

TABLE OF CONTENTSPAGEClimatological Notes

- | | |
|---|---|
| 1. Some climatological notes, fall 1969 | 1 |
|---|---|

Crookston Experiments

- | | |
|--|----|
| 2. Effect of zinc on the yield and quality of sugarbeets, 1969 | 14 |
| 3. Land forming experiment | 18 |
| 4. Sugarbeet rotation studies, 1969 | 21 |

Elk River Sand Plain Experiments

- | | |
|--|----|
| 5. Fertilizing alfalfa at Elk River, Sherburne County, 1969 | 26 |
| 6. Field experiments with asphalt moisture barriers (AMB) on sandy soils in Sherburne County | 29 |
| 7. Soil fertility trials on potatoes | 38 |
| 8. The effect of nitrogen and potassium rates on corn yields on an irrigated Hubbard loamy coarse sand | 39 |
| 9. Weather summary, Elk River, 1969 | 42 |

Lamberton Experiments

- | | |
|---|----|
| 10. Experiments with nitrogen source, placement and time of nitrogen application to a Webster clay loam at Lamberton from 1960 through 1969 | 45 |
| 11. Lime plots, Lamberton, 1969 | 66 |
| 12. The effect of heavy sulfate salt applications to an Ostrander loam at Rosemount and to a calcareous Webster clay loam at Lamberton on soil extract conductivity, plant populations and yields of Hark and of Chippewa 64 soybeans in 1969 | 70 |
| 13. Winter versus spring fertilization on 1969 corn yields | 74 |

Morris Experiments

14. Continuous corn silage	77
15. Corn irrigation experiment	78
16. Effect of high rate of phosphorus with and without zinc on corn yields	79
17. Phosphorus fertilization of continuous corn	80
18. Phosphorus and potassium fertilization of alfalfa	82
19. Use of seed incorporated (POP-UP) fertilizer	83
20. Use of varying rates of nitrogen and starter on corn in 1969	84
21. Yields of field corn grown each of thirteen years with varying rates of nitrogen fertilization at Morris	85
22. NPK fertilization of soybeans	87
23. Zinc fertilization of continuous corn	89
24. Weather summary, 1969	90

Park Rapids Experiments

25. 1968 climatic studies at the Park Rapids sulfur experimental field	91
26. Effect of boron rates on stand, appearance and nutrient composition of corn and alfalfa	104

Rosemount Experiments

27. Continuous corn - high fertility experiment	119
---	-----

Waseca Experiments

28. Zinc sources on corn	123
29. Alfalfa fertilization	124
30. Residual effects of N-P-K treatments on soybeans	124

	<u>PAGE</u>
31. Corn population research	125
32. Foliar-applied micronutrients	126
33. Sugar corn experiments	127
<u>Alfalfa Fertilization</u>	
34. Fertilizer and lime trials at Pierz, Morrison County	128
<u>Corn Planting Trials</u>	
35. Method of corn planting study	129
<u>Fertilization for Grass Seed</u>	
36. Trace element study with Kentucky bluegrass and timothy	133
<u>Soybean Fertilization</u>	
37. Soybean nitrogen fertilization studies	139
38. Soybean fertilizer placement study	144
39. Effect of micronutrients on soybean seed yields	149
<u>Zinc Fertilization</u>	
40. Four years of experiments with different zinc fertilizer sources and phosphate for continuous corn on a zinc deficient Hamerly loam near Benson, Minnesota	152
<u>Herbicide Residues</u>	
41. Soil pesticide residues	158
<u>Analysis of Tile Waters</u>	
42. Nutrient concentration of drainage tile water in central Minnesota	162