Making better use of yield maps

Southern Precision Agriculture Association

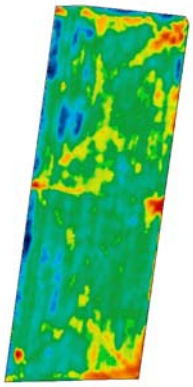
GRDC Grains Research & Development Corporation

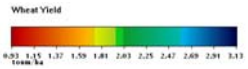
Australian Government Department of Agriculture, Fisheries and Forestry National Landcare Programme

SAGIT

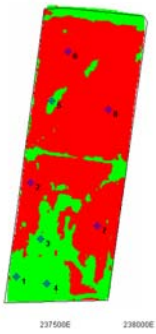
Variable rate

1. Does the crop yield vary across the paddock?
2. What are the main causes of variation?
3. Are the differences great enough, consistent enough and are the areas big enough to matter?
4. Can we reduce or increase inputs in parts of the paddock to get a better economic return?



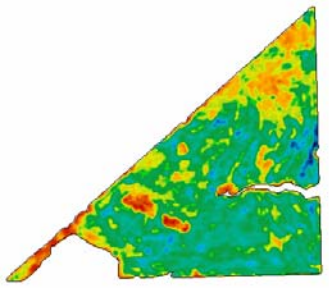


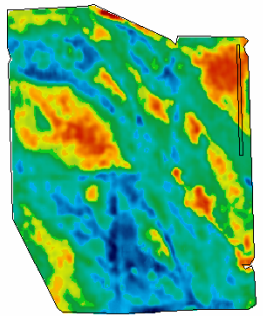
Produce a zone map for soil sampling sites



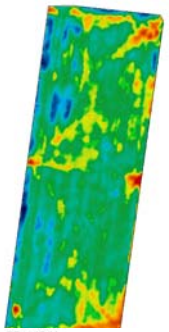
Soil Analysis

	Zone 1 (Red)	Zone 2 (Green)
Available N (kg /ha) (0 - 60 cm)	134	104
Phosphorus ppm (0 - 10 cm)	76	36
Organic Carbon (%)	1.18	1.23
pH (water) (0 -10)	6.2	7.68
EC dS/m (0- 10)	0.27	0.16
Boron ppm 0-60cm	4	2.52
Exchangeable sodium (sub soil)	4.9	1.4
Lime (0 - 30)	very low	high
Comments	heavier subsoil	lighter subsoil

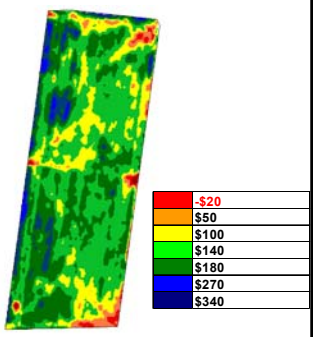


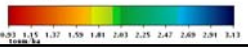


Wheat grain yield



Gross margin map





Finding out what is limiting production on your farm

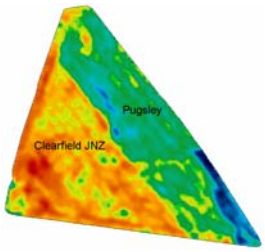
Key points for on-farm trials:

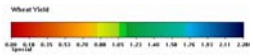
1. Don't change two things at once.
2. Make treatments big enough to assess with a yield map.
3. Put strips through representative areas of the paddock.
4. Repeat treatments or separate the strips with the paddock treatment.

Comparing two wheat varieties

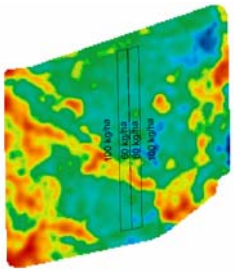
Two wheat varieties - Pugsley Vs Clearfield JNZ

Yield Summary, 2007	
Variety	Yield (t/ha)
Pugsley	1.34
Clearfield JNZ	0.72

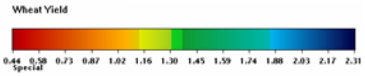




Sowing rates of wheat

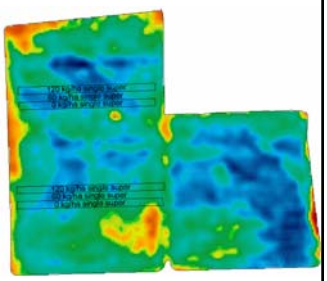


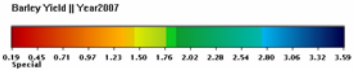
Yield summary, t/ha, 2007	
Seed Rate (kg/ha)	Grain yield (t/ha)
100	1.58
60	1.61
80	1.57
100	1.63



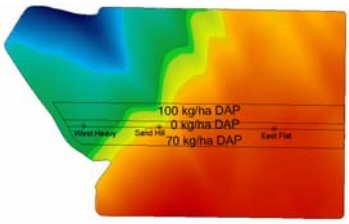
Different P fertiliser rates

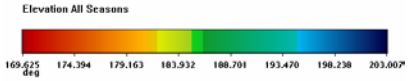
Three rates of single super (0, 60 & 120 kg/ha)



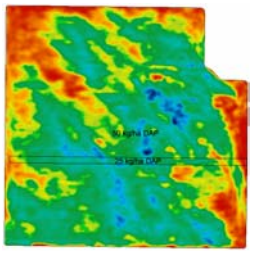


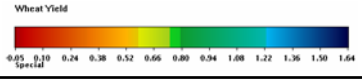
Three rates of DAP





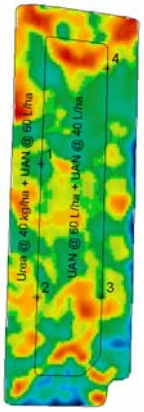
Two rates of DAP

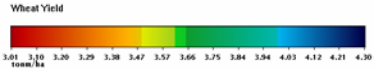




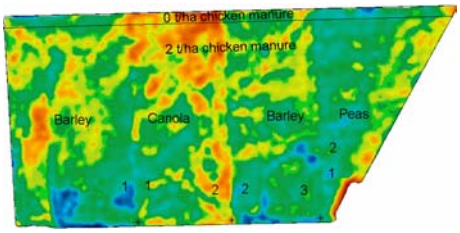
Centre vs Outside runs

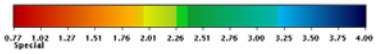
UAN Vs urea at seeding





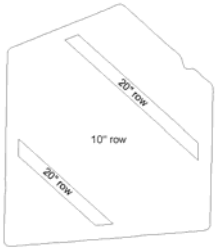
Chicken litter vs nil and paddock history





Row widths

10inch vs 20inch row spacing in canola



Locating test strips

The value of interaction in PA grower groups