



‘Drought Risk Assessment – Practical
Management Support to Build Resilience’

GUIDED DROUGHT RISK SELF-ASSESSMENT TOOL



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1. INTRODUCTION

Welcome to the GUIDED DROUGHT RISK SELF-ASSESSMENT TOOL, which has been developed in partnership between Rural Business Tasmania, the Derwent Catchment Project and the Tas Farm Innovation Hub to assist Tasmanian farmers and landowners alike identify how vulnerable they are to the impacts of drought.

To help you work out where you sit in terms of drought readiness, we have developed the attached questionnaire which will give yourself a rating for each of the following key drivers for drought risk management:

- Water
- Pasture
- Grazing system management
- Perennial horticulture water application
- Fencing
- Forecasting and trigger points
- Natural capital
- Financial management
- Enterprise flexibility and personal resilience

Each driver or segment contains a short series of questions for yourself to rate yourself either:

No, Mostly, Yes or Not Applicable.

Once you have completed all eight sections, the answers are then tallied up and a rating / score is given for each section, along with an overall risk rating score.

Please refer to our **GLOSSARY SECTION** contained at the rear of this guide for assistance as required around terms used and practical examples of questions asked.

This tool will assist the property manager at a quick glance identify key drivers that may need reviewing to help the farming operation be more drought ready.

Ideally you would complete this assessment with your preferred farm advisor to gain maximum benefit and insight however this tool is developed with the aim of allowing 100% self-assessment should this be the case.

Please reach out to either Rural Business Tasmania or the Derwent Catchment Project teams should you require any assistance.

Please see either www.ruralbusinesstasmania.org.au or www.derwentcatchment.org for contact details.

Lastly, again thank you for taking the time to complete this assessment as I am sure your farm will thank you. However, do note that this assessment is intended as a guide only and should not solely be relied upon to determine your property's readiness for drought. We strongly encourage you to both work and engage with your own specialist advisors as required.

2. EXAMPLES OF COMPLETED WORKSHEETS

An individual section may look like this:

WATER						
QUESTION	Response				My Score	
Q.1 Can your water infrastructure utilise all paddocks and stock levels at peak demand?	No 1	Mostly 2	Yes 3	N/A 3	3	
Q.2 Is your storage and supply adequate to cover extreme dry?	No 1	Mostly 2	Yes 3	N/A 3	2	
Q.3 Do you have infrastructure fail safes in place in case of extreme events i.e. storms? <i>i.e. If power goes out due to fallen trees etc that pumps will be able to be returned to function asap</i>	No 1	Mostly 2	Yes 3	N/A 3	2	
Q.4 Can you maintain good water quality in dry conditions?	No 1	Mostly 2	Yes 3	N/A 3	2	
Note: For "Not Applicable to us" answers, rate yourself three (3)						
TOTAL SCORE OUT OF 12 FROM ABOVE					9	

SCORING MATRIX		
Comment		RATING
If your score is between 0 to 4 then rate yourself	1. RED	High risk, need to act
If your score is between 4 to 6 then rate yourself	2. AMBER	At risk, need to improve
If your score is between 6 to 8 then rate yourself	3. YELLOW	Average, could do better
If your score is between 9 or 10 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 10 then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Water Management is: Please transfer this rating to your overall rating worksheet		BLUE

Your overall rating worksheet once fully completed would then look like this:

YOUR OVERALL RISK RATING WORKSHEET

Please record your score and colour rating from each segment below
1=RED, 2=AMBER, 3=YELLOW, 4=BLUE, 5=GREEN

Segment/Key Driver <i>e.g. Trigger points</i>	Score	Colour Rating 3 - AMBER
Water	4	Blue
Pasture Condition	3	yellow
Grazing System	3	Yellow
Perennial Horticulture	3	Yellow
Fencing	2	Amber
Natural Capital	3	Yellow
Financial	5	Green
Flexibility and Resilience	4	Blue
Trigger Point Management	3	Yellow

My overall score out of 40

30

My overall rating (per below matrix)

Blue

SCORING MATRIX

Comment

If your score is 0 to 14 then rate yourself

If your score is 15 to 20 then rate yourself

If your score is 21 to 26 then rate yourself

If your score is 27 to 32 then rate yourself

If your score is above 32 then rate yourself

RATING

1. RED

High risk, need to act

2. AMBER

At risk, need to improve

3. YELLOW

Average, could do better

4. BLUE

Getting there, room for improvement

5. GREEN

Reducing our drought risk

3. Drought Risk Assessment Tool Kits

YOUR OVERALL RISK RATING WORKSHEET

Please record your score and colour rating from each segment below
1=RED, 2=AMBER, 3=YELLOW, 4=BLUE, 5=GREEN

Segment/Key Driver <i>e.g. Trigger points</i>	Score	Colour Rating 3 - AMBER
Water		
Pasture Condition		
Grazing System		
Perennial Horticulture		
Fencing		
Natural Capital		
Financial		
Flexibility and Resilience		
Trigger Point Management		

My overall score out of 40

My overall rating (per below matrix)

SCORING MATRIX

Comment		RATING
If your score is 0 to 14 then rate yourself	1. RED	High risk, need to act
If your score is 15 to 20 then rate yourself	2. AMBER	At risk, need to improve
If your score is 21 to 26 then rate yourself	3. YELLOW	Average, could do better
If your score is 27 to 32 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 32 then rate yourself	5. GREEN	Reducing our drought risk

WATER

QUESTION			Response				My Score
Q.1	Can your water infrastructure utilise all paddocks and stock levels at peak demand?	No 1	Mostly 2	Yes 3	N/A 3		
Q.2	Is your storage and supply adequate to cover extreme dry?	No 1	Mostly 2	Yes 3	N/A 3		
Q.3	Do you have infrastructure fail safes in place in case of extreme events i.e. storms? <i>i.e. If power goes out due to fallen trees etc that pumps will be able to be returned to function asap</i>	No 1	Mostly 2	Yes 3	N/A 3		
Q.4	Can you maintain good water quality in dry conditions?	No 1	Mostly 2	Yes 3	N/A 3		
<i>Note: For "Not Applicable to us" answers, rate yourself three (3)</i>							
TOTAL SCORE OUT OF 12 FROM ABOVE							

SCORING MATRIX

Comment		RATING
If your score is 0 to 4 then rate yourself	1. RED	High risk, need to act
If your score is 4 to 6 then rate yourself	2. AMBER	At risk, need to improve
If your score is 7 or 8 then rate yourself	3. YELLOW	Average, could do better
If your score is 9 or 10 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 10, then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Water Management is: Please transfer this rating to your overall rating worksheet		

PASTURE CONDITION

QUESTION	Response	My Score
Q.1 What % of your paddocks have productive perennial pastures?	30% or less 1 30-70% 2 70%+ 3 N/A 3	
Q.2 What % of clover or legume do you have in your pasture?	30% or less 1 30-70% 2 70%+ 3 N/A 3	
Q.3 Do you use soil testing to inform nutrient use?	30% or less 1 30-70% 2 70%+ 3 N/A 3	
TOTAL SCORE OUT OF 9 FROM ABOVE		

SCORING MATRIX

Comment		RATING
If your score is 0 to 2 then rate yourself	1. RED	High risk, need to act
If your score is 3 to 4 then rate yourself	2. AMBER	At risk, need to improve
If your score is 5 or 6 then rate yourself	3. YELLOW	Average, could do better
If your score is 7 or 8 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 8 then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Pasture Condition Management is:		
Please transfer this rating to your overall rating worksheet		

GRAZING

QUESTION	Response				My Score
Q.1 Do you use rest/recovery periods?	<i>Not really</i> 1	<i>Partly</i> 2	<i>All Year</i> 3	<i>N/A</i> 3	
Q.2 How long is your feed gap in an average year?	<i>6 months</i> 1	<i>4 months</i> 2	<i>2 months</i> 3	<i>N/A</i> 3	
Q.3 Do you buy in fodder? i.e. rye grass from irrigated paddocks = less vulnerable, competing with dairy farmers for silage and hay = more vulnerable. Consider transport.	<i>When required</i> 1	<i>Every season</i> 2	<i>Almost never</i> 3	<i>N/A</i> 3	
Q.4 Is the fodder you are buying in vulnerable to drought?	<i>Yes</i> 1	<i>Partially</i> 2	<i>No</i> 3	<i>N/A</i> 3	
Q.5 Are you equipped with infrastructure, skills and capacity to feed in confined areas? i.e. drought lotting, containment feeding	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.6 Do you have feed storage systems holding more than required to fill your usual feed gap?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.7 Do you monitor feed on offer and are stocking rates adjusted to suit?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
TOTAL SCORE OUT OF 21 FROM ABOVE					

SCORING MATRIX

Comment		RATING
If your score is 0 to 7 then rate yourself	1. RED	High risk, need to act
If your score is 8 to 10 then rate yourself	2. AMBER	At risk, need to improve
If your score is 11 to 14 then rate yourself	3. YELLOW	Average, could do better
If your score is 15 to 17 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 17 then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Grazing Management is:		
Please transfer this rating to your overall rating worksheet		

PERENNIAL HORTICULTURE

QUESTION			Response			My Score
Q.1	Do you have sufficient water for post-harvest irrigation??	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.2	Do you look to maximise and manage soil infiltration levels??	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.3	Does your enterprise utilise drip irrigation?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.4	Does your enterprise utilise supplementary irrigation as a backup to primary irrigation sources?	<i>None</i> 1	<i>Some</i> 2	<i>All</i> 3	<i>N/A</i> 3	
Q.5	Do you look to maximise and manage soil infiltration levels??	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.6	Does your enterprise utilise drip irrigation?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
TOTAL SCORE OUT OF 18 FROM ABOVE						

SCORE MATRIX

Comment		RATING
If your score is 0 to 6 then rate yourself	1. RED	High risk, need to act
If your score is 7 to 9 then rate yourself	2. AMBER	At risk, need to improve
If your score is 10 to 12 then rate yourself	3. YELLOW	Average, could do better
If your score is 13 to 15 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 15 then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Perennial Horticulture Management is:		
Please transfer this rating to your overall rating worksheet		

FENCING

QUESTION	Response				My Score
Q.1 Is your boundary game fenced?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.2 Can you depend on your fencing to contain livestock?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.3 Have you fenced off vulnerable country? i.e. in Tasmania - North facing slopes	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.4 How many of your dams/waterways are fenced?	<i>None</i> 1	<i>Some</i> 2	<i>All</i> 3	<i>N/A</i> 3	
TOTAL SCORE OUT OF 12 FROM ABOVE					

SCORING MATRIX

Comment		RATING
If your score is 0 to 4 then rate yourself	1. RED	High risk, need to act
If your score is 4 to 6 then rate yourself	2. AMBER	At risk, need to improve
If your score is 7 or 8 then rate yourself	3. YELLOW	Average, could do better
If your score is 9 or 10 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 10 then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Fencing Management is: Please transfer this rating to your overall rating worksheet		

NATURAL CAPITAL

QUESTION		Response				My Score
Q.1	Do you manage to maintain soil infiltration rates?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.2	Do you monitor your soil moisture levels using soil moisture probes?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.3	Are you effectively managing north facing slopes for ground cover and weeds?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.4	What % of your waterways are fenced with off-stream watering points?	<i>Up to 30%</i> 1	<i>30-80%</i> 2	<i>80%+</i> 3	<i>N/A</i> 3	
Q.5	What % of your paddocks have shelterbelts?	<i>Up to 30%</i> 1	<i>30-80%</i> 2	<i>80%+</i> 3	<i>N/A</i> 3	
Q.6	Do you have bushland that is fenced from livestock?	<i>No</i> 1	<i>Some</i> 2	<i>All</i> 3	<i>N/A</i> 3	
Q.7	Is the bushland weed free?	<i>No</i> 1	<i>Mostly</i> 2	<i>Yes</i> 3	<i>N/A</i> 3	
Q.8	Do you rely on bushland areas for livestock?	<i>Yes</i> 1	<i>At times</i> 2	<i>No</i> 3	<i>N/A</i> 3	
TOTAL SCORE OUT OF 24 FROM ABOVE						

SCORING MATRIX

Comment

If your score is 0 to 8 then rate yourself

If your score is 9 to 12 then rate yourself

If your score is 13 to 17 then rate yourself

If your score is 18 to 20 then rate yourself

If your score is above 20 then rate yourself

1. RED
2. AMBER
3. YELLOW
4. BLUE
5. GREEN

RATING

High risk, need to act

At risk, need to improve

Average, could do better

Getting there, room for improvement

Reducing our drought risk

Your Rating for Natural Capital Management is:
Please transfer this rating to your overall rating worksheet

FINANCIAL MANAGEMENT

QUESTION			Response			My Score
Q.1	Do you maintain and monitor your cash budget on a regular basis?	No 1	Partially 2	Yes 3		
Q.2	Do you have a good relationship with your credit provider?	No 1	Partially 2	Yes 3		
Q.3	What level of debt does your farm enterprise carry?	Low 1	Medium 2	High 3		
Q.4	Is your BAS and tax up to date?	No 1	Partially 2	Yes 3		
Q.5	Do you have a written business plan and do you review it?	No 1	Partially 2	Yes 3		
Q.6	Do you know your breakeven points?	No 1	Some 2	All 3		
Q.7	Do you have the ability to raise capital to get through the drought?	No 1	Partially 2	Yes 3		
Q.8	Does your debt exceed 2 years of gross income?	Yes 1		No 3		
TOTAL SCORE OUT OF 24 FROM ABOVE						

SCORING MATRIX

Comment

If your score is 0 to 8 then rate yourself

If your score is 9 to 12 then rate yourself

If your score is 13 to 17 then rate yourself

If your score is 18 to 20 then rate yourself

If your score is above 20 then rate yourself

1. RED
2. AMBER
3. YELLOW
4. BLUE
5. GREEN

RATING

High risk, need to act

At risk, need to improve

Average, could do better

Getting there, room for improvement

Reducing our drought risk

Your Rating for Financial Management is:

Please transfer this rating to your overall rating worksheet

FLEXIBILITY AND RESILIENCE

QUESTION	Response			My Score
Q.1 Do you have multiple income streams on farm?	<i>No</i> 1		<i>Yes</i> 3	
Q.2 Do you have off farm income or ability to obtain?	<i>No</i> 1		<i>Yes</i> 3	
Q.3 Do you have a support network of friends and advisors to call upon to help you make informed decisions?	<i>Low</i> 1		<i>High</i> 3	
Q.4 I like to research and seek out new ideas and best practices of the farm?	<i>No</i> 1		<i>Yes</i> 3	
Q.5 Do you have interests and hobbies outside of the farm?	<i>No</i> 1		<i>Yes</i> 3	
Q.6 Do you have the ability to sell into multiple or different markets?	<i>No</i> 1	<i>Partially</i> 2	<i>Yes</i> 3	
TOTAL SCORE OUT OF 18 FROM ABOVE				

SCORING MATRIX

Comment		RATING
If your score is 0 to 6 then rate yourself	1. RED	High risk, need to act
If your score is 7 to 9 then rate yourself	2. AMBER	At risk, need to improve
If your score is 10 to 12 then rate yourself	3. YELLOW	Average, could do better
If your score is 13 to 15 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 15 then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Flexibility and Resilience is:		
<i>Please transfer this rating to your overall rating worksheet</i>		

TRIGGER POINT

QUESTION	Response		My Score
Q.1 Do you have a climate forecast point at which you change your operations? i.e. destock, adjust, containment feed	<i>No</i> 1	<i>Yes</i> 3	
Q.2 Do you have a ground cover % at which you change your operations? i.e. destock, adjust, containment feed	<i>No</i> 1	<i>Yes</i> 3	
Q.3 Do you have a point where you don't sow?	<i>Low</i> 1	<i>High</i> 3	
Q.4 Do you have a point at which you adjust your operating plan based on water availability?	<i>No</i> 1	<i>Yes</i> 3	
Q.5 Do you have a point during the season at which you adjust your spending?	<i>No</i> 1	<i>Yes</i> 3	
TOTAL SCORE OUT OF 15 FROM ABOVE			

SCORING MATRIX

Comment		RATING
If your score is 0 to 5 then rate yourself	1. RED	High risk, need to act
If your score is 6 to 8 then rate yourself	2. AMBER	At risk, need to improve
If your score is 9 or 10 then rate yourself	3. YELLOW	Average, could do better
If your score is 11 or 12 then rate yourself	4. BLUE	Getting there, room for improvement
If your score is above 12 then rate yourself	5. GREEN	Reducing our drought risk
Your Rating for Trigger Points is: Please transfer this rating to your overall rating worksheet		

4. GLOSSARY

Water

Can your water infrastructure utilise all paddocks and stock levels at peak demand?

Drought conditions increase livestock and irrigation water demand and dependency. Pipe, pump and valve infrastructure need to be adequate for this. There is emphasis on 'peak demand' here as when it is a prolonged dry, animals are thirstier.

Is your storage and supply adequate to cover extreme dry?

Here we are identifying if the enterprise has a real risk of running low or running out of water. This could be due to low stream flows, limited storage or limited water allocation from schemes.

Do you have infrastructure fail safes in place in case of extreme events i.e. storms?

If power goes out due to fallen trees etc. will pumps will be able to be returned to function asap. This can cause massive disruption to ensuring adequate stock water in dry conditions.

Can you maintain good water quality in dry conditions?

As dams or rivers get low, algal issues are more likely and water quality can be impacted.

Pasture

What % of your paddocks have productive perennial pastures?

The condition of pastures has a key impact on resilience. Productive perennial pastures that are suited to your particular landscape and conditions are the key - not just what was recommended in a mix from the agent. The presence of weedy annuals creates bare ground vulnerability and impacts the resilience of pasture when dry increases.

What % of clover or legume do you have in your pastures?

The recommended target for legume in pastures is 30% however research by TIA indicates that most Tasmanian pastures fall very short of that target. Having legumes in pastures reduces nitrogen use and offers a far superior quality feed for livestock.

Do you use soil testing to inform nutrient use?

This tells us whether a producer is likely to have adequate nutrient input level in their pastures which saves money and offers better pasture condition. This will also identify if they are tuned in to only applying what is needed rather than blanket fertiliser applications which increases nutrient run off.

Grazing Systems

Do you use rest/recovery periods?

This question is to identify whether the farmer implements a rotational grazing system or if paddocks are set stocked. Set stocking, apart from during lambing, can be associated with poor ground cover and pasture condition.

How long is your feed gap in an average year?

This question is to assess if producer has strategies to produce feed on farm most of the time or if they have strategies in times of limited feed.

Do you buy in fodder?

This will ascertain if the enterprise grows their own supplementary feed or if it is sourced off farm.

Is the fodder you are buying vulnerable to drought?

i.e., rye grass straw from irrigated paddocks is less vulnerable or if you are competing with dairy farmers for silage and hay you are more vulnerable. It's also important to consider transportation and any vulnerabilities there.

Are you equipped with infrastructure, skills and capacity to feed in confined areas i.e., drought lotting, containment feeding?

Confinement feeding is an important drought reliance strategy. If farmers have a set up or know how to build one and have the skills and experience to manage stock in and out, they will be far more resilient when drought hits.

Do you have feed storage systems holding more than required to fill your usual feed gap?

Having extra feed stored on farm is an excellent back up in drought however we notice in Tasmania that this practice is limited.

Do you monitor feed on offer and are stocking rates adjusted to suit?

If farmers are using plate meters, are conducting dry matter cuts or using other technology to help determine management decisions related to pasture quantity this enables forward planning and creates resilience

Perennial Horticulture

Do you have sufficient water for post-harvest irrigation?

The amount of water that farmers require will vary from season to season, and planning and monitoring is vital to ensuring adequate water remains available post-harvest.

Do you look to maximise and manage soil infiltration levels?

Infiltration is the downward entry of water into the soil and is an indicator of the ability of the soil to allow water movement into and through the soil profile. Soil temporarily stores water, making it available for root uptake, plant growth and habitat for soil organisms. It is triggered by crop and land management practices that affect surface crusting, compaction, and soil organic matter.

Does your enterprise utilise drip irrigation?

An efficient water and nutrient delivery system for growing crops, delivering water and nutrients directly to the plant's roots zone, in the right amounts, at the right time, so each plant gets exactly what it needs, when it needs it, to grow optimally.

Does your enterprise utilise supplementary irrigation as a backup to primary irrigation sources?

Do you ever use supplemental irrigation (e.g. sprinklers)? It may take time to irrigate total cropped area in more extreme weather conditions, therefore supplemental irrigation may be required to ensure watering is adequate.

Do you regularly monitor soil moisture levels?

Knowing how much water to apply and when to apply is a fundamental management decision on which effective water management practices should be based.

Do you then adjust irrigation levels based on current moisture levels?

When considering a watering regime for a crop, it is wise to understand the various growth stages and the water requirements of the crop in order to achieve maximum yield and quality potentials. Maintaining adequate soil moisture conditions during moisture-sensitive stages of growth will have a significantly beneficial effect on plant growth and overall yield.

Can you deliver sufficient water to all areas under crop?

Ensuring adequate water and delivery is available to meet planned inputs to maximise yield and ensure viability of the crop.

Fencing

Is your boundary game fenced?

Studies undertaken by NRE's game management section indicate that on average farmers are losing ~50% of their pasture if they are near remnant vegetation. This has a very large impact in how much feed is produced for livestock in Tasmania and drought increases the pressure from browsing animals.

Can you depend on your fencing to contain livestock?

Poor fences or lack of maintenance can lead to difficulties in creating effective pasture rest and the functionality of rotations.

Have you fenced off vulnerable country i.e., in Tas north facing slopes?

These areas are a key driver for soil erosion as sheep preferentially graze the north-facing slopes as they are warmer. Whole hills are often set stocked with the north-facing slopes bearing the brunt of the stocking impacts particularly when it is dry. Fencing initiatives have been offered previously and there is clear value in protecting the north-facing components of the hillsides.

How many of your dams/waterways are fenced?

An important 'best practice' strategy is to fence off dams and waterways to ensure the integrity of the water's edge. Stock can become bogged if they are trying to access water and the level is low.

Natural Capital

Do you manage to maximise soil infiltration rates?

Water infiltration is a critical indicator of soil health and unfortunately is largely either not understood or is not considered important in a farm management context. If soils are highly compacted, water runs off and it is more difficult for the moisture to reach the pasture/crop roots. This is a water use efficiency issue as well as the degradation of soil as a natural asset.

Do you monitor your soil moisture levels using soil moisture probes?

Soil moisture levels are critical for crop and pasture growth. Relying on visual surface assessments does not provide adequate information for management decisions. This question will allow us to understand if the producer is working to the optimum standards for productivity.

Are you effectively managing north facing slopes for groundcover and weeds?

North facing slopes are highly vulnerable to erosion and due to this they can have poor ground cover or weed infestations such as thistles and horehound.

What % of your waterways are fenced with off-stream watering points?

Good practice that increases the resilience of waterbodies and waterways includes fencing and off stream watering points. This prevents cattle and stock getting bogged and falling into waterways and pugging and reduced water quality associated with dams.

What % of your paddocks have shelterbelts?

Shelterbelts are a good animal welfare tool and have the added benefit of creating corridors for wildlife to move around. If shelterbelts are native, they can provide pollination services and increase biodiversity on farms.

Do you have bushland that is fenced from livestock?

Remnant vegetation that is well managed and that does not contain stock has biodiversity benefits on farm.

Is the bushland weed free?

If bush areas are in good condition without weeds this increases the biodiversity value of the remnant vegetation.

Do you rely on bushland areas for livestock?

The biodiversity value and condition of remnant vegetation can be severely impacted by stock, especially in times of drought.

Financial

Do you maintain and monitor your cash budget on a regular basis?

By having a good understanding of where you sit in regards to your cashflow enables the farmer to make informed decisions.

Do you have a good relationship with your credit provider?

Regular contact greatly assists the bank in better understanding your farm which can assist in quicker and more favourable decisions when additional funding is sought.

What level of debt does your farm enterprise carry?

Farming enterprises with lower levels of debt can have spare capacity to take on extra debt to help them get through dry times through buying in additional resources such as fodder.

Is your BAS and tax up to date?

Being behind in taxation commitments is an indicator that the farm may be in financial stress, and this may hinder your ability to raise capital.

Do you have a written business plan and do you review it?

A well-crafted business plan would have ensured that the enterprise has thought ahead in regards to drought management and what options they may have, again this will assist the farmer make informed decisions

Do you know your breakeven points?

By knowing your cost of production per unit (e.g. per head, per tonne, etc) you can make informed decisions on whether to keep, sell exit etc.

Do you have the ability to raise capital to get through drought?

If you need to borrow extra funds to get through a drought, can you?

Does your debt exceed 2 years of gross income?

Farms that have a high level of debt or gearing have reduced capacity to borrow; an old rule of thumb is for a farm to have no more than \$2 of debt for every dollar of income (e.g. \$100 in total farm income and \$50 of total farm debt equals \$2 of debt for every dollar of income). Farms with debt above this level can function quite OK but should tough times arise then they have less scope to borrow.

Flexibility & Resilience

Do you have multiple income streams on farm?

Multiple income streams can reduce the likelihood of total loss of income during a drought.

Do you have off farm income or ability to obtain?

Off farm income can be non-climate related and provide valuable cashflow during periods of reduced income.

Do you have a support network of friends and advisors to call upon to help you make informed decisions?

Mental health and well-being are vital for all individuals particularly during periods of stress. Being able to bounce ideas off other people helps with yourself not feeling all alone and can lead to better decision making.

I like to research and seek out new ideas and best practises for my farm?

Being open to new best ideas can lead to improved productivity, risk management and ultimately improved farm viability.

Do you have interests and hobbies outside of the farm?

Maintaining both mental and physical health for farm managers and owners greatly helps in stress management and again can lead to better decision making during dry times.

Do you have the ability to sell into multiple or different markets?

Having this flexibility provides additional options and doesn't lock the farm into a particular marketing method and reduces risks.

Trigger Points

Do you have a climate forecast point at which you change your operations i.e. destock, adjust, containment feed?

e.g. 80% chance of an El Nino weather pattern developing may see you adjust your stocking rates.

Do you have a ground cover % at which you change your operations i.e. destock, adjust, containment feed?

Ground cover management is a vital in regards to minimising soil degradation.

Do you have a point a where you don't sow?

Do you have a point at which you adjust your operating plan based on water availability?

Do you have a point during the season at which you adjust your spending?

All these questions for trigger points revolve around forward planning and encouraging the farmer to make informed rational decisions prior to any drought event occurring. This reduces the risk of rash ill-informed decisions occurring that could negatively impact on the farm.