



## FERTILIZER ADVISORY SERVICE

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### CLIENT DETAILS

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### ADVISOR DETAILS

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## SUMMARY OF ANALYTICAL RESULTS

(These results may not be used in litigation)

Submission : 90 Year : 2024 Printed : 24 Aug 2024

Your sample ID	Lab number	Sample density g/mL	P mg/L	K mg/L	Ca mg/L	Mg mg/L	Exch. acidity cmol/L	Total cations cmol/L	Acid sat. %	pH (KCl)	Zn mg/L	Mn mg/L	Cu mg/L
NKANTEKO 2	F1823	0.90	6	247	514	129	1.32	5.58	24	4.00	2.3	11	2.7

Your sample ID	Lab number	Mid-Infrared Estimates		
		Org. C %	N %	Clay %
NKANTEKO 2	F1823	3.0	0.21	37

### Comments:

- (1) Recommended rates of fertilizer and lime for the relevant crops are reported on the following pages. No recommendation will be given for crops not entered on the submission form.
- (2) Recommendations are not provided for subsoil samples.
- (3) It is assumed that samples submitted for crops and for the establishment of pastures were taken from the top 15 cm of soil. For the maintenance of established pastures, a sampling depth not exceeding 10 cm is assumed.
- (4) It is assumed that the lime to be used has a neutralising value equal to 75% of that of pure calcium carbonate. Dolomitic lime is recommended if soil Mg levels are low, and calcitic lime, if soil Mg exceeds 0.6 x soil Ca. Where Mg is sufficient, but not excessive, either type of lime may be used. If lime is not necessary, but the soil Mg level is suboptimal for the intended crop, this is indicated under the "Lime type" heading with the comment "low Mg". Consult your advisor for the most cost-effective method of improving Mg status.
- (5) Phosphorus recommendations are based on a water-soluble P source.
- (6) The recommendations are based on the assumption that the soil sample is truly representative of the land and that other growth factors are not limiting.
- (7) Organic carbon, total nitrogen and clay percentage, estimated by mid-infrared (MIR) spectroscopy, is given for most samples. MIR measurements should be viewed as reasonably reliable estimates. Actual C, N and clay percentages (as well as S concentrations) can be determined (at extra cost) on request.

NUTRIENT AND LIME RECOMMENDATIONS

Italian ryegrass pastures: establishment; irrigated

Sample ID	Lab Num	NITROGEN		PHOSPHORUS			POTASSIUM			LIME				ZINC
		Yield target t/ha	Req. N kg /ha	Sample soil test mg/L	Target soil test mg/L	Req. P kg/ha	Sample soil test mg/L	Target soil test mg/L	Req. K kg/ha	Sample acid sat. %	PAS %	Req. Lime t/ha	Lime type	Zinc fert. reqd.?
NKANTEKO 2	F1823	8.0	200	6	10	45	247	100	0	24	20	1.0	Dol/Calc	No
		10.0	260	6	12	65	247	120	0	24	20	1.0	Dol/Calc	No
		12.0	350	6	14	85	247	140	0	24	20	1.0	Dol/Calc	No

Sample soil test and sample acid saturation reflect the soil test values of the sample submitted. Required P and required K (coloured red) are the amounts of P and K required to raise the soil test to the target value. Lime required (coloured red) is the amount of lime needed to decrease the soil acid saturation to the permissible acid saturation (PAS).

MANAGEMENT GUIDELINES

- (1) LIME, IF REQUIRED, SHOULD BE APPLIED AT LEAST ONE TO TWO MONTHS BEFORE PLANTING. It is assumed that the lime will be incorporated to a depth of 20 cm. Thorough incorporation is essential: discing followed by ploughing is recommended.
- (2) All recommended P should be incorporated into the soil at establishment.
- (3) Where soil test P levels are considered adequate, but are less than 120 mg/L, a starter application of 20 kg P/ha has been recommended to promote initial plant growth.
- (4) Where the soil P test of a sample is abnormally high (>120 mg/L), and the sample is truly representative of the whole field, no fertilizer P should be applied until test levels indicate a P requirement.
- (5) Potassium requirement is related to the method of pasture utilization: the K recommendation above assumes utilization by permanent grazing. Under cutting-and-removal or intermittent grazing one or more additional K topdressings during the course of the growing season may be required.
- (6) 50 kg N/ha should be applied at or soon after establishment. The remainder of the total N recommended should be applied in split dressings of 30 to 50 kg N/ha over the growing season.
- (7) Pastures generally require 30-40 kg/ha per annum of sulphur. In many situations this can be supplied from the atmosphere and by the mineralization of organic S in soils, but supplementary S fertilizer may be necessary, especially on sandy soils (sample density > 1.35 g/mL), where sulphate is lost by leaching.
- (8) Molybdenum deficiency may limit production - discuss requirements with your adviser.

**NUTRIENT AND LIME RECOMMENDATIONS****Kikuyu pastures: establishment; irrigated**

Sample ID	Lab Num	NITROGEN		PHOSPHORUS			POTASSIUM			LIME				ZINC
		Yield target t/ha	Req. N kg /ha	Sample soil test mg/L	Target soil test mg/L	Req. P kg/ha	Sample soil test mg/L	Target soil test mg/L	Req. K kg/ha	Sample acid sat. %	PAS %	Req. Lime t/ha	Lime type	Zinc fert. reqd.?
NKANTEKO 2	F1823	6.0	110	6	7	20	247	100	0	24	40	0	-	No
		10.0	230	6	8	20	247	120	0	24	40	0	-	No
		14.0	350	6	10	45	247	140	0	24	40	0	-	No

Sample soil test and sample acid saturation reflect the soil test values of the sample submitted. Required P and required K (coloured red) are the amounts of P and K required to raise the soil test to the target value. Lime required (coloured red) is the amount of lime needed to decrease the soil acid saturation to the permissible acid saturation (PAS).

**MANAGEMENT GUIDELINES**

- (1) LIME, IF REQUIRED, SHOULD BE APPLIED AT LEAST ONE TO TWO MONTHS BEFORE PLANTING. It is assumed that the lime will be incorporated to a depth of 20 cm. Thorough incorporation is essential: discing followed by ploughing is recommended.
- (2) All recommended P should be incorporated into the soil at establishment.
- (3) Where soil test P levels are considered adequate, but are less than 120 mg/L, a starter application of 20 kg P/ha has been recommended to promote initial plant growth.
- (4) Where the soil P test of a sample is abnormally high (>120 mg/L), and the sample is truly representative of the whole field, no fertilizer P should be applied until test levels indicate a P requirement.
- (5) Potassium requirement is related to the method of pasture utilization: the K recommendation above assumes utilization by permanent grazing. Under cutting-and-removal or intermittent grazing one or more additional K topdressings during the course of the growing season may be required.
- (6) 50 kg N/ha should be applied at or soon after establishment. The remainder of the total N recommended should be applied in split dressings of 30 to 50 kg N/ha over the growing season.
- (7) The last N dressing should be before mid-March in frost areas; in frost-free areas it should be applied six weeks before the end of the productive season.
- (8) Pasture N requirement is closely related to moisture supply. The highest N recommendation is applicable only where annual rainfall exceeds 750 mm or irrigation is practised.
- (9) Pastures generally require 30-40 kg/ha per annum of sulphur. In many situations this can be supplied from the atmosphere and by the mineralization of organic S in soils, but supplementary S fertilizer may be necessary, especially on sandy soils (sample density > 1.35 g/mL), where sulphate is lost by leaching.