

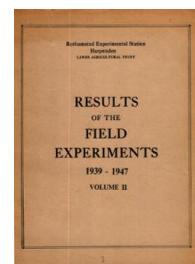
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U Kok-saghyz

Rothamsted Research

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U/1

KOK - SAGHYZ

Hoosfield 1943

Effects of fertilizers and spacing. *Taraxacum kok-saghyz* is a dandelion found wild at an altitude of 7,000 feet in Kazakstan and cultivated in Russia as a source of latex. The rubber content of the roots is about 4% and 200 lb. per acre of rubber has been obtained in Russia.

Design; 12 randomized blocks of 4 plots each, certain interactions being confounded between blocks.

Area of each plot: For early harvesting, 0.00055 acre; for late harvesting, 0.00179 acre.

Treatments

Sulphate of ammonia: None, 0.6 cwt. N per acre (0.2 cwt. N in Autumn and 0.4 cwt. N in Spring).

Superphosphate: None, 0.6 cwt. P₂O₅ per acre

Muriate of potash: None, 1.0 cwt. K₂O per acre.

Spacings (applied to blocks): 18" between rows, 4" in row (i.e. between adjacent plants)

18" between rows, 8" in row.

12" between rows, 12" in row.

Crop Notes

Seed sown: Oct. 16. This sowing was not successful and the crop was resown on March 22. Harvested: Sept. 7 ('Early') and Nov. 8 ('Late'). Previous crop, Ryegrass.

Standard errors: between blocks, applicable to spacings:

Roots (early harvest) 1.56 cwt. per acre or 20.5%, 6 d.f.

Roots (late harvest) 1.64 cwt. per acre or 16.2%, 6 d.f.

applicable to artificials:

Roots (early harvest) 1.47 cwt. per acre or 19.4%, 18 d.f.

Roots (late harvest) 3.63 cwt. per acre or 35.9%, 18 d.f.

Plant number (early harvest) 9.51 thousands per acre or 19.9%, 18 d.f.

Plant number (late harvest) 7.27 thousands per acre or 16.1%, 18 d.f.

The seed used for the second sowing had been soaked and kept at 0°C for 14 days. This treatment increased the field germination (50% germination in 2 days compared with 5 days for untreated seed).

U/2

Kok-Saghyz

Differential Responses

| | Mean | Sulph. amm. | | Superphosphate | | Mur. Pot. | |
|---|-------|-------------|-------|----------------|-------|-----------|-------|
| | | Abs. | Pres. | Abs. | Pres. | Abs. | Pres. |
| Roots, early harvest, cwt. per acre. Mean, 7.6 | | | | | | | |
| | ±0.42 | | | ±0.59 | | | |
| Sulphate of ammonia | 0.0 | | | 0.0 | 0.0 | -1.3 | 1.3 |
| Superphosphate | 0.1 | 0.1 | 0.1 | | | -0.4 | 0.6 |
| Muriate of Potash | 0.9 | -0.4 | 2.2 | 0.4 | 1.4 | | |
| Roots, late harvest, cwt. per acre. Mean, 10.1 | | | | | | | |
| | ±1.05 | | | ±1.48 | | | |
| Sulphate of ammonia | 0.5 | | | -0.8 | 1.8 | 0.4 | 0.6 |
| Superphosphate | -0.4 | -1.7 | 0.9 | | | -0.6 | -0.2 |
| Muriate of Potash | 0.1 | 0.0 | 0.2 | -0.1 | 0.3 | | |
| Plant number, early harvest, thousands per acre. Mean, 47.9 | | | | | | | |
| | ±2.75 | | | ±3.88 | | | |
| Sulphate of ammonia | -4.2 | | | -0.6 | -7.8 | -4.4 | -4.0 |
| Superphosphate | 0.5 | 4.1 | -3.1 | | | -2.6 | 3.6 |
| Muriate of Potash | 4.6 | 4.4 | 4.8 | 1.5 | 7.7 | | |
| Plant number, late harvest, thousands per acre. Mean, 45.1 | | | | | | | |
| | ±2.10 | | | ±2.97 | | | |
| Sulphate of ammonia | -8.2 | | | -9.1 | -7.3 | -5.9 | -10.5 |
| Superphosphate | 1.9 | 1.0 | 2.8 | | | -0.6 | 4.4 |
| Muriate of Potash | 2.2 | 4.5 | -0.1 | -0.3 | 4.7 | | |

| Spacing | Roots, cwt. per acre | | Plant no., thous. per acre | |
|------------------------------|----------------------|-------|----------------------------|------|
| | Early | Late | Early | Late |
| | ±0.78 | ±0.82 | | |
| 18" between rows, 4" in row | 7.6 | 9.5 | 48.2 | 47.0 |
| 18" between rows, 8" in row | 6.7 | 9.9 | 40.8 | 40.1 |
| 12" between rows, 12" in row | 8.5 | 10.9 | 54.7 | 48.3 |

The first spacing involved a seed-rate per unit area double that of the other two spacings.