

Precision Agriculture Peter Kuhlmann, Mudamuckla

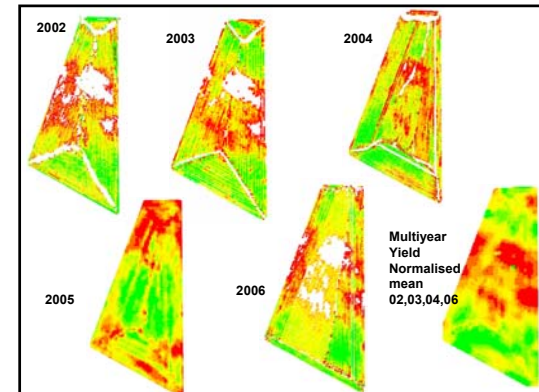
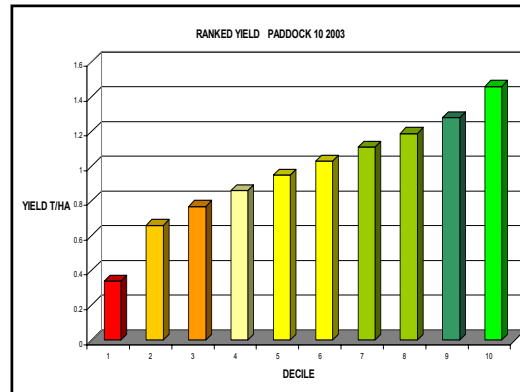
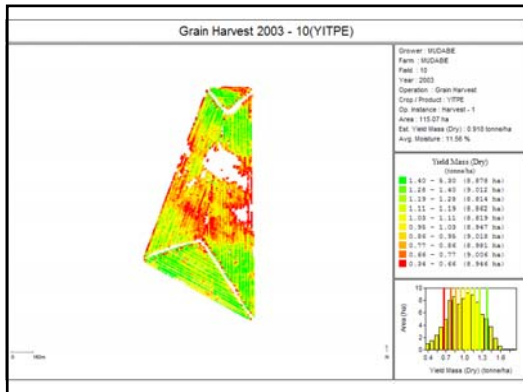
Location: Mudamuckla, 40 km East of Ceduna
Rainfall: 291mm Average, 214 GSR
Soil: Grey Calcareous Sandy Loam, pH 8.5
Farming System: No till cropping 75-80%,
Grain Area: 6500 ha for grain using fluid phosphorus
Yield : Wheat 0.9 t/ ha, Barley 0.9 t/ha

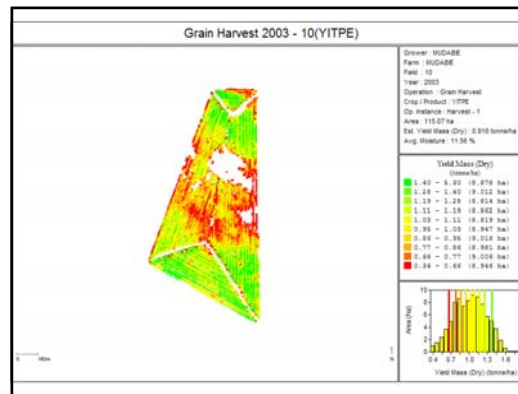
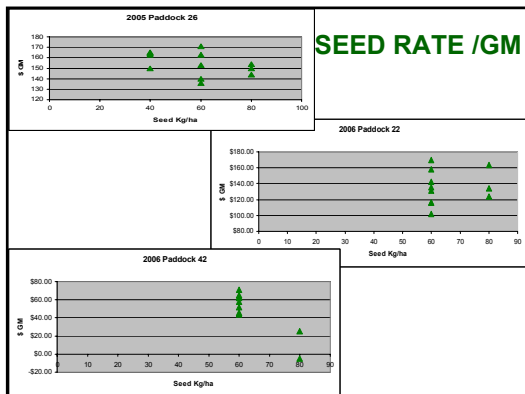
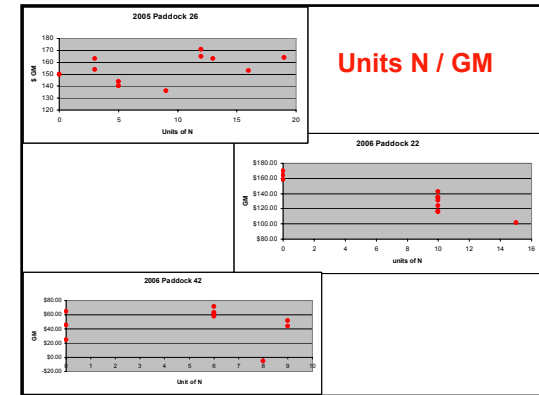
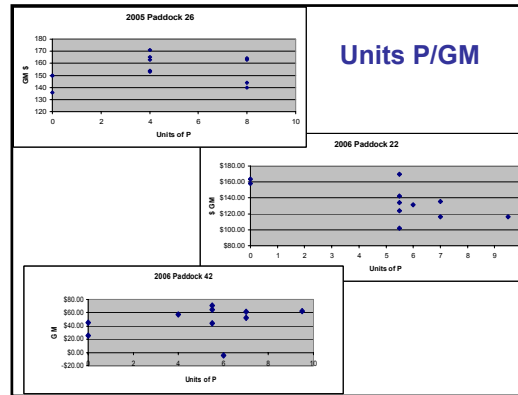
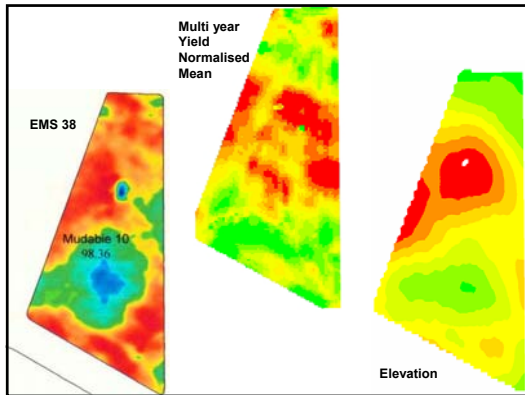
Precision Agriculture Equipment

- **Yield Monitors:** Ag Leader since 2002
- **Mapping Program:** Ag Leader SMS Basic
- **Variable Rate Airseeder:** Morris (electric over hydraulic)
- **Variable Rate Fluid Cart:** controller by Farmscan (Liquid Systems)
- **Autosteer:** gps Ag Auto Farm 2cm with base station
- **Rate controller:** Ag Leader Insight

Other Guidance Equipment

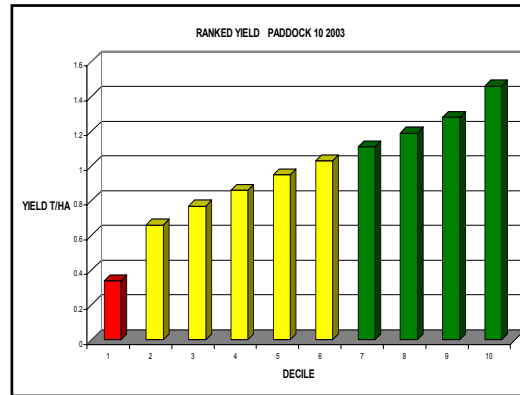
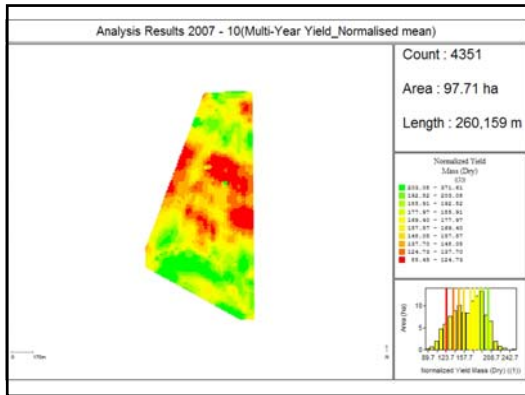
- **Spraying :** Farmscan Farmlap with autosteer and auto shut-off using Omnistar
- **Second tractor/header :** gps Ag Ezi-Steer coupled to Croplands Outback





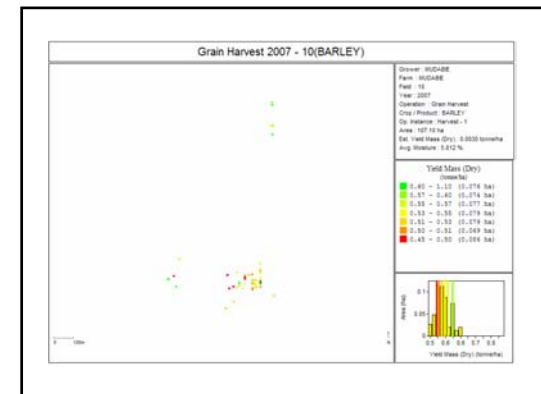
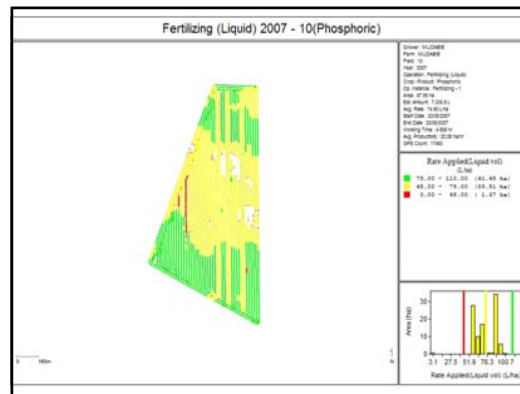
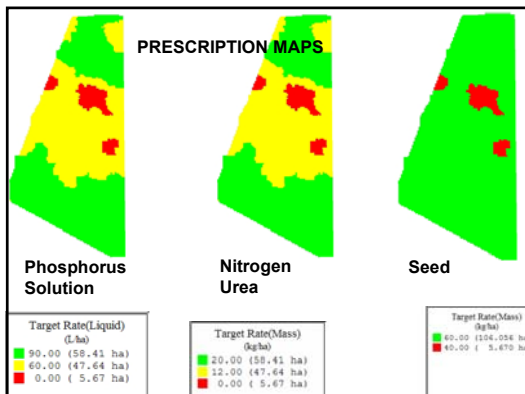
ZONE DIFFERENCES

<ol style="list-style-type: none"> 1. Poor yield/ GM 2. Stony, shallow,, "magnesia" flats 3. Lower PAW 4. Lower harvest index 5. Less nutrients removed 6. Iceplant, annual saltbush 	<ol style="list-style-type: none"> 1. Best yield / GM 2. Deep, sandier hills/ slopes 3. Higher PAW 4. Higher harvest index 5. More nutrients removed 6. Onion weed, melons
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SEEDING INPUTS 2007

SEED Kg/ha	PHOSPHORUS Units P/ha Phos. Acid	NITROGEN Units N/ha Urea	Total \$/Ha	% of Zones Av.
\$250/t	\$3.75/unit P	\$1.00/unit		
40	0	0	\$10.00	10%
60	4.5	5.5	\$37.38	50%
60	6.75	9.2	\$49.51	40%
			Av \$39.49	
60	5.0	6.0	\$39.75	Normal





2007 Paddock 10 GM comparison
Maritime Barley on stubble yielded 0.14 t/ha

Zone	Area	Prescription	Standard
Good	40%	283%	307%
Medium	50%	51%	29%
Poor	10%	76%	-55%
Average	\$28	146%	100%

2007 Paddock 2 GM comparison
Yitpe wheat on cultivated Pasture yielded 0.51 t/ha

Zone	Area	Prescription	Standard
Good	44%	102%	108%
Sandhill	24%	120%	122%
Medium	24%	92%	91%
Poor	8%	35%	15%
Average	\$178	99%	100%

2007 Paddock 42 GM comparison
Wyalkatchem wheat on Pasture Yielded 0.63 t/ha

Zone	Area	Prescription	Standard
Good	40%	110%	108%
Medium	50%	100%	99%
Poor	10%	88%	68%
Average	\$219	103%	100%

Paddock	Prescription	Standard	Benefit of PA
2	\$175	\$178	-\$3
10	\$ 35	\$ 28	+\$7
41	\$ 226	\$ 219	+\$7

GM Benefits of Precision Agriculture in 2007
Trials conducted by Jon Hancock, EP Farming Systems



