Lime Sources

Time to Re-Lime

- Quality matters, not the source especially when long distances are involved
- Lower quality lime needs higher application rates to achieve the same pH change
- Download product information sheets for lime quality information: www.limewa.com.au
- Compare cost effectivenes using the lime comparison calculator: www.soilquality.org.au

Agricultural lime is any product that is used to increase the pH of soil. In WA, the three main sources are limesand, limestone and dolomitic lime. Application of one of these products is usually the most economical method of ameliorating soil acidity. The quality (neutralising value and particle size), as well as the cost (including transport and spreading), of any liming product needs to be considered. All the required information is detailed on the Product Information Sheets supplied by Lime WA Inc. members, which can be downloaded from limewa.com.au. A useful lime comparison calculator can be found at www.soilquality.com.au.

Limesand

Limesand is mined from coastal sand dunes found in various places along the south west coast. ***It is entirely different to the silica sand that is found on beaches around Perth.*** Limesand is comprised mostly of shell fragments of marine organisms—predominantly calcium carbonate with some magnesium carbonate. The limesand dunes, which are approximately 10,000 years old, were formed by wind action when sea levels dropped and the exposed limesand was moved inland. The fineness, types of shell and purity varies between deposits.

Limestone

Most limestone for agriculture is mined and crushed from coastal deposits of Tamala limestone. This limestone is 1–2 million years old and was formed by cementation of limesand deposits, either by the action of rainfall wetting and drying or when the deposits were submerged during periods of high sea level. The composition and purity of limestone also varies between deposits.

Dolomitic lime

Dolomitic lime in WA is mostly mined from old lake and inland drainage systems. Dolomitic lime has a higher proportion of magnesium carbonate than limesand or limestone. It was formed by the accumulation of calcium and magnesium carbonates dissolved from rock.

Lime quality

The key factors in lime quality are neutralising value and particle size. It is the carbonate in lime that neutralises acid in the 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%. With a higher neutralising value lime, you can use less, or spread over a greater area, for the same pH change. Lime with a higher proportion of small particles will react quicker to neutralise acid in the soil.

Lime WA Inc. agricultural lime sources

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The Avon Catchment Council has set a target pH_{CaCl_2} of 5.5 for topsoils and 4.8 for subsurface soils in the Avon River Basin by 2020.

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