KIT 1.8

Reduce the impacts of low pH, aluminium toxicity and other nutrient toxicities on plant water uptake to improve grain yield and stability.

Impact	**Growers address acid soil constraints such that soil pH is maintained above critical levels and root growth, uptake of water and nutrients, grain yield and profitability are maximised.**
Summary	• Growers and their advisers understand and can quantify the impact of low pH and toxicities on grain yield and stability. • Growers have access to knowledge, tools and management options to address low pH, aluminium toxicity and other nutrient toxicities in the short, medium and long term. • Growers have the tools and decision aids to maximise returns from implementing management options addressing these constraints.

SCOPE	INVESTMENT OUTCOMES
Understanding of the need to act and quantification of the benefits of action Understanding of the causes and potential impacts on crop production of soil acidity is increased.	1.8.1. Growers and their advisers have access to cost-effective field tools to diagnose acidity constraints in the topsoil and subsoil. 1.8.2. Growers and their advisers understand the causes and rates of acidification across soil types, farming systems and regions, and understand the impacts of acidification on crop growth and yield.
Soil and crop management options to address acid soil constraints Crop yields and profitability are increased by minimising acidification, treating acid soils with effective amendments, and improving plant tolerance of soil acidity.	1.8.3. Growers and their advisers have access to cost-effective amendments and knowledge of optimal application rates and methods, including the use of precision and digital tools, to neutralise soil acidity. 1.8.4. Growers and their advisers have access to soil and crop management practices that minimise soil acidification while treating other soil constraints. 1.8.5. Growers have access to crop species and varieties (including legumes with suitable rhizobia) with enhanced tolerance to soil acidity.
Adoption of practices to address acid soil constraints The adoption of improved soil amendments, tolerant crop species and varieties and/or agronomic practices to address soil acidity is increased.	1.8.6. Growers and their advisers understand the impact of soil acidification on medium- to long-term farm profitability, and have the motivation, ability and tools to manage it.

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