COMPLETE PASTURE PROFILE

The Complete Pasture Picture for Plant & Animal Health

Key Points:

- Animal health/pasture nutrition combined
- Clover sampling – selective v representative
- Less cost

When collecting pasture samples, you may have asked yourself *"should I focus primarily on animal health (and take a mixed herbage sample) or should I collect a sample that most accurately shows the plant nutrient requirements (and collect a clover only sample)?"*

To gain the most agronomic benefit from pasture analysis we are pleased to offer you a **combination of mixed pasture and clover-only testing** to give a more reliable assessment of pasture nutrition while simultaneously encompassing the animal health perspective. Now, in one package, you can obtain a clover tissue analysis, including the important trace element molybdenum, plus a mixed herbage analysis for animal health requirements including molybdenum, cobalt and selenium. As well, metabolisable energy and crude protein are reported for the mixed pasture.

The combination of these tests offers a substantial cost saving as well as having the advantage of giving you a more complete picture on the nutrient status of your pasture.

How to Order this Profile

Request this profile by ticking the CPP (Complete Pasture Profile) box on the analysis request form. If you are a user of our mobile device app then create two samples one after the other (CPP then Clov test boxes). DIY sample kits are available from the laboratory – submit two bags of sample as described below.

Sampling Options for Clover in the CPP

Clover leaf analysis is extremely powerful when diagnosing mineral deficiencies which may limit pasture growth. But just how should such a sample be collected?

You have **two options**.

1. The recommended procedure, which is more of a diagnostic approach, involves **selectively sampling affected clover plants**. This approach is better if you believe that there is a nutrient deficiency limiting clover production. In this situation, you are collecting clover that is clearly affected by the deficiency. Avoid vigorously growing clover (near dung or urine spots), and selectively sample the stunted, pale coloured, or otherwise affected plants. You do not have to sample from the whole area, and 40 shoots (stem plus leaf blades) are sufficient for the analysis. A second bag of mixed herbage should be provided for the CPP (mixed pasture) tests sample.

2. The second option is to collect **a representative sample over the whole area**. This is normally achieved by cutting 15 to 20 sub-samples of the mixed herbage, mixing, then dividing them evenly between 2 x sample bags (write "Clover" on one of the bags) – the clover component will then be dissected out at the laboratory. The advantage of this approach is that it is a relatively straightforward procedure and it yields a representative sample.

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The first approach means the clover sample is not representative of the whole paddock, but it should more clearly identify the primary deficiency affecting (clover) production, so is therefore of more agronomic benefit.

What you get after splitting the samples:

- Mixed Pasture analysed for **N, P, K, S, Ca, Mg, Na, Cl, Fe, Mn, Zn, Cu, B, Mo, Co, Se, Crude Protein, DOMD & Metabolisable Energy.**

- Clover-only analysed for **N, P, K, S, Ca, Mg, Na, Fe, Mn, Zn, Cu, B & Mo**

Plant Analysis Results

Sample Name: Mixed Pasture
Lab Number: ▮▮▮▮▮
Sample Type: Mixed Pasture (P1)

Analysis		Level	Optimum
Nitrogen*	%	2.2	4.0 - 5.0
Nitrogen*	%DM	2.3	
Phosphorus	%	0.39	0.38 - 0.45
Potassium	%	2.2	2.5 - 3.0
Sulphur	%	0.21	0.30 - 0.40
Calcium	%	0.47	0.60 - 1.00
Magnesium	%	0.14	0.20 - 0.30
Sodium	%	0.224	0.150 - 0.300
Iron	mg/kg	410	100 - 250
Manganese	mg/kg	153	60 - 150
Zinc	mg/kg	44	30 - 50
Copper	mg/kg	10	10 - 12
Boron	mg/kg	5	
Molybdenum	mg/kg	3.2	0.50 - 1.2
Cobalt	mg/kg	0.30	0.10 - 0.20
Selenium	mg/kg	0.04	0.08 - 0.15
Crude Protein*	%DM	14.7	20.0 - 30.0
Digestibility of Organic Matter in Dry Matter (DOMD)*	%	76.2	65.0 - 80.0
Metabolisable Energy*	MJ/kgDM	12.2	9.0 - 12.0

Sample Name: Mixed Pasture (Clover Only)
Lab Number: ▮▮▮▮▮
Sample Type: LEAF White Clover (P3)

Analysis		Level	Optimum
Nitrogen*	%	4.3	4.8 - 5.5
Phosphorus	%	0.33	0.35 - 0.40
Potassium	%	1.8	2.0 - 2.4
Sulphur	%	0.22	0.27 - 0.32
Calcium	%	1.68	0.80 - 2.50
Magnesium	%	0.26	0.18 - 0.25
Sodium	%	0.576	0.070 - 0.400
Iron	mg/kg	137	50 - 200
Manganese	mg/kg	41	25 - 100
Zinc	mg/kg	28	16 - 30
Copper	mg/kg	7	6 - 12
Boron	mg/kg	28	18 - 30
Molybdenum	mg/kg	0.62	0.30 - 1.5

The above nutrient graph compares the levels found with reference interpretation levels. NOTE: It is important that the correct sample type is assigned, and that the recommended sampling procedure has been followed. R J Hill Laboratories Limited does not accept any responsibility for the resulting use of this information. IANZ Accreditation does not apply to comments and interpretations, i.e. the 'Range Levels' and subsequent graphs.

Contact Details

For further information about any of the above tests please contact our Agriculture client service managers. Sampling supplies can be ordered online via www.hill-laboratories.com.