

THEME 1: WHY WOULD WE?

What's it all about? The effects of machinery wheel compaction on soils in South-Eastern Australia

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Soil compaction results in reduced porosity and increased soil strength. These two physical effects are anathema to healthy plant growth and consequently soil compaction reduces crop yield and farm profits. Besides the obvious physical effects of compaction there are also impacts on soil chemistry, soil biology and nutrient cycling. Land used for cropping in South-East Australia has a diverse range of soils from light sandy textures to heavy cracking clays and these occur across a rainfall gradient of 300-600+ mm mean annual precipitation. How does soil type affect the vulnerability of a soil to the compacting effects of farm traffic and how is climate involved? In this presentation, drawing from our knowledge of Australian soils, I will explore the interactions between traffic, compaction, climate and soil type and the importance of this knowledge in controlled traffic farming.