## Use of Phosphoric Acid to Improve Emergence of Sugarbeets

Carmy G. Page, Coshise County Extension Agent; Robert E. Dennis, Extension Agronomist and David K. Parsons, Assistant Agricultural Agent-Field Testing

Spreckels-Amstar; Kansas Settlement, Cochise County

Acid Applied April 17, 1974
Location - Jack Lease
(Spreckels Farm)
Spray width - 3 inches
Plot - 2 beds 30' long (5' x 30')

| Treatments 1/ | | Plants in Thirty Feet of Row | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | May 2 | | | | | May 8 | | | | | May 13 | | | | | May 23 2/ | | | | |
| | | Rep. | | | | | Rep. | | | | | Rep. | | | | | Rep. | | | | |
| | | 1 | 2 | 3 | 4 | Ave. 4/ | 1 | 2 | 3 | 4 | Ave. 4/ | 1 | 2 | 3 | 4 | Ave. 4/ | 1 | 2 | 3 | 4 | Ave. 4/ |
| 1 | S 3/ | 75 | 46 | 52 | 71 | 64.8 a | 66 | 47 | 43 | 69 | 61.0 a | 58 | 49 | 43 | 67 | 57.5 a | 27 | 8 | 12 | 18 | 17.0 a |
| | N | 63 | 48 | 90 | 73 | | 58 | 44 | 90 | 71 | | 51 | 45 | 83 | 64 | | 22 | 13 | 22 | 14 | |
| 2 | S | 76 | 72 | 42 | 50 | 62.0 a | 43 | 68 | 40 | 44 | 54.1 a | 32 | 64 | 45 | 39 | 52.1 a | 23 | 23 | 6 | 16 | 19.4 a |
| | N | 91 | 28 | 67 | 70 | | 78 | 33 | 65 | 62 | | 83 | 31 | 64 | 59 | | 40 | 21 | 4 | 22 | |
| 3 | S | 53 | 58 | 85 | 45 | 59.1 a | 54 | 50 | 71 | 47 | 59.9 a | 58 | 40 | 57 | 48 | 53.3 a | 5 | 28 | 10 | 4 | 16.6 a |
| | N | 54 | 67 | 48 | 63 | | 55 | 65 | 47 | 58 | | 52 | 64 | 45 | 62 | | 8 | 46 | 17 | 15 | |
| 4 | S | 78 | 54 | 60 | 56 | 61.1 a | 69 | 56 | 61 | 44 | 57.0 a | 54 | 44 | 61 | 39 | 52.2 a | 40 | 21 | 0 | 17 | 13.3 a |
| | N | 63 | 103 | 45 | 30 | | 57 | 98 | 46 | 25 | | 52 | 95 | 45 | 28 | | 16 | 39 | 1 | 12 | |

1/ Treatment:
1. 50 gal/A-------217cc Acid ($P_2O_5$ - 24%) + 613cc $H_2O$.
2. 100 gal/A-------434cc Acid ($P_2O_5$ - 24%) + 296cc $H_2O$.
3. 150 gal/A-------651cc Acid ($P_2O_5$ - 24%) + 180cc $H_2O$.
4. Check

2/ Cultivated, evidence of damage seen.
3/ S or N indicates North or South bed of the two bed plot.
4/ Means followed by the same letter are not significantly different at .05 level by Student Newman Keul's test.

## Use of Phosphoric Acid to Improve Emergence of Sugarbeets

Carmy G. Page, Cochise County Extension Agent; Robert E. Dennis, Extension Agronomist; David K. Parsons, Assistant Agricultural Agent-Field Testing

Spreckels-Amstar; Kansas Settlement, Cochise County

Acid Applied April 17, 1974
Beets irrigated up April 17, 1974.
Location - Plot N (1 Mile West of Headquarters)
Spray width = 3 inches
Plot = 2 beds 30' long (5' x 30')

| | | Plants in Thirty Feet of Row | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | May 8 | | | | | May 13[2] | | | | | May 23 | | | | | June 28[3] | | | | |
| Treatment[1] | | Rep 1 | 2 | 3 | 4 | Ave.[4] | Rep 1 | 2 | 3 | 4 | Ave.[4] | Rep 1 | 2 | 3 | 4 | Ave.[4] | Rep 1 | 2 | 3 | 4 | Ave.[4] |
| 1 | S[5] | 53 | 49 | 34 | 31 | 47.6 a | 40 | 46 | 33 | 28 | 42.1 a | 32 | 46 | 33 | 26 | 37.6 a | 23 | 33 | 21 | 22 | 22.5 a |
| | N | 63 | 57 | 48 | 46 | | 49 | 56 | 44 | 41 | | 36 | 52 | 42 | 34 | | 27 | 18[3] | 20 | 16 | |
| 2 | S | 37 | 27 | 51 | 65 | 48.3 a | 39 | 30 | 46 | 63 | 45.0 a | 40 | 32 | 46 | 51 | 44.4 a | 28 | 15 | 22 | 33 | 21.8 a |
| | N | 42 | 41 | 78 | 45 | | 46 | 35 | 64 | 37 | | 39 | 29 | 80 | 38 | | 26 | 22 | 24[3] | 26 | |
| 3 | S | 46 | 58 | 36 | 47 | 53.1 a | 44 | 52 | 27 | 41 | 49.0 a | 43 | 53 | 23 | 38 | 43.3 a | 38 | 31 | 19 | 29 | 24.8 a |
| | N | 63 | 45 | 49 | 81 | | 65 | 49 | 40 | 72 | | 54 | 41 | 31 | 63 | | 33 | 27 | 17 | 41[3] | |
| 4 | S | 50 | 47 | 51 | 41 | 49.0 a | 41 | 43 | 41 | 47 | 42.9 a | 35 | 37 | 40 | 37 | 37.1 a | 22 | 26 | 28 | 27 | 21.0 a |
| | N | 63 | 36 | 68 | 35 | | 49 | 33 | 55 | 34 | | 39 | 28 | 52 | 29 | | 17 | 18 | 15[3] | 15 | |

1/ Treatment:
1. 50 gal/A ---- 217cc Acid ($P_2O_5$ - 24%) + 613cc $H_2O$.
2. 100 gal/A ---- 434cc Acid ($P_2O_5$ - 24%) + 396cc $H_2O$.
3. 150 gal/A ---- 651cc Acid ($P_2O_5$ - 24%) + 180cc $H_2O$.
4. Check

2/ Cultivated
3/ Recultivated. Evidence of damage caused by cultivator.
4/ Means followed by the same letter are not significantly different at .05 level Newman-Keul's test.
5/ S or N indicates that North or South bed of the two-bed plot.

## Use of Phosphoric Acid to Improve Emergence of Sugarbeets

Carmy G. Page, Cochise County Extension Agent; Robert E. Dennis, Extension Agronomist; David K. Parsons, Assistant Agricultural Agent-Field Testing

Location - Abandoned adobe house field
Spray width - 3 inches
Plot - 2 beds 30' long (5' x 30')

Plants in Fifty Feet of Row

| Treatment[1] | | May 2 | | | | | May 8 | | | | | May 13 | | | | | May 23[2] | | | | | June 28[3] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Rep | | | | | Rep | | | | | Rep | | | | | Rep | | | | | Rep | | | | |
| | | 1 | 2 | 3 | 4 | Ave.[5] | 1 | 2 | 3 | 4 | Ave.[5] | 1 | 2 | 3 | 4 | Ave.[5] | 1 | 2 | 3 | 4 | Ave.[5] | 1 | 2 | 3 | 4 | Ave.[5] |
| 1 | S[4] | 63 | 77 | 76 | 53 | 68.3 a | 63 | 64 | 64 | 51 | 63.6 a | 60 | 69 | 56 | 50 | 62.9 a | 52 | 56 | 55 | 48 | 55.1 a | 31 | 31 | 21 | 20 | 27.6 a |
| | N | 76 | 87 | 67 | 47 | | 71 | 76 | 74 | 46 | | 70 | 72 | 77 | 49 | | 60 | 59 | 65 | 46 | | 33 | 27 | 32 | 26 | |
| 2 | S | 68 | 63 | 63 | 75 | 65.8 a | 66 | 62 | 53 | 70 | 64.4 a | 66 | 58 | 56 | 73 | 66.6 a | 63 | 55 | 51 | 59 | 57.6 a | 32 | 18 | 25 | 23 | 26.4 a |
| | N | 71 | 59 | 56 | 71 | | 69 | 58 | 69 | 68 | | 77 | 69 | 70 | 64 | | 60 | 66 | 48 | 59 | | 24 | 30 | 23 | 36 | |
| 3 | S | 84 | 68 | 84 | 64 | 69.9 a | 83 | 66 | 61 | 55 | 66.1 a | 84 | 59 | 57 | 67 | 67.8 a | 78 | 50 | 55 | 56 | 59.8 a | 35 | 23 | 23 | 28 | 26.1 a |
| | N | 72 | 66 | 64 | 77 | | 75 | 63 | 56 | 70 | | 71 | 68 | 58 | 78 | | 64 | 63 | 58 | 54 | | 25 | 31 | 26 | 18 | |
| 4 | S | 69 | 72 | 76 | 50 | 70.0 a | 64 | 71 | 65 | 56 | 66.8 a | 61 | 63 | 68 | 48 | 62.9 a | 55 | 58 | 62 | 50 | 56.3 a | 23 | 24 | 21 | 24 | 23.6 a |
| | N | 71 | 77 | 93 | 52 | | 64 | 77 | 86 | 52 | | 62 | 74 | 79 | 48 | | 52 | 67 | 64 | 42 | | 23 | 24 | 20 | 30 | |

1/ Treatments:
1. 50 gal/A--------217cc Acid ($P_2O_5$ - 24%) + 613cc $H_2O$.
2. 100 gal/A--------434cc Acid ($P_2O_5$ - 24%) + 396cc $H_2O$.
3. 150 gal/A--------651cc Acid ($P_2O_5$ - 24%) + 180cc $H_2O$.
4. Check

2/ Cultivated
3/ Thinned.
4/ S or N indicates North or South bed of the 2 bed plot.
5/ Means followed by the same letter are not significantly different at .05 level by Student Newman-Keul's test.