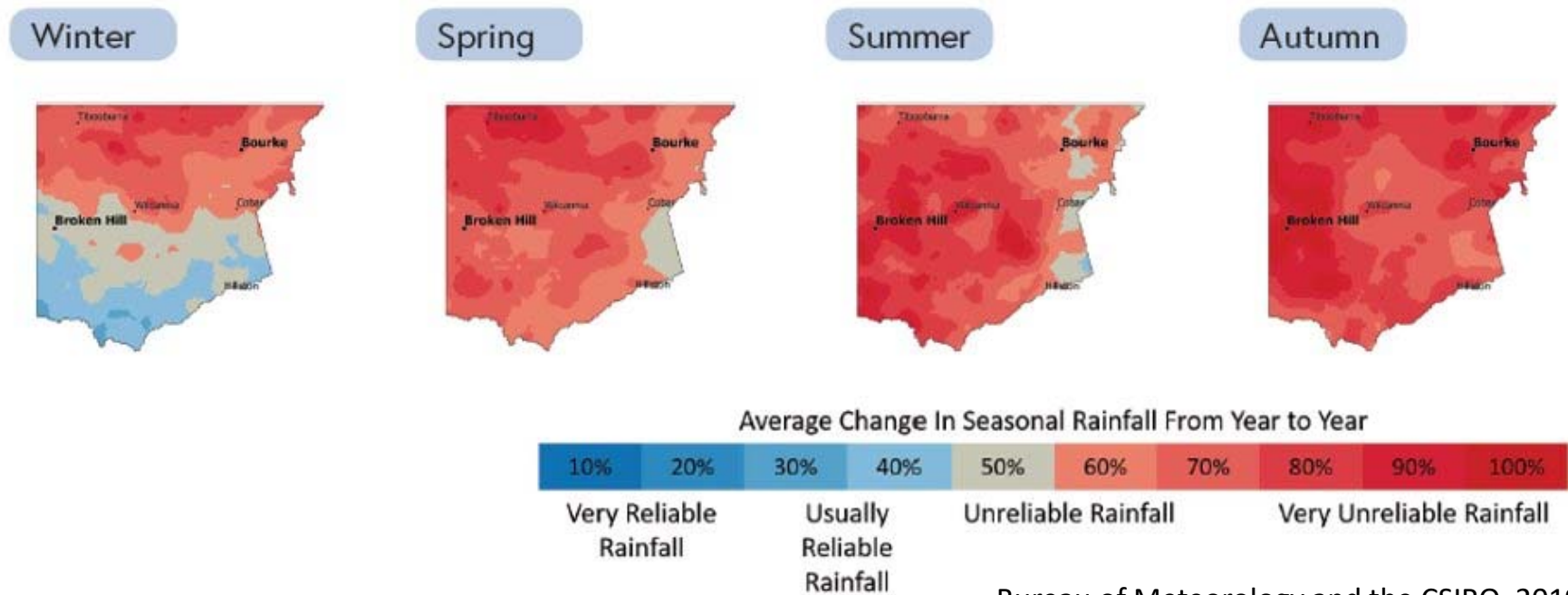# Background

- Poor or declining pasture productivity is an ongoing challenge for pastoral producers.

- Seasonal distribution of rainfall strongly influences the growth and composition of pastures (Eldridge and Grant, 2004).

- There was a significant decline in vegetation cover and pasture yield recorded in the western Riverina rangelands from 1990 to 2003 (Eldridge and Grant, 2004).

- The proportion of key perennial species in the pasture mix also declined to less than 40% of that recorded in 1990. Anecdotally, these trends have been observed to have continued.

- Monitoring, and using the results of monitoring to guide decision making, is a key component of a successful management objective in rangelands.

Benefits of perennials in pasture

Winter   Spring   Summer   Autumn

Average Change In Seasonal Rainfall From Year to Year

| 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |

Very Reliable Rainfall   Usually Reliable Rainfall   Unreliable Rainfall   Very Unreliable Rainfall

Bureau of Meteorology and the CSIRO, 2019

Benefits of perennials in pasture

- Productive rangeland pastures have a diverse mix of species

- Rainfall is becoming more variable and less reliable.

- Pasture needs to be able to respond to rainfall at any time of year.

- Diversity of species allows this response to occur.

About the program

- Developed and tailored specifically for the Western region.

- Focus on practices which improve whole-property performance.

- Network with a small group of fellow producers and share experiences.

- Attend 5 sessions over 12 months

- Develop your ability to monitor, measure and record pasture, resource condition and livestock condition.

Pilot in progress – now taking EOIs

Aim

- Enhance how well pastures are 'conditioned' to respond to rainfall or withstand a dry time.

- Effectively manage livestock to meet production targets.

The process

1. Identify target paddock – select monitoring site or sites
2. Set a management objective – do you wish to maintain or improve paddock condition?
3. Identify grazing strategies – what will you do to get to the objective?
4. Record observations – monitoring
5. Make the decision

Source: Glove box guide to tactical grazing management

1. Identify target paddock – select monitoring site

2. Set a management objective – do you wish to maintain or improve paddock condition?

- Examples of management objectives for the program:
  - Protect ground cover and encourage perennial species.

  - Maintain ground cover and increase the proportion of bladder saltbush in the paddock.

  - Assess species composition to develop an understanding of seasonal changes.

- Simple, realistic and achievable.

3. Identify grazing strategies – what will you do to get to the objective?

- Examples of grazing strategies:
  - Maintain a minimum of 50% ground cover

  - Monitor for evidence of grazing on perennial saltbush and remove pressure when this occurs

  - Do not exceed 30% utilisation of key perennial grasses

  - Monitor for saltbush recruitment events and judge the grazing risk

4. Record observations – monitoring

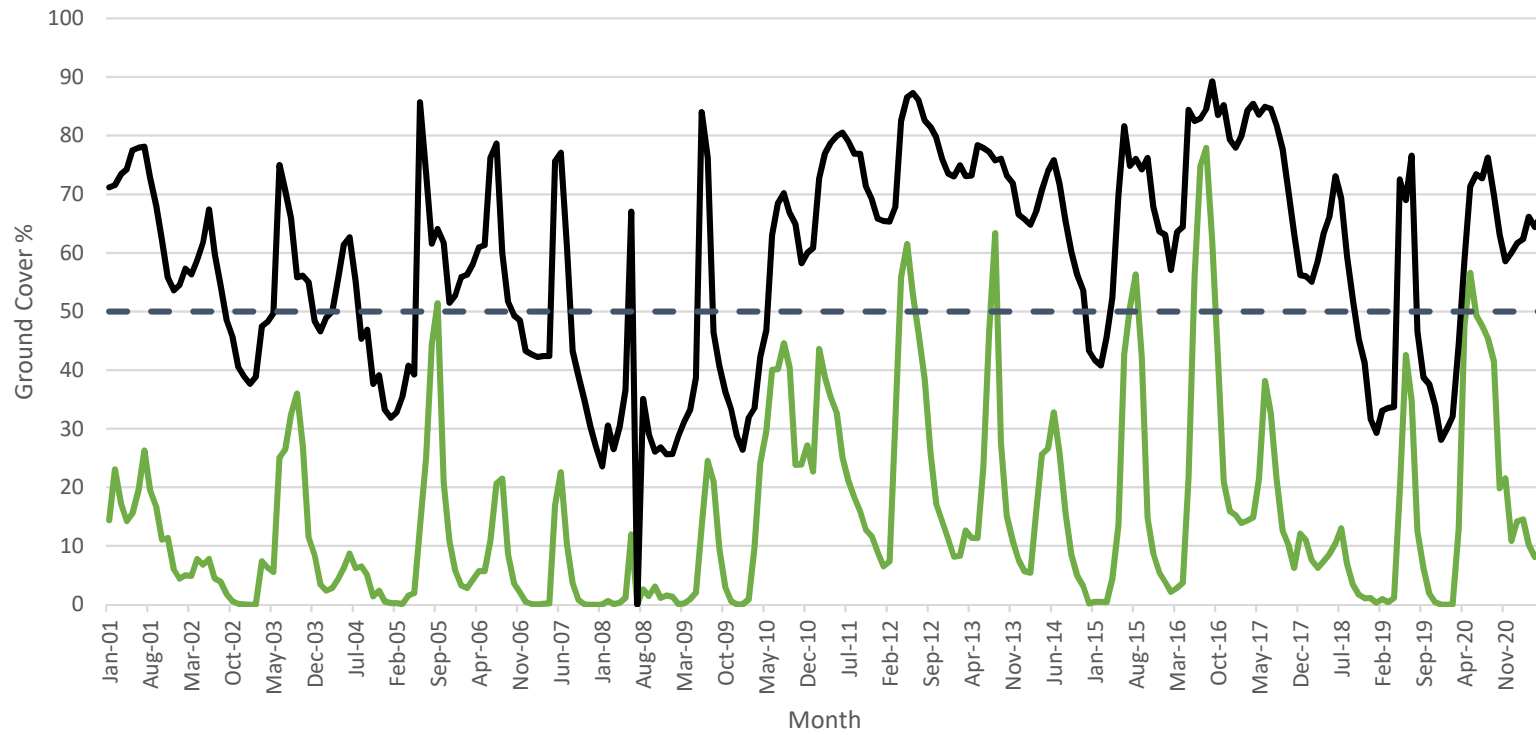| Site Name: Date:	Site Coordinates: Lat: Long:	Observer:
Paddock name: Area: _____(ha)	Rainfall (last 12 months) mm	Rainfall (last 3 months) mm
Management Objective: Strategies: 		
Paddock condition compared to management objective: 		

4. Record observations – monitoring

Features	Measured:		Target:	
Shrub Cover				
Ground Cover (%) - Step point - Satellite - Trend				
Standing Dry Matter (kg DM/ha)				
Main contributing species			At current time of year:	
Average pasture height (cm)				
% green				
Key Species name	Growth Phase (vegetative, reproductive, dormant)	Utilisation (%)	Digestibility (estimated)	Digestibility (actual)
Unmanaged grazing pressure	Proportion of forage demand:		Impact:	High Med Low

Monitoring ground cover

Source: GeoGLAM RAPP

Identifying pasture quality

• Samples taken from four key species at each site.

Results	Units	LOR	Kajaro Fairy Forage	Swamp Grass Forage	Bellevue Cane Grass Forage	Cotton Bush Forage	Woody Copper Burr Forage
Neutral Detergent Fibre	%	10	59	59	63	67	56
Acid Detergent Fibre	%	4	31	34	28	42	36
Crude Protein	%	2	12.1	5.4	13.0	11.8	10.8
Inorganic Ash	%	3	6	4	12		
DMD	%	39	60	58	67	46	47
Metabolisable Energy	MJ/kg DM	4.3	8.7	8.4	9.9	6.3	6.4
*Water Soluble Carbohydrate	%	4	6.5	8.2	4.4		
*AFIA Grade		0	No Grade	No Grade	No Grade		
Organic Matter	%	75	94	96	88		
DOMD	%	38	58	56	64	46	46
INORGANIC ASH	%	0.5				8	27
ORGANIC MATTER	%	0.5				93	73
Dry Matter	%	0.5	44.3	66.3	56.5	66.1	59.2
Moisture	%	0.5	55.7	33.7	43.5	33.9	40.8

Predicting livestock performance

- Focus on digestibility, potential intake and stage of production.

- Condition score of livestock
  - Is it predicted to increase or decrease?

5. Making the decision

- Ground cover targets

- Key species utilisation

- Predicted livestock performance

- How are you progressing towards your objectives?

- Are you approaching any thresholds set in your grazing strategy?

- Is there a recruitment opportunity?

Participant feedback

- "like minded producers from similar enterprises"

- "love having the small group – the information given and what others talk about is very relevant to us right now"

Next Steps

- Submit an EOI

- Set up a monitoring site

- Get to know the key species in your pastures

Take home messages

- The Improving Tactical Decision Making program is tailored specifically for the Western region.

- Increasing understanding of your key pasture species will enhance your ability to make grazing management decisions.

- Monitoring, and using the results of monitoring to guide decision making, is a key component of a successful management objective in rangelands.

Tools and resources

- Profitable Grazing Systems – Improving Tactical Decision Making

- Producer Demonstration Sites

- Glove Box Guide to Tactical Grazing Management for the semi-arid woodlands Compiled by 'Tac' Campbell & Ron Hacker

- Making More from Sheep Pastoral Module