

Impact of lime transport costs

Time to *Re-Lime* Lime

With high neutralising value limes, you can buy and transport less for the same pH change

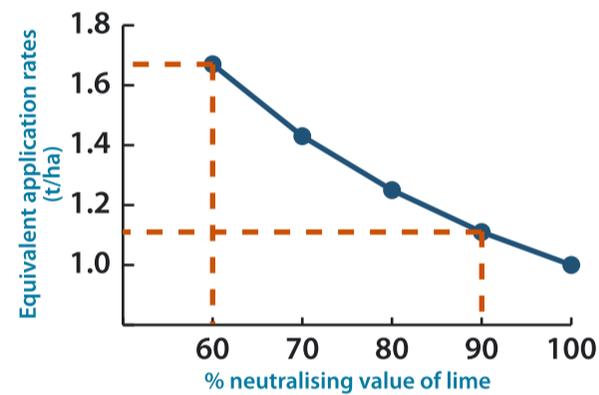


The cost of transporting lime will be the largest component of liming costs for many farmers. Lime quality differs between sources, so the transport cost alone does not determine the best value for money.

Transporting the active ingredient

It is the carbonate in agricultural lime that neutralises acid in soil. How much carbonate the lime contains is important; whether it is from limesand, limestone or dolomite doesn't matter. The neutralising value of the lime is expressed as a percentage of pure calcium carbonate which is given a value of 100%. A higher neutralising value means that more of the product that you have paid to have delivered and spread is working to increase soil pH.

Lime required to apply the equivalent neutralising capacity



Neutralising value makes a big difference to the impact of lime transport costs on treating soil acidity

	Neutralising value of lime		
	90%	80%	70%
Amount of active product (t/ha) when lime applied at 1.5 t/ha	1.4	1.2	1.0
* Expected topsoil pH change (lime applied at 1.5 t/ha)	1.0	0.8	0.6
* Lime required (t/ha) to increase pH from 4.5 to 5.5	1.5	1.9	2.5
** 200 km transport cost per ha to increase pH by 1 unit	\$30	\$38	\$50
** 300 km transport cost per ha to increase pH by 1 unit	\$45	\$58	\$75

Calculating the real cost

Sourcing lime from local suppliers, if available, is generally the best option. The further you need to transport lime, the more critical high neutralising value becomes. You must know what you are buying (download the latest product information sheets from the Lime WA Inc. website www.limewa.com.au) and then calculate the **actual cost (on-farm) of the neutralising value**. A useful calculator to assist with these calculations can be found at www.soilquality.org.au

Key points to consider

- Transport is a major component of a liming program.
- High neutralising value reduces the impact of transport cost.
- The real cost is the cost per tonne of neutralising value transported to your farm.
- When using lower neutralising limes you need to buy more lime, transport more lime and apply more lime to achieve the same pH increase.

* Estimated for sandy soil.

** Based on freight @ 10 cents/km/t. Does not include product purchase price.

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The Avon Catchment Council has set a target pH_{CaCl2} of 5.5 for topsoils and 4.8 for subsurface soils in the Avon River Basin by 2020.

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