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Top tips for long term management of productivity, profit and soil protection

While crop production on cracking clay soils can be relatively resilient to agronomic management changes such as rotations and tillage in the short term, decisions made now can have a major impact on productivity, profitability and soil resources in the long term.

That is one of the key messages from Agriculture Victoria Research senior scientist Professor Roger Armstrong who will present at the Hart Field Day on Tuesday, September 19.

Prof Armstrong's long-term trials in Victoria's Wimmera have shown the significant impact crop management decisions can have on productivity, profitability and the soil resource, particularly 10-20 years down the track.

"In the short term there's a huge amount of resilience of the rotation and tillage practice on our high quality cracking clay soils, you can get away with a lot in the short term but the crunch comes later down the line," he said.

"If you consistently start depleting carbon (C) and nitrogen (N) levels in your soil, it's almost impossible financially to rectify that situation in the long term, the cost can be extremely prohibitive in returning them to healthy levels."

Other key take home messages from Prof Armstrong's presentations at the Hart Field Day will include his findings that:

1. Incorporating a green manure or lucerne phase greatly increased soil N and C.
2. Fallowing decreased soil C and total N.
3. Tillage system had little effect on wheat yield on this high quality cracking clay soil but burning crop residues reduced soil C and total N.
4. Long-term declines in N and C fertility are associated with continuous cropping, even when pulses are in the rotation.
5. Profitability of intensive cropping rotations was highest and risk lowest in favorable seasons.
6. Profitability of rotations including a pasture phase were lower over the long term, but higher during 'dry' seasons and resulted in lower risk.

Hear more from Prof Roger Armstrong during the Hart Field Day, Tuesday, September 19, 2017, at the Hart Field-Site.

Online registrations are now open to avoid the queue.

For more information and to register for this event, see the Hart Field-Site Group website www.hartfieldsite.org.au

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