Decisions for drought-affected producers
Topics

1. Current situation, the year ahead
2. Options
3. Feed supplies, costing nutrients
4. Producers’ reflections on drought

Produced by the South Region Beef Extension team

Roger Sneath  Kiri Broad  Tim Emery
Australia – floods, fires, droughts - one of the world’s most variable climates

April to March annual Australian rainfall relative to historical records 1890 - 2011

1
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01 02 03 04 05 06 07 08 09 10 11 12 13

14 15 16 17 18 19 20 21 22 23 24 25 26

27 28 29 30 31 32 33 34 35 36 37 38 39

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53 54 55 56 57 58 59 60 61 62 63 64 65

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92 93 94 95 96 97 98 99 100 101 102 103 104

105 106 107 108 109 110 111 112 113 114 115 116 117

118 119 120 121 122 123 124 125 126 127 128 129 130

131 132 133 134 135 136 137 138 139 140 141 142 143

144 145 146 147 148 149 150 151 152 153 154 155 156
Current situation

Rainfall Relative to Historical Records
February 2013 to January 2014

Pasture Growth Relative to Historical Records from 1957
November 2013 to January 2014

~ 70 % drought declared
Queensland current summer rainfall by month (% of average)

October  November  December  January  February (1st-20th)

www.longpaddock.qld.gov.au
rainfall and pasture growth maps
Current situation

Eastern young cattle indicator

Current situation - summary

• Failed summer/s
• Low water supplies
• Low cattle prices
• Tight feed supplies
• Late patchy rain

The question on many people’s minds

Even if good rain:
- will there be enough pasture bulk and water to last till next summer?
Decisions for producers

Everybody's situation is different
Everyone is trying to do their best

Wise in hindsight ...!
If we knew the future...!

Historic rainfall & pasture growth patterns

Rainfall data
• Google: Rainman streamflow
  Free download, soon to be web interactive
• BOM rainfall data
Roma median rainfall

End summer growing season

High probability good pasture growing rain

Past experience, records
Col Paton – dry season forage budget videos

Need: 10kg/hd/d x 270 days = 2700 kg DM

Feed: 300 kg/ha available* = 9 ha/head

*after detachment, roos/goats, unusable, residual ground cover
Dry season forage budgeting


Google – Futurebeef photo standards
From Grazing Land Management (GLM)

Two important ‘grazing principles’ for good land condition:
1. Dry season forage budget
2. Wet season spell some paddocks each year

Underlying ‘grazing business principles’ to help guide decisions...

- Pastures generate the wealth potential (& cheapest feed)
- Cattle - just one way to convert pastures into $
- Land in A condition is twice as productive as land in C condition
- Large scale, long term feeding is extremely costly
  
  (as opposed to strategic supplementation or short term feeding)
Summary

• Nearing the end of the summer growing season
• Reassess pasture & water supplies – adjust numbers to match
• Critical time for decisions and action

More info
• DAFF 13 25 23
• Rainfall & pasture maps  www.longpaddock.qld.gov.au
• Rainfall data  Google: Rainman streamflow,  BOM rainfall data
• Cattle prices  http://www.mla.com.au/Prices-and-markets
Questions, comments?

Expand or close dialogue box

Type questions or share your comments here anytime
1. Current situation, the year ahead

2. Options: sell, feed, feedlot, agist... other management

3. Feed supplies, costing nutrients

4. Producers’ reflections on drought
Options when more cattle than pasture

- Sell
- Feed - maintenance
- Feed - production
- Feedlot
- Agist
- Drove
- Lease
- Buy land
- Other income

People usually use a mix of options
Sell (& buy back) vs feeding

Sell $450
Cost ~$250
Buy $700

Feed 270 days x $1.00/hd/d = $270 (feed cost only)
# Economics – sell v feed

## Costs of feeding versus selling

The State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained in, or derived from these spreadsheets.

<table>
<thead>
<tr>
<th>Daily feed cost</th>
<th>3.0 kg's fed/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$550/t (=55c/kg)</td>
</tr>
<tr>
<td></td>
<td>$1.85/hd/day</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start date</th>
<th>24-Feb-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>End</td>
<td>21-Dec-14</td>
</tr>
</tbody>
</table>

### Feed Costs:

- **Feed cost $/hd/d** $1.55
- **fuel, labour, R&M, gear... $/hd** $5
- **interest (stock & feed) $/hd** $30
- **cost to feed $/hd** $573

### Sell & Buy Back Costs:

- **buy back $/kg** $1.55
- **450 Lwt kg/ha**
- **$30 + freight $/hd**
- **$9 - interest saved/earned** 5%

Cost to buy back (buy back value - value now)

<table>
<thead>
<tr>
<th>Cost to buy back</th>
<th>$718</th>
<th>$71,801</th>
</tr>
</thead>
<tbody>
<tr>
<td>$487</td>
<td>$48,701</td>
<td></td>
</tr>
<tr>
<td>$86</td>
<td>$8,591</td>
<td></td>
</tr>
<tr>
<td>advantage to sell &amp; buy back per 100 head</td>
<td>$8,591</td>
<td></td>
</tr>
</tbody>
</table>

### Summary:

- **Break even sale price to cover feed costs** $2.40
- **Final weight kg** 350

Selling

Pros

• Often seen as one of the better options in hindsight
• May rain - right decision at time
• In control - act early, continued adjustment
• Acting early – weight, price, more pasture for others
• Controls downside risk
• Less stress - more time / opportunity
• “Cattle = $ and $ don’t feel the dry”
• Most productive animals remain

Cons

• Loss up front - missed future profit?
• Low sale price – high buy back?
• Buy back quality?
Feeding

Pros
• If not too long & expensive
• If well planned & prepared

Cons
• How long will it go for?
• Rising feed costs.
• Could be high cost, less time & opportunity
• Stress
• Stock may become un-saleable
• Pasture damage
• Stock losses
Selling down

- Normal sale stock
- Higher risk & least profitable stock
  - Preg test – empty
  - Out season or late calving
  - Poor temperament, conformation, parasite susceptible
  - Old
  - Cull heifers
  - Poor doers
  - Inferior bulls
- Keep most productive, lowest risk, best genetics
Production feeding / Feedlot

Do sums – extra value > extra costs?

Production feeding
Economics better if...
  ▪ close to premium, short period
  ▪ cheap feed, high gains
Cull & weaned cows
  ▪ check grid - price jump (HSCW, P8)

Custom Feedlot
• Likely hood of profit?
• Quotes - ‘as fed’ or ‘DM’ (feed intakes & prices, conversions)
• Understand charges, risks
• Where & how sold
• Uniform mob - beware poor doers & temperament
• Pen load - less stress
• Check prior vaccines eg respiratory disease?

Spreadsheet - FutureBeef website
Agistment

Pros
• Like selling – avoids feeding
• Spell home pasture
• Steers – easy, one way trip
• May be profitable – do sums

Cons
• Finding it, expensive, distance
• Run out – return / find more
• People - management / communication (written contract)
• Poor performance / losses – travel fatigue, calf losses, bogging, diseases, parasites, poisoning
• Possibly uneconomic

More information
• “Agistment guidelines” NSW DPI Primenote
Other considerations

• **Stay healthy** – manage stress
• **Segregate** on feed requirements – cost savings
• **Early wean** for cow condition & future fertility
• **Vaccines** (5in1, botulism), **Parasite control** – lice / worms
• **Water** – good access, fenced, troughs, clean & deepen dams
• **Gradual changes** in feeds, fill cattle on safe feed
• If full feeding – small paddocks
• **Beware the break** – weak cattle, exposure, green pick, weeds, spelling
• **Keep records** – what did/when/why - what worked well, not well, do different
Holding breeder condition

Energy: Supply v Demand 500kg cow

- ME intake
- ME requirements

Forage budget
- Adjust numbers

Good condition at calving

P if deficient

CP if no green NIRS test

Early wean for cow CS

Preg test

Wet season spell

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun
Questions - comments

People use a mix of strategies to try and preserve equity and minimise losses.

Sell
Feed - maintenance
Feed - production
Feedlot
Agist
Drove
Lease
Buy land
Other income

Type your questions or share your comments here anytime
Topics

1. Current situation, the year ahead
2. Options
3. Feed supplies, costing nutrients
4. Producers’ reflections on drought
Feed supplies

- Plan ahead - buy when cheaper - contracts
- Shop around
- Beware wet feeds – check sums

Leading sheep
Newsletter
‘Around the Camp’, 21 Feb 2014
# Feed price guide Feb 2014 (ex GST)

<table>
<thead>
<tr>
<th>Jan 2014</th>
<th>Price</th>
<th>Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain</td>
<td>$330-340</td>
<td>reasonable</td>
</tr>
<tr>
<td>Chickpea</td>
<td>$400-480</td>
<td>reasonable</td>
</tr>
<tr>
<td>Hay</td>
<td>$380-500</td>
<td></td>
</tr>
<tr>
<td>WCS old</td>
<td>$500+</td>
<td>very tight</td>
</tr>
<tr>
<td>WCS new</td>
<td>$385+</td>
<td>April ex Moree</td>
</tr>
<tr>
<td>Feedlot rations/pellets</td>
<td>$380-500+</td>
<td></td>
</tr>
<tr>
<td>Molasses</td>
<td>June/July (unless contract)</td>
<td></td>
</tr>
</tbody>
</table>

## 24 Feb 2014 Protein meals

<table>
<thead>
<tr>
<th>Protein meals</th>
<th>$/t bulk ex GST</th>
<th>Supply</th>
<th>Ex</th>
<th>CP% DM</th>
<th>MJ/kg DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palm kernel meal</td>
<td>350</td>
<td>Reasonable</td>
<td>Bris</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Soybean meal</td>
<td>765</td>
<td>Limited</td>
<td>Bris</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>Canola meal</td>
<td>500</td>
<td>Very tight - May on</td>
<td>Newcastle</td>
<td>36</td>
<td>10</td>
</tr>
<tr>
<td>Cotton seed meal</td>
<td>550</td>
<td>Very tight - May on</td>
<td>Narrabri</td>
<td>44</td>
<td>12</td>
</tr>
<tr>
<td>Cottonseed meal pellets</td>
<td>450</td>
<td>None till April</td>
<td>Hillston</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>Sunflower meal</td>
<td>410</td>
<td>None till April</td>
<td>Newcastle</td>
<td>28-30</td>
<td>10</td>
</tr>
<tr>
<td>C-Alm pellets</td>
<td>450</td>
<td>None</td>
<td>Downs ex Hillston</td>
<td>17</td>
<td>9.9</td>
</tr>
<tr>
<td>Dried Distillers Grain</td>
<td></td>
<td>End April</td>
<td></td>
<td>30+/-</td>
<td>12.5</td>
</tr>
</tbody>
</table>
Costing nutrients

Need to know:
1. $/t  
2. DM%  
3. Nutrient level – ‘DM’ or ‘As fed’ basis

<table>
<thead>
<tr>
<th>Feed</th>
<th>$/t</th>
<th>(c/kg)</th>
<th>DM %</th>
<th>ME (MJ/kg) (DM)</th>
<th>ME (MJ/kg) (as fed)</th>
<th>cents/MJ ME</th>
<th>CP% (DM)</th>
<th>CP% (as fed)</th>
<th>$/kg CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton seed meal</td>
<td>500</td>
<td>50</td>
<td>90%</td>
<td>12</td>
<td>10.8</td>
<td>4.6</td>
<td>43</td>
<td>39</td>
<td>1.29</td>
</tr>
</tbody>
</table>

**Other considerations**
- Risk
- Experience
- Handling - storage, equipment, mixing, delivery, troughs
- Labour or full service
- Water content
- Response

Spreadsheet on FutureBeef website
<table>
<thead>
<tr>
<th></th>
<th>$/t</th>
<th>c/kg</th>
<th>MJ/kg as fed</th>
<th>c/MJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain</td>
<td>$300</td>
<td>30</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Silage</td>
<td>$100</td>
<td>10</td>
<td>3</td>
<td>3.3</td>
</tr>
</tbody>
</table>

high water content – do sums!!!
## Costing protein

<table>
<thead>
<tr>
<th></th>
<th>$/t</th>
<th>kg CP</th>
<th>$/kg CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCS</td>
<td>$200</td>
<td>200</td>
<td>$1.00</td>
</tr>
<tr>
<td>WCS</td>
<td>$550</td>
<td>200</td>
<td>$2.75</td>
</tr>
<tr>
<td>CSM</td>
<td>$550</td>
<td>400</td>
<td>$1.38</td>
</tr>
<tr>
<td>Copra</td>
<td>$550</td>
<td>200</td>
<td>$2.75</td>
</tr>
<tr>
<td>Dry lick</td>
<td>$800</td>
<td>540</td>
<td>$1.48</td>
</tr>
</tbody>
</table>

Cost : response
<table>
<thead>
<tr>
<th>Feed</th>
<th>Price ($)/t (as fed)</th>
<th>Freight ($/t) (as fed)</th>
<th>$/t landed (c/kg) (as fed)</th>
<th>DM %</th>
<th>Energy ME MJ/kg (DM)</th>
<th>Cent ME MJ/kg</th>
<th>CP%</th>
<th>$/kg CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example - Silage</td>
<td>110</td>
<td>100</td>
<td>210</td>
<td>21</td>
<td>32%</td>
<td>8.5</td>
<td>2.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Example - Grape Marc</td>
<td>200</td>
<td>200</td>
<td>400</td>
<td>40</td>
<td>48%</td>
<td>10.8</td>
<td>5.2</td>
<td>7.7</td>
</tr>
<tr>
<td>Example - Lucerne</td>
<td>500</td>
<td>100</td>
<td>600</td>
<td>60</td>
<td>88%</td>
<td>9</td>
<td>7.9</td>
<td>7.6</td>
</tr>
<tr>
<td>Example - Soybean meal</td>
<td>765</td>
<td>50</td>
<td>815</td>
<td>81.5</td>
<td>90%</td>
<td>12</td>
<td>10.8</td>
<td>7.5</td>
</tr>
<tr>
<td>Example - Canola meal</td>
<td>500</td>
<td>100</td>
<td>600</td>
<td>60</td>
<td>90%</td>
<td>10</td>
<td>9.0</td>
<td>6.7</td>
</tr>
<tr>
<td>Example - Hay</td>
<td>250</td>
<td>200</td>
<td>450</td>
<td>45</td>
<td>88%</td>
<td>8</td>
<td>7.0</td>
<td>6.4</td>
</tr>
<tr>
<td>Example - Cotton seed meal</td>
<td>600</td>
<td>50</td>
<td>650</td>
<td>65</td>
<td>90%</td>
<td>12</td>
<td>10.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Example - Chickpea</td>
<td>450</td>
<td>50</td>
<td>500</td>
<td>50</td>
<td>90%</td>
<td>10</td>
<td>9.0</td>
<td>5.6</td>
</tr>
<tr>
<td>Example – Commercial feedlot ration</td>
<td>400</td>
<td>50</td>
<td>450</td>
<td>45</td>
<td>90%</td>
<td>11</td>
<td>9.9</td>
<td>4.5</td>
</tr>
<tr>
<td>Example - WCS (whole cottonseed)</td>
<td>440</td>
<td>50</td>
<td>490</td>
<td>49</td>
<td>90%</td>
<td>13</td>
<td>11.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Example - Molasses</td>
<td>285</td>
<td>50</td>
<td>335</td>
<td>33.5</td>
<td>75%</td>
<td>12</td>
<td>9.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Example - Palm kernel meal (PKE)</td>
<td>350</td>
<td>50</td>
<td>400</td>
<td>40</td>
<td>90%</td>
<td>12</td>
<td>10.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Example - Grain</td>
<td>335</td>
<td>50</td>
<td>385</td>
<td>38.5</td>
<td>90%</td>
<td>12</td>
<td>10.8</td>
<td>3.6</td>
</tr>
</tbody>
</table>
Working out average intakes

Dry lick - 15% urea, 52% CP, $800/t (80c/kg)

Kg put out / no of cattle / how long last

\[
\begin{align*}
210 \text{ kg} & \quad / \quad 100 \text{ hd} & \quad / \quad 7 \text{ days} \\
= 2.1 \text{ kg} & \quad / \quad 1 \text{ hd} & \quad / \quad 7 \text{ days} \\
= 300 \text{ grams} & \quad / \quad \text{hd} & \quad / \quad 1 \text{ day}
\end{align*}
\]

\[
300 \text{ grams} / \text{hd} / \text{day} \times 15\% \text{ urea} = 45 \text{ grams urea}
\]

\[
300 \text{ grams} / \text{hd} / \text{day} \times 52\% \text{ CP} = 156 \text{ grams CP}
\]

\[
0.3 \text{ kg} \times 80 \text{ c/kg} = 24\text{c/hd/day}
\]
More information

Goats: Nutrition and management of goats in drought by B. A. McGregor, Dec 2005, RIRDC Publication No 05/188, RIRDC Project No DAV 217A

Horses: Google - Drought feeding and management for horses David Nash

Sheep: sites listed on last page
Questions, comments?

Type questions or share your comments here anytime.
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Producers of the North-West Slopes of NSW reviewed their drought preparation and business strategies for 2003.

David Llewelyn
Senior Livestock Officer, Moree.

• **best decision** - destocking to critical dates

• **worst decision** - not acting early enough
Key messages focused on forward planning...

‘Know what you are going to do and when’ was the key to staying in control.
Of crucial importance is to:

• have a plan
• set critical dates
• progress personal educational needs
• have a strategy for recovery.
1. Drought occurs when stocking rate exceeds carrying capacity (i.e. drought is not only rainfall-induced).

2. Humans control stocking rate.

1. Drought occurs when stocking rate exceeds carrying capacity (i.e. drought is not only rainfall-induced).

2. Humans control stocking rate.


4. Success in drought is achieved in the same way as at other times (e.g. using sound business management principles).

5. Start with goals, write & communicate the plan & recovery plan. (Plan now for next time, write plan down. Put plan in folder. Don’t lose the folder.)

6. Finetune the plan regularly
Thirteen key lessons learnt

7. Move early.

8. Remain positive — keep in touch with positive people.

9. Set critical dates.

10. Beware the emotional load! Share the responsibility with family members. Don’t be afraid to seek help.
Thirteen key lessons learnt

7. Move early.

8. Remain positive — keep in touch with positive people.

9. Set critical dates.

10. Beware the emotional load! Share the responsibility with family members. Don’t be afraid to seek help.

11. Watch out for unmanageable equity losses.

12. Look on mistakes as learning opportunities.

13. Preserve the resource base for financial recovery and future generations.
People

- Stay positive and in control.
- Be an opportunist.
- Maintain harmonious communications with business & family.
- Ensure networking and educational needs are met.
Questions, comments

- Drought updates, probabilities  www.longpaddock.qld.gov.au
- Rainman (rainfall data)  google - rainman streamflow
- FutureBeef  futurebeef.com.au
- Sheep sites  www.leadingsheep.com.au

Leading sheep
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