

former condition. However, in many cases this did not happen, and top-dressing trials which included a potash treatment and an excellent method of quick testing of soils and plant tissues were used to investigate the trouble.

So far nearly 50 soil samples from different parts of the pumice country of the Rotorua district have been examined for potash and other plant nutrients, and the results from these and those of topdressing experiments and plant-tissue tests have frequently indicated very clearly that potash is no longer in plentiful supply generally, but it is very deficient in many localities.

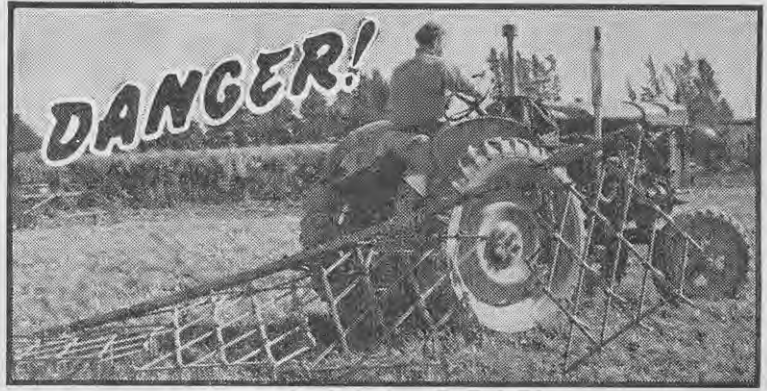
It is not proposed in this article to deal with the whole of the investigation up to the present time, but rather to acquaint farmers concerned with the problem that lies ahead of them so that steps may be taken to deal with it. As far as it is known to present the districts of Oturoa and Kaharoa and parts of Ngongotaha, Mamaku, Reporoa, and Broadlands are chiefly affected by potash deficiency. Those farms longest under cultivation, some for more than 40 years, are the most deficient and those of more recent development, if at all deficient, are the least so.

Ample Potash in Night Paddocks

Night paddocks on dairy farms, regardless of the age of property, are almost invariably in good condition and contain ample potash, but fields cut more or less regularly for hay, although frequently receiving more phosphates, have often been found to be in great need of potash treatment. Ordinary day paddocks are usually between these two extremes. Urine contains most of the potash from the food consumed by an animal, which is one reason for the good condition of night paddocks. Hay, on the other hand, can rob a field of more than 1cwt. of potash annually, and if the field is cut frequently for hay for some years and the potash is not fed back on to the paddock, the result can be serious.

A symptom of potash deficiency in pastures which have had good general management and have received regular and adequate dressings of phosphates is a lack of good clover growth and a decided tendency for browntop, sweet vernal, flat weeds, and moss to replace ryegrass and cocksfoot. Lucerne also has been found to suffer severely under conditions similar to those responsible for pasture deterioration. Wherever potash has been applied in such cases at 1cwt. per acre (early spring or early autumn seem the best periods for pasture and spring for lucerne) excellent responses have been obtained in a few weeks. If the extra expense of the potash is a financial difficulty, it would seem perfectly safe either to reduce the amount of normal phosphatic topdressing or withhold it for a year, provided such topdressing has not been neglected in the past.

Investigation is being made to determine the most suitable amount of potash to apply after the initial application, and information on this will be published as soon as it becomes available.



THOUGH present all the year round, the danger of short hitching implements to tractors is more acute in August and September, when South Island farmers are harrowing wheat to aid its tillering and North Island farmers are harrowing pasture to spread sheep and cow dung and fed-out hay that has not been eaten by stock. When sharp turns are made with short-hitched sets of harrows, the bar engages on the tyre and rides up the wheel, as in the illustration, so that the driver is in danger of severe injury. To avoid this danger there should be fitted between the harrows and the tractor a length of chain or wire rope long enough not to foul the rear wheel when sharp turns are made. Short-hitched implements are more likely to ride up the wheel of a steel-wheeled tractor, especially one fitted with A grips instead of spade lugs. This danger is also present to a less degree with trailer-drawn implements with a short drawbar, though contact between the rear wheel or crawler tracks and the drawbar more usually results in damage to the implement or the tractor tyre than in a human injury.

Exercise care when sharp turns must be made with a tractor and fit longer hitches where necessary.

—C. J. CROSBIE, Farm Machinery Instructor,
Department of Agriculture, Christchurch.

METEOROLOGICAL RECORDS FOR MAY

Station	Height of station above M.S.L. (ft.)	Air temperatures in degrees (Fahrenheit)				Rainfall in inches				Bright sunshine hours	
		Approx. mean	Difference from normal	Absolute maximum and minimum		Total fall	No. of days of rain	Difference from normal	Maximum fall		
				Maximum	Minimum				Amount		Date
Kerikeri	201	60.8	+ 5.8	72.0	43.0	9.56	22		2.03	21	96.4
Auckland	160	61.0	+ 4.4	70.2	47.1	2.04	18	- 2.94	0.52	10	122.0
Tauranga	10	58.4	+ 5.1	70.1	37.1	12.26	18	+ 7.42	4.46	15	113.5
Ruakura	131	55.4	+ 3.7	71.2	27.9	1.30	11	- 3.28	0.32	18	104.0
Rotorua	980	54.9	+ 5.2	68.0	32.0	6.50	15	+ 1.04	1.74	12	81.2
Gisborne	12	56.8	+ 4.0	72.1	38.7	4.18	13	- 0.31	1.23	12	114.9
New Plymouth ..	160	57.4	+ 4.0	69.0	41.5	2.59	14	- 3.30	0.95	15	108.1
Napier	5	56.7	+ 4.3	76.7	38.2	2.46	10	- 0.75	1.37	12	128.3
Talhappe	2157	52.6	+ 6.1	69.9	34.0	0.94	10	- 2.39	0.21	14	
Wanganui	72	56.3	+ 4.4	75.0	33.7	0.98	11	- 2.25	0.20	5	134.8
Palmerston North	110	54.4	+ 3.9	74.0	31.8	0.52	9	- 1.88	0.17	12	127.4
Wainanga	350	53.0	+ 4.0	72.9	28.0	2.16	9	- 1.84	0.83	13	115.9
Wellington	415	54.6	+ 3.4	70.2	38.5	1.42	15	- 2.91	0.30	12	104.7
Nelson	24	55.1	+ 4.6	67.7	37.9	3.61	13	+ 0.46	1.00	15	115.7
Blenheim	12	53.8	+ 3.8	71.8	31.8	1.64	11	- 0.66	0.55	26	143.5
Hokitika	12	53.6	+ 5.4	70.0	33.8	15.50	21	+ 6.05	4.34	26	94.5
Hanmer Springs ..	1225	49.0	+ 4.5	76.0	20.5	2.09	11	- 2.51	0.45	5	92.3
Christchurch .. .	22	51.1	+ 3.6	79.1	31.6	1.03	7	- 1.85	0.64	13	88.9
Ashburton	323	49.6	+ 3.7	75.0	28.0	1.39	11	- 1.10	0.44	17	90.9
Timaru	56	49.2	+ 2.5	71.4	30.0	0.80	9	- 0.71	0.51	17	107.6
Alexandra	520	44.8	+ 1.9	68.2	19.2	0.92	8	- 0.01	0.80	25	104.7
Talari	80	47.6	+ 1.7	74.5	24.7	0.95	6	- 1.35	0.47	17	94.8
Invercargill .. .	32	47.0	+ 1.3	68.0	25.0	1.47	15	- 2.73	0.40	16	100.8