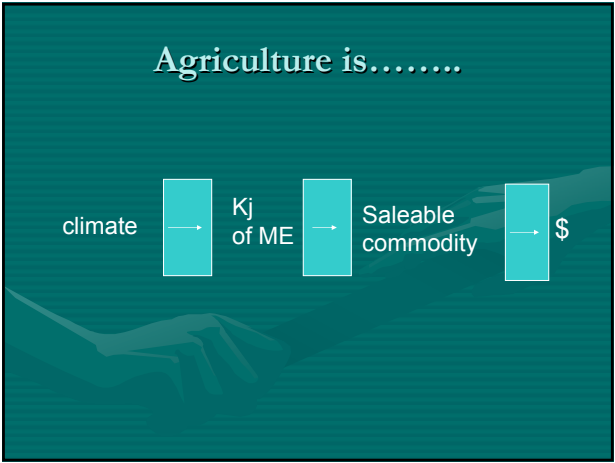


**Satellite Imagery -
a tool to analyse and
express your system's
potential**

Agriculture is.....

```
graph LR; A[climate] --> B[Kj of ME]; B --> C[Saleable commodity]; C --> D[$];
```

The diagram illustrates a process flow with four stages connected by arrows. The stages are: climate, Kj of ME, Saleable commodity, and \$. The arrows indicate a sequential process from left to right.

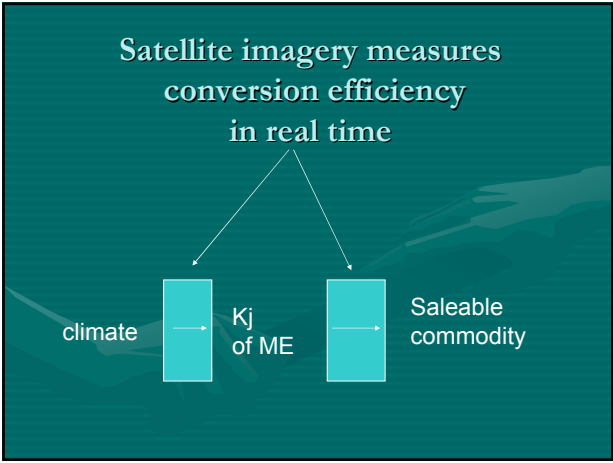


```
graph TD; A[Satellite imagery measures conversion efficiency in real time] --> B[climate]; A --> C[saleable commodity];
```



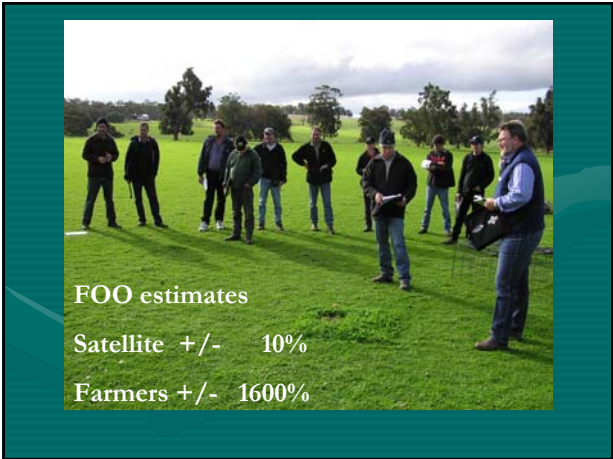
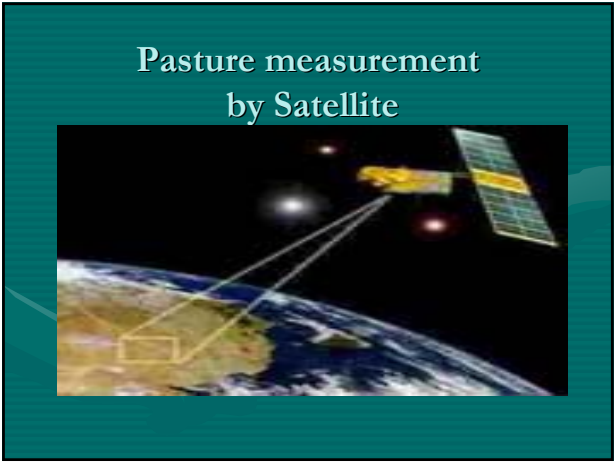


climate

Kj of ME

Saleable commodity



Pasture measurement by Satellite

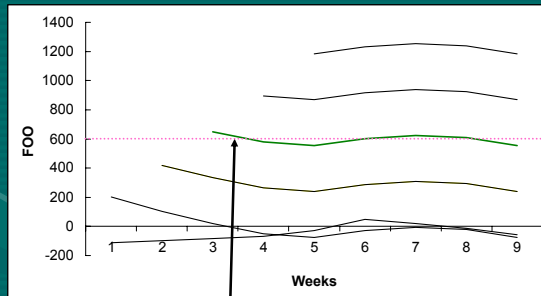
A satellite with solar panels is shown in orbit above the Earth. Two lines of sight from the satellite converge on a rectangular area on the ground, which is highlighted with a yellow rectangle. The Earth's horizon and clouds are visible in the background.A group of approximately ten people, mostly men, are standing on a lush green golf course. In the foreground, a man in a blue and white jacket and jeans is holding a black golf bag. The background shows a line of trees and a cloudy sky. The overall scene is outdoors and appears to be a casual gathering or a golf lesson.A group of approximately ten people, mostly men, are standing on a lush green golf course. In the foreground, a man in a blue and white jacket and jeans is holding a black golf bag. The background shows a line of trees and a cloudy sky. The overall scene is outdoors and appears to be a casual gathering or a golf lesson.A group of approximately ten people, mostly men, are standing on a lush green golf course. In the foreground, a man in a blue and white jacket and jeans is holding a black golf bag. The background shows a line of trees and a cloudy sky. The overall scene is outdoors and appears to be a casual gathering or a golf lesson.

Pasture growth Rate Kg / Ha / Day Dry Matter



PGR's from the break

Deferment calculator using FOO, PGR and stock requirements



Deferment period selected

Early Grazing period



$(\text{PGR} \times \text{Grazed Ha}) - 15\% \text{ wastage} / \text{stock number}$
= Kg / Hd / Day
Add supplementary feed if required

2003 in-season decisions



Stock agisted to reduce PGR requirement by 3 Kg / Ha / Day

2004 in-season decisions



Agisted stock returned and increased PGR requirement by 7 Kg / Ha / Day



Spell period shortened at end of winter feed gap when ;
 $\text{PGR} > (\text{total Kg consumed per day} + 10\%) / \text{total Ha}$

Neutral Detergent Fibre

Metabolizable Energy

30 %

13%

40%

10%

50%

9%

A

B

C

Body weight / NDF = Kg Dry matter per day
x ME = Kj of ME per day



60 Kg / 45 NDF = 1.3 Kg x 10 ME = 13.3 MJ of ME

60 Kg / 30 NDF = 2 Kg x 13 ME = 26 MJ of ME



Benchmark figure changes over 3 years

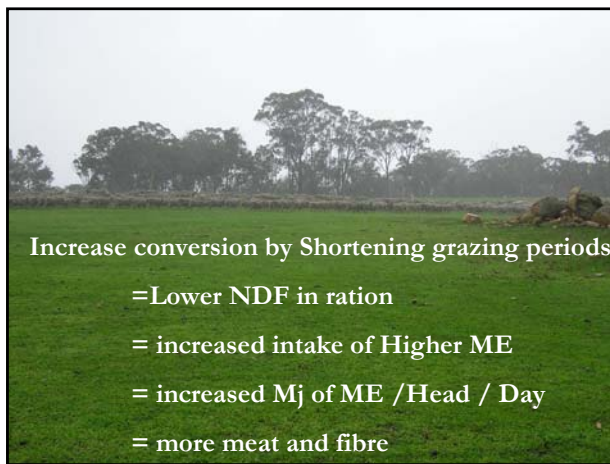
Wool cut

52 Kg to 85 kg per winter grazed Ha

increased 63%

4.5 Kg to 6.1 kg per head

increased 35%



Increase conversion by Shortening grazing periods

= Lower NDF in ration

= increased intake of Higher ME

= increased MJ of ME / Head / Day

= more meat and fibre

Paddock comparisons Established versus 1st year



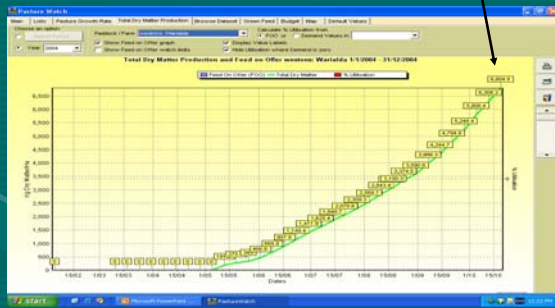
26 units N

11 units N

Established pasture 380mm rain total dry matter 8158 kg



1st year pasture 6848 Kg
16% less total dry matter



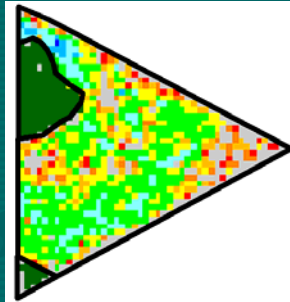
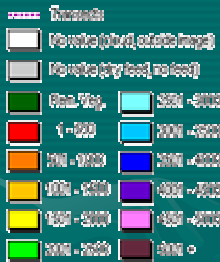
Measured early nitrogen response
500 Kg/Dry matter per Ha



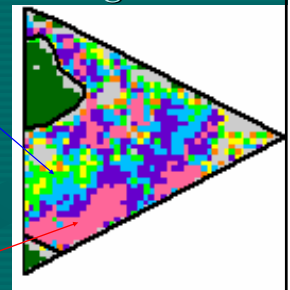
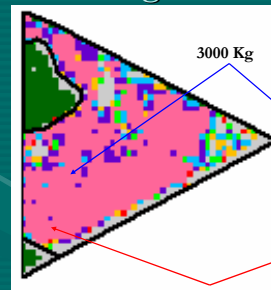
12th Sept 2004
FOO 1924 Kg

Total dry 5000 Kg
Converted 62%

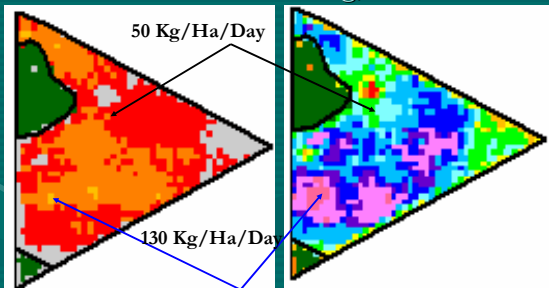
FOD Kg/ha



2002 FOO ain't FOO
September 5200 Kg/Ha av
October 3761 Kg/Ha av



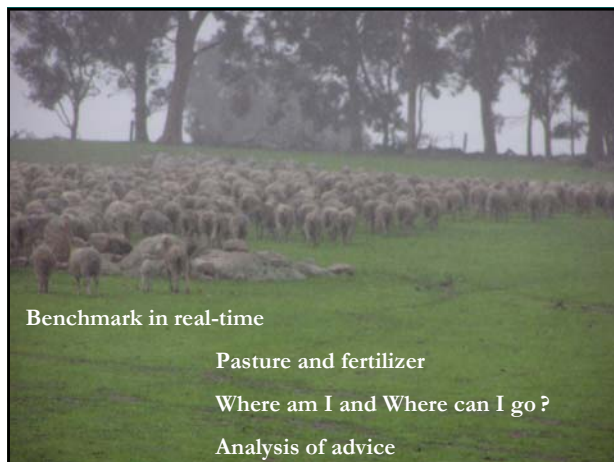
September 476 Kg
October 2003 3283 Kg
av PGR 90Kg,



Farm comparisons

- + 1200 Kg Dry matter / Ha
- 15% utilization
- + 70% wool production / Ha





Assumptions					
600	ME	1 kg greasy wool	65%		\$4.50
900	ME	kg clean wool			\$7.20
70	ME	1 kg liveweight gain			
10	ME / DSE / Day	maintenance			
11.5	ME	pasture during growth			
Pasture production					
9240	Kg pasture grown				
2600	Kg pasture unused		total MJ ME		% Utilized
6640	Kg pasture utilized		76360		72
2003 Production					
85 Kg wool / ha	13.5 DSE		85 % lambing		
Usage			total required		
lambs	7.65	at 30	kg LWG	16065	ME
ewes	9	at 15	kg LWG	9450	
ewes maint	13.5	at 150	Days	20250	
wool	51	at 600	ME/kg	30600	At 60% Winter grown
residual				76365	
				-5	

