

P TOOL QUESTIONS:

1. How do farmers evaluate how much fertiliser or P they should be applying to paddocks.

- **What should they need to look at in regards to soil test information?**
- **Stocking rates and amount of production being exported off farm?**
- **Financial cost of different applications v benefits**

In my opinion the “*Five Easy Steps To Ensure You Are Making Money From Superphosphate*” is well named and self explanatory. The instruction guide and accompanying CD provides a clear and logical pathway for decision making about the application of Phosphorus fertiliser but also – and most importantly - the economics of doing so. This latter point is especially relevant with the perceived high cost of fertiliser. Arguably one of the most common arguments/questions amongst farmers is the old nutshell of ‘whether they can afford to apply fertiliser’ and, conversely, ‘whether they can they afford not to ...!?’ This guide helps farmers to make an informed answer to those questions.

Other than the focus upon production and economics, there is an emphasis also upon ensuring that fertilisers are applied in a careful, planned and considered way in order to minimise environmental affects.

2. How does the P tool work (ie does it cover the above questions) and can you step me through the decision making process it goes through. Is this the new tool that farmers use to help make better decisions about fertiliser use?

There has been considerable research in the key area of phosphorus and plant nutrition undertaken over many years by numerous research organisations including CSIRO, state departments of agriculture and industry. This has often been backed up by extensive on-farm demonstrations and field trials supported by farmer groups such as grassland societies. This Guide has for the first time attempted to integrate all of that pure and practical research while also focussing upon the economics of investing in fertiliser. This in my opinion sets it apart from previous such technical instructional programs.

This is undertaken by following a series of steps which may best be summarised as follows:

Step 1 *Where are we ...? - Our starting point*

- what is our current P fertility level? This involves using soil testing to determine the phosphorus content of our soils
- what is our current level of productivity and stocking rate

Step 2 *Where do we want to be ...? - Our target*

- what are our targets in terms of both Phosphorus level and stocking rate. Determine what stocking rate is appropriate for your projected soil fertility level.

Step 3 *How do we get there? the methodology*

- how much P fertiliser to apply, including most importantly when and where

Step 4 *What does it cost ...? Economics*

- is it economic ? ie ensure that the proposed investment in fertiliser – and most importantly extra livestock - will be profitable. It is foolhardy to apply P and “grow more grass” without having the livestock to utilise the extra feed grown.

Step 5 Are there any other factors to consider ...?

Is the potential response to P being impacted by a deficiency of any other nutrient?

3. Can the tool work-out pay-back periods for expenditure on fertiliser?

Yes. One of the great benefits of this tool is not only its capacity to help farmers determine the agronomic aspects of P fertiliser application but also the economics of doing so. The Manual and accompanying CD/DVD follows a systematic process by which famers input all of the key financial elements. These include the cost of fertiliser and spreading cost, the cost of purchase of additional livestock, current interest rates and a rudimentary gross margin. Once all of this information is inputted, along with the basic agronomic information, soil test results, target stocking rates and fertility levels then you are presented with an economic evaluation of the “cost of super”. This is presented in various ways including: potential profitability (projected net cash result); time taken to break even (cumulative cash flow difference) and internal rate of return. A noteworthy aspect of the program is the ability of users to change the cost of various inputs (for instance fertiliser or gross margin) and observe how this impacts upon the profitability. For example while the cost of fertiliser is obvious what does have a significant influence on the “bottom line” is the gross margin. Information from wether trials for example suggests a variation in gross margin from \$ 13 to \$ 31 per DSE. This highlights the fundamental need to ensure quality animals genetics to ensure that you get the *“biggest bang from your fertiliser buck”*

It should be noted that a comprehensive worked example is provided within the Manual and CD which is based upon a long term Phosphorus trial at Bookham NSW conducted by Phil Graham of NSW DPI (I&I).

4. How do farmers assess if their land can utilise more P?

5. What are the “critical” levels for P, and if levels in soil are over, what does this mean?

Both these questions can be answered as follows:

Soil testing, undertaken using a systematic and methodical approach, is of fundamental importance in determining both current and, most importantly, target phosphorus levels. The target P level is often referred to as the “critical” level and indicates the level above which little or no further response to the application of fertiliser may be expected. The Five easy Steps Guide provides an indication as to how to determine or assess what is the Critical P level for your soil and most importantly how much P fertiliser needs to be applied to reach that target.

“Having this basic information is critically important to making an informed decision about how much P to apply to raise fertility. Conversely of course it may be that your current level of fertility is either at or even above the optimum level (critical point) in which case all you need to do is apply a reduced or “maintenance” rate of P. Indeed in some cases it may even be possible to skip a year or two! ”.

The Guide provides an explanation about how to undertake soil tests and importantly how to interpret the results taking into account both the Olsen and Colwell P tests. An explanation is also provided about the new Phosphorus Buffering Index which is essential to interpreting the results of the Colwell soil test including how to predict the critical P level which varies according to soil type.

To access the P Tool (Five easy steps to ensure you are making money from superphosphate) go to <http://www.mla.com.au/Publications-tools-and-events/Publication-details?pubid=5011>