaching and research in Crop Production and Physiology. Part of the research included testing over 100 plant growth regulatory chemicals on yield of corn and soybean since 1960 to present.

Publications

Anderson, I.C. and D.R. Buxton. 1995. Evaluation of potential herbacious crops for the midwest. 106 pp. final report to Oak Ridge National Laboratory managed by Martin Marietta.

Anderson, I.C. and R.M. Cruse. 1993. Tillage and allelopathic aspects of the corn-soybean rotation effect. In Interjit, K.M.M. Dakshini, and F. A. Einhellig (ed.). Allelopathy. ACS series 582, Washignton.

Awards (see below)

Elected Fellow of American Society of Agronomy and the Crop Science Society of America

Sarobol, E. and I. C. Anderson. 1992. Improving yield of corn in the corn-soybean rotation. In S.J.H. Pizvi and V. Pizvi (ed) Allelopathy, basic and applied aspects. Champman & Hill, Inc.