

Improving nutrient use efficiency

Using the Phosphorus Budgeting Tool for making better fertiliser decisions

Fertiliser application is a significant expenditure for most farm budgets and for many beef and sheep producers fertilising their whole property annually is considered too costly. Soil tests are one tool farmers can use to assist in the fertiliser decisions.

The Phosphorus Budgeting Tool enables farmers to calculate the rate of phosphorus required based on stocking rates, current soil phosphorus levels and production goals. This easy-to-use calculator will assist the producer in making management decisions, whether you are starting from scratch or looking to refine your existing fertiliser program.

Maintenance Rate

Maintenance rate is the amount of phosphorus that has been removed from the farm and should be replaced each year. The old rule of thumb of 1 kg/dse/ha has been refined through research to improve profitability and minimise environmental impacts.

Producers can determine the maintenance rate for their property taking into consideration soil type, landscape, grazing management and rainfall.

Capital Rate

The capital rate is the amount of phosphorus required above and beyond maintenance rate to increase the phosphorus level. The target phosphorus level for grazing enterprises is 15 mg/kg (Olsen P) and exceeding this level is a potential waste of inputs as it does not necessarily grow extra feed.

Producers are encouraged to set a target P level for their farming system taking into account farm production goals, soil and landscape constraints.

Phosphorus Budgeting Tool Workshops

In the workshop farmers are instructed on how use the Phosphorus Budgeting Tool and develop an annual fertiliser plan and budget for their property.

The Phosphorus Budgeting Tool can:

- Calculate annual phosphorus requirements for each paddock (maintenance & capital)
- Compare the cost of using different fertiliser products
- Assist in allocating fertiliser application with a pre-determined budget
- Maximise fertiliser efficiency

Contact Sue Briggs, DEPI on 02 6030 4510 to organise a phosphorus budgeting workshop for your area or download the Phosphorus Budgeting Tool from www.holbrooklandcare.org.au.

This note was developed by Sue Briggs, DEPI Rutherglen. For further information phone 02 6030 4510.

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What is my stocking rate?

This is what my stock are taking off each year.

Do I need to apply any fertiliser this year?


This is what I need to raise P levels.

Is this realistic?


Comparing the cost of different products.

Fertiliser Budget


Paddock Name	Maintenance			+ Capital			= Fertiliser rate			Budget				
	Ha	Stocking Rate (dse/ha)	Maintenance (kg P/ha)	Current P Level	Target P Level	Capital (kg P/ha)	M only No	M only M+C	Fertiliser Product	Total (kg P/ha)	Budget Rate (kg fert/ha)	Spread Rate (kg fert/ha)	Total (tonnes)	Total Cost (\$)
Adam	20	12	8.4	8	15	70.0	<input type="radio"/>	<input type="radio"/>	Single super	78.4	891	900	18.00	\$ 6,210.00
Geoff	20	12	8.4	8	15	70.0	<input type="radio"/>	<input type="radio"/>	DAP	78.4	392	400	8.00	\$ 6,400.00
George	20	12	8.4	8	15	70.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	8.4	95	100	2.00	\$ 690.00
Luke	20	12	8.4	8	9	10.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	18.4	209	200	4.00	\$ 1,380.00
Bill	20	12	8.4	8	9	10.0	<input type="radio"/>	<input type="radio"/>	DAP	18.4	92	100	2.00	\$ 1,600.00
Charles	20	12	8.4	8	10	20.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	28.4	323	325	6.50	\$ 2,242.50
David	20	12	8.4	8	10	20.0	<input type="radio"/>	<input type="radio"/>	DAP	28.4	142	150	3.00	\$ 2,400.00
Eddie	20	12	8.4	12	15	30.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	8.4	95	100	2.00	\$ 690.00
Fred	20	12	8.4	12	15	30.0	<input type="radio"/>	<input type="radio"/>	Single super	38.4	436	425	8.50	\$ 2,932.50
Greg	20	12	8.4	12	13	10.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	18.4	209	200	4.00	\$ 1,380.00
Harry	20	12	8.4	12	13	10.0	<input type="radio"/>	<input checked="" type="radio"/>	DAP	18.4	92	100	2.00	\$ 1,600.00
Ian	20	12	8.4	18	15	-30.0	<input checked="" type="radio"/>	<input type="radio"/>	Single super	0.0	0	0	0.00	\$ -
Tim	20	12	8.4	18	15	-30.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	8.4	95	100	2.00	\$ 690.00
Tony			0.0			0.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	0.0	0	0	0.00	\$ -
Jim			0.0			0.0	<input type="radio"/>	<input type="radio"/>	Single super	0.0	0	0	0.00	\$ -
Jack			0.0			0.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	0.0	0	0	0.00	\$ -
Kevin			0.0			0.0	<input type="radio"/>	<input type="radio"/>	Single super	0.0	0	0	0.00	\$ -
Leo			0.0			0.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	0.0	0	0	0.00	\$ -
Sue			0.0			0.0	<input type="radio"/>	<input type="radio"/>	Single super	0.0	0	0	0.00	\$ -
Ash			0.0			0.0	<input type="radio"/>	<input checked="" type="radio"/>	Single super	0.0	0	0	0.00	\$ -
260		Maintenance rate kg P/dse	0.7	Capital rate kg P/unit		10	Change all <input type="radio"/> Single super <input type="radio"/>			Single super			48.0	\$ 28,215.00
										MAP			0.0	
										DAP			15.0	
										Other 1			0.0	
										Other 2			0.0	
										Other 3			0.0	




Australian Government




Holbrook Landcare Network



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Department of Environment and Primary Industries



Government of Victoria



What is the rule of thumb for your property?