

OptiSoil

Product Offering

Edition 2024-25

www.optisoil.com.au

Welcome to OptiSoil

A leading provider of soil management solutions that help farmers and land managers optimise their yields and productivity. At OptiSoil, we specialise in soil constraint management and digital soil mapping services, facilitated by our state-of-the-art soil laboratory and proximal sensing technologies.



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*All prices in this document are GST exclusive and are subject to change without notice.

*Any service not listed is subject to a detailed quote.

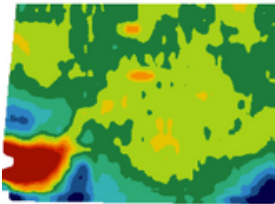
*Any job less than minimum size is subject to a detailed quote.

Proximal Sensing

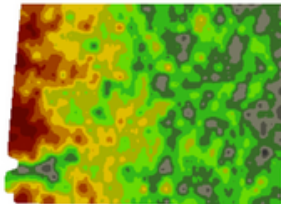
- **DualEM Survey** - 4x depth slices from DualEM 1HS (max 160cm), or Dual EM 21S (max 300cm) for precise characterisation across multiple depth slices down the soil profile.
- **Gamma Radiometrics** - RSX-1, 4L detector crystal for best available sensitivity, allowing delineation of soil type changes. The large crystal offers superior sensitivity for identifying fine soil variation.
- **Sample design.** Statistically analysed, targeted core sites and intensity determined by using available layers and levels of certainty required. Incorporating yield maps, long term NDVI, bare earth, EM, Gamma, and the national soils data base.

	Dual EM	Dual EM + Gamma Radiometric
PROXIMAL SENSING	EM - 12,24,36	EM + GR-12,24,36
Deliverable		
Soil texture	X	X
Management zones	X	X
Sampling plan	X	X
24 m Swaths (min area 100ha)	16.00	18.00
36 m Swaths (min area 150 ha)	13.00	15.00
Irrigation infrastructure	POA	

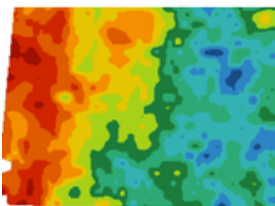
Landscape Change



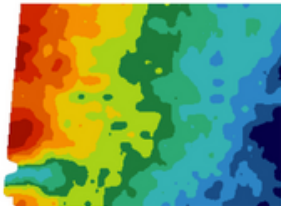
Gamma - K



DualEM 160cm



Gamma - TC



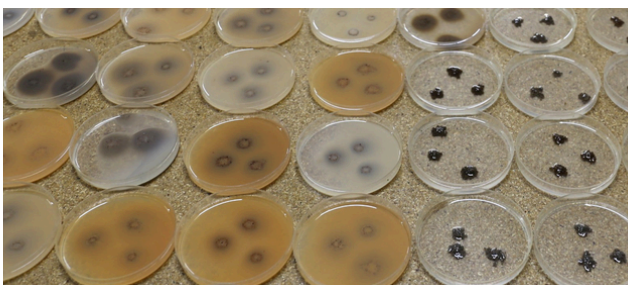
Digital Soil Mapping

Zoning Analysis:

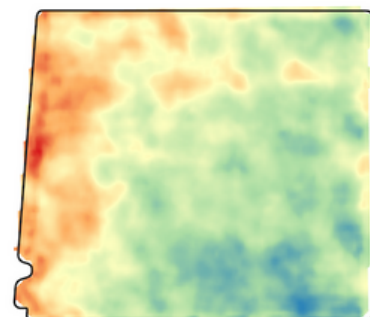
- Soil maps delivered interactively in chosen GIS platform, in addition to PDF. Field zoning by integration of available yield and soil maps.
 - Chemical and physical properties.
 - Depth to constraint maps, 3D understanding of constraints to root growth.
 - Quantification of spatial uncertainty to ensure soil maps are fit for purpose.
 - Statistically based spatial modelling to identify soil-based yield drivers.
- Analysis of importance of individual measured and mapped soil properties on yield variation in each season. Yield drivers change depending on the most seasonally apparent constraint.
- Zone maps, variable rate files and trial design supplied to PCT Agcloud or other platform of choice.

OptiSoil Digital Soil Mapping Service Matrix	OPS DIG 1	OPS DIG 2	OPS DIG pH	OPS DIG PAW
Depth 1 (0-10) cm		OSP-5		
Depth 2 (0-10+10-20) cm	OSP-5 X 2			
Depth 3 (40-50+60-70) cm	OSP-7 X 2			
Depth 4 (10-20+40-50+60-70) cm		OSP-7 X 3		
Depth 5 (0-15+15-30+30-60+60-90) cm				OPS-WN X4
Depth 6 (0-30) cm x 5			OSP-pHX 5	
EM + Gamma (swath width)	EM+GR, 24,36	EM+GR, 24,36		EM+GR, 36
Soil Coring	X	X	X	X
Deliverables				
Soil analysis nutrient raw data	X	X	X	X
Strategic sampling plan	X	X	X	X
Nutrient traffic light report	X	X	X	
Interactive digital soil map in chosen GIS platform	X	X	X	X
Variable rate maps for chosen input	X	X	X	X
Intensity 1-12 ha (min area 350ha, 24m swath)	\$50.90	\$47.10	-	-
Intensity 1-25 ha (min area 750ha 36m swath)	\$34.90	\$33.10	-	\$35.80
Grid sampling 2 ha	-	-	\$50.00	-
Grid sampling 4 ha	-	-	\$30.00	-

*OptiSoil has a flexible approach to sample design and characteristics to be measured. Including grid sampling. All jobs will have a detailed quote attached.



Aggregate Stability 60-70cm
 2
 5
 9
 12
 15



Digital Soil Mapping cont.

Soil analysis:

- Chemical & physical analysis on 4 soil segments between 0 and 100cm to facilitate 3D soil maps.
- Additional analytes and combinations are available for specific needs.
- Test methods are based on procedures as described in Soil Chemical Methods - Australasia (2011) Rayment and Lyons.

Soil coring:

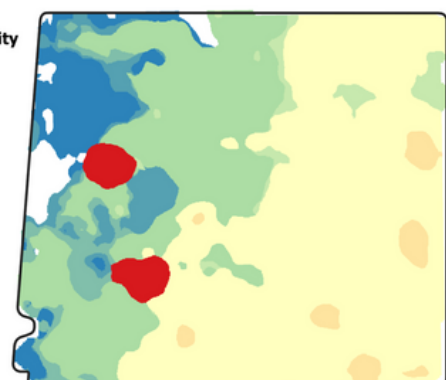
- Intact 0-100 cm, 50mm cores.
- Allowing for calculation of bulk density and visual analysis of soil through the profile for the identification of textural and colour changes, compaction layers and rooting depth.

	Dig Map Top Soil	Dig Map Nutrition	Dig Map Physical	Dig Map pH	Dig Map N
Digital Soil Mapping Soil Analysis	OSP-5	OSP-6	OSP-7	OSP-pH	OSP-WN
Nitrate - Nitrogen	X		X		X
Ammonium - Nitrogen	X		X		X
pH water & CaCl ₂	X		X	X	
EC (1:5 water)	X		X		
Chloride	X		X		
Phosphorus (Colwell)	X	X			
Phosphorus PBI	X	X			
Phosphorus BSES	X	X			
Exchangeable Cations (Ca, K, Mg, Na, Al)	X		X		
Organic Carbon (Walkley and Black)	X	X			X
Texture (Hydrometer)	X		X		
Zinc, Copper, Manganese, Iron, (DPTA)	X	X			
Sulphur (KCl ₄₀)					
Boron (hot CaCl)					
Aggregate Stability, Spontaneous & Mechanical	X		X		
Bulk Density	X		X		
ECEC	X		X		
Ecse	X		X		
ESI	X		X		
Pressure Plate (1/3, 15 bar, Plant Available Water)					X



Depth to Salinity

- 0cm
- 15cm
- 30cm
- 45cm
- 60cm



Soil Lab Services

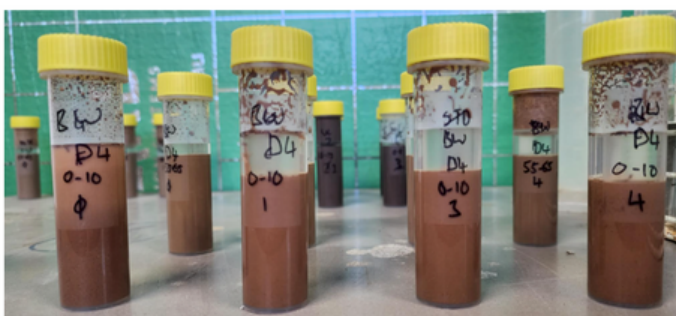
OptiSoil's laboratory:

- Provides quick and precise soil testing services, delivering reliable and timely results to serve agribusiness partners.
- Effective analysis is only as good as the sampling design and recommendations.
- In conjunction with soil analysis capability, OptiSoil can design tailored sampling strategies and recommendations to support productivity objectives.
- All testing is done on site at our laboratory located at Inverell in Northern NSW.

	Comprehensive	Monitor	Sub Soil	Sub Soil	Nitrogen
Standard Lab	OSP-1	OSP-2	OSP-3	OSP-4	OSP-N
Nitrate - Nitrogen	X	X	X	X	X
Ammonium - Nitrogen	X	X	X	X	X
pH water & CaCl2	X	X	X		
EC (1:5 water)	X	X	X		
Chloride	X	X	X		
Phosphorus (Colwell)	X	X		X	
PBI (Colwell)	X			X	
Phosphorus (BSES)	X	X	X	X	
Exchangeable Cations (Ca, K, Mg, Na, Al, ECEC)	X	X	X	X	
Organic Carbon (Walkley and Black)	X				X
Texture (Hydrometer)	X	X	X		
Zinc, Copper, Manganese, Iron (DPTA)	X	X		X	
Sulphur (KCl40)	X			X	
Boron (hot CaCl2)	X				
Aggregate Stability (Loveday and Pyle)	X	X	X	X	
Bulk Density - Intact core only		X	X	X	
Calculations					
ECEC	X	X	X	X	
Ecse	X	X	X	X	
ESI	X	X	X	X	
Price per sample	\$97.00	\$75.00	\$60.00	\$60.00	\$26.00

*More analytes and extraction methods are available on request.

OptiSoil Gypsum Rates - Incubation



Precision Ag Services

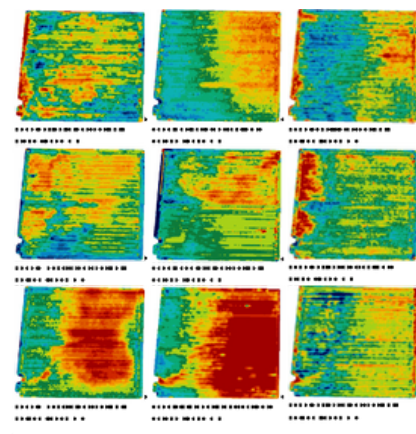
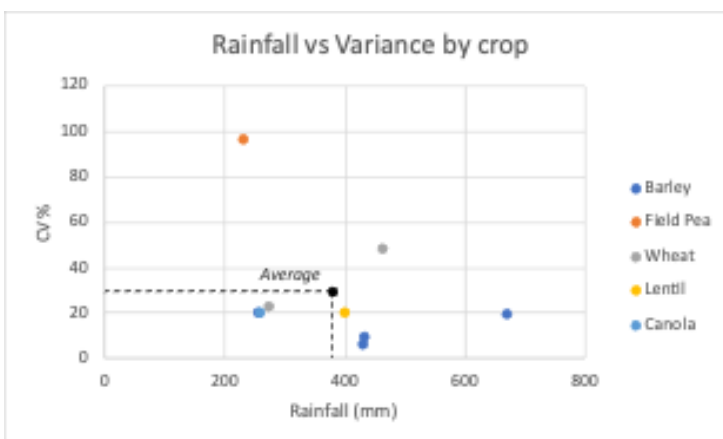
At OptiSoil, we provide precision agriculture support to both farmers and agronomists.

As a PCT Agcloud dealer, we offer services such as yield data processing, prescription recommendations, trial management and data analytics – all delivered remotely.

For consultants, we integrate with your business to help you deliver more value to your clients, ensuring you maximise the benefits of the PCT Agcloud platform. We also offer a specialised soil service to enhance your growers' results, keeping them engaged and driving better outcomes.

Our focus is always on data-driven decision-making, helping growers make informed choices that optimise productivity and profitability.

PRECISION AG SERVICES (Remote)	OPS DIG PA1	OPS DIG PA2
Yield Data processing	X	X
Nutrient balance maps	X	X
Soil sampling design	X	X
Trials protocol development, analysis, reporting & recommendations		X
Annual seasonal analysis, reporting and recommendations		X
Harvester set up for yield data collection		X
Price per Ha (minimum 500 ha)	\$1.90	\$3.90



Soil Coring Services

OptiSoil offers a fee for service soil coring service along side its soil analytics services. Due to the complex nature of travel, sampling depth and intensity, jobs will be quoted on application.

Soil Coring	OPS-S1	OPS-S2	OPS-S3	OPS-S4
Depth 1 (0-10) cm	OPS-5	OPS-5	OPS-5	OPS-N
Depth 4 (10-20+40-50+60-70) cm		OPS-4 X3	OSP-N X3	OPS-N X3
Deliverables				
Sampling plan	X	X	X	X
Raw soils analysis data	X	X	X	X
Nutrient traffic light report	X	X	X	X
Soil Lab Analysis	\$88	\$268	\$166	\$104
Soil Coring	POA	POA	POA	POA



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OptiSoil 