

SOIL TEST CORRELATIONS FOR POTASSIUM

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Nine strip trials were laid down in which 0-0-60 was broadcast at 100, 200 and 400 lb/acre in addition to the nitrogen and phosphorus supplied at the rates recommended on the basis of the fall soil test. Most of the 1968 potassium program was concentrated on the Carrot River soils in the general Nipawin-Carrot River area. Excellent responses to K were obtained for soils in the very low soil test range (ammonium acetate extraction). Some responses, with barley, were obtained with soils in the medium range. As in 1967, barley appeared to respond better to potash fertilization than did wheat. However, one wheat trial, on a soil very low in K, showed excellent visual response but the final yield response was suppressed by heavy frost damage.

Soil sampling in November, 1968 indicated that a significant proportion of the added K not used by the 1967 crop remains in the surface 6" of soil in an available form. In this regard three of the locations were permanently staked so that residual response patterns can be determined.

TABLE 1. Results of potassium trials - 1968
(Yields in bu/acre)

Soil Type	Crop	Nitrogen* + Phosphorus Yield	Yield Increase 0-0-60 @			Potassium soil test lb/acre (spring)
			100	200	400	
Cr:v1	Wheat	5.4	9.5	12.9	15.0	71
We:c1	Wheat	45.5	0.0	-1.0	2.1	238
Cr:v1	Barley	39.4	2.8	9.4	19.8	144
Cr:v1	Rapeseed	26.2	0.3	2.9	3.5	101
Cr:v1	Barley	10.9	27.0	37.6	46.8	67
Cr:v1	Barley	24.1	14.8	26.6	27.8	61
Wf:v1	Barley	44.9	17.6	5.3	5.1	172
Cr:v1	Wheat	35.8	7.6	7.5	2.4	104
Cr:v1	Barley	44.7	18.6	13.5	9.1	89

* Nitrogen and phosphorus were applied to the entire plot area at the rates recommended on the basis of the soil test.