FY95-XVIII-58
COMPARATIVE EVALUATION OF PRODUCTIVITY OF PRIME AND NONPRIME SOILS

CONTRACTOR: North Dakota State University Land Reclamation Research Center

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PARTICIPANTS

Sponsor	Cost Share
The Coteau Properties Company	$10,184
The Falkirk Mining Company	$4,880
BNI Coal, Ltd.	$2,970
Knife River Corporation	$3,182
ND Industrial Commission	$21,116
Total	$42,332

Project Schedule - 1 Year
Contract Date - 2/27/95
Start Date - 2/27/95
Completion Date - 3/20/96

Project Deliverables
Status Report - 6/15/95 ✓
Status Report - 9/15/95 ✓
Final Report - 3/20/96 ✓

OBJECTIVE / STATEMENT OF WORK

The objective of this program is: 1) to compare the productivity of prime and nonprime topsoil materials in different topographic positions; and 2) to determine if the separate handling of prime or nonprime topsoil is necessary. This is the fourth and final year of the study. The following three tasks are proposed for the fourth year: 1) analyze data from previous three years, 2) establish and monitor wheat plots at Coteau and Falkirk (fertilizer added to bring all plots to equal fertility, and precipitation and moisture content monitored), and 3) analyze and present data from the four years of study in a final report.

CONCLUSIONS AND RECOMMENDATIONS

- In 1995, topsoil depth did not affect wheat yield at the Coteau or Falkirk site.
- In 1995, topographic positions affect yields at the Coteau site but not at the Falkirk site.
- In 1995, there was no difference in yield between the Bowbells and Williams soils, which is consistent with the data from previous years.
- During the four-year study, yields from the Zahl soil were not as consistently equivalent to yields from the Bowbells and Williams soils.
- It seems reasonable to allow topsoil from Zahl to be mixed with Bowbells and Williams topsoil.
- It is, therefore, recommended that the topsoil from these three soils could be mixed without significantly affecting the productivity of reclaimed land.