

CONTENTS

Introduction	2
Dealing with water stressed crops	3
Calculating harvest break-even point	4
Guide for estimating sheep and pasture yields	7
Managing the sheep enterprise in a difficult season	12
Sheep health issues	19
Debt mediation system	22
Reimbursement of stamp duty on refinancing loans	23
Retirement assistance for farmers	24
Farm Help - Supporting families through change	25
Farm Help - Re-establishment Grant	28
Looking after yourself in difficult times	29
List of Tables	
Table 1 Options for crops	3
Table 2 Break-even yield required to cover harvesting costs	4
Table 3 Row spacing conversion factors for calculating yield	7
Table 4.1 Calculating barley screenings from sowing date & grain size	8
Table 4.2 Calculation of grain yield for 100 heads per square metre	8
Table 4.3 Calculation of grain yield for 200 heads per square metre	8
Table 4.4 Calculation of grain yield for 300 heads per square metre	8
Table 4.5 Calculation of grain yield for 400 heads per square metre	9
Table 4.6 Calculation of grain yield for 500 heads per square metre	9
Table 5 Estimate of yield and oil for Karoo canola	10
Table 6 Pulse crop yield estimations for average and poor yields	10
Table 7 Stocking options	12
Table 8 Animal liveweight/condition score	12
Table 9 Impact of dry season on pasture	13
Table 10 Issues to deal with	14
Table 11 Guidelines for supplementary feeding rates	15
Table 12 Value of feed types	16

Introduction

Farmers' approaches to adverse seasonal conditions whether they be frost, flood or low rainfall should be to acquire as much information as possible on the immediate agronomic and financial situations and make a judgement on the longer term implications for the following seasons. Once the information has been acquired, in consultation with advisers, it is necessary to construct and implement agronomic and business strategies to deal with individual situations.

The agronomic and stocking options for the dry season supplied in this booklet deal with questions and issues arising from the Year 2000 season, which has been characterised by a mid to late June break and significantly below average rainfall for the growing season (to September).



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Dealing with water stressed crops

In addition to harvesting, a number of short-term options are available to deal with low yielding drought affected crops. Options are discussed in this report along with their respective benefits and costs. Agronomic considerations that affect all options are also explained.

A summary of options for crops is presented in Table 1.

Table 1: Options for crops

Options	Advantages	Disadvantages
Harvest	<ul style="list-style-type: none"> • Removes grain • Possible income \$ • Conditions stubble for seeding • Retains organic matter 	<ul style="list-style-type: none"> • Cost vs return • Weed control
Hay	<ul style="list-style-type: none"> • Stubble removed • Reduces weed seeds • Possible income \$ • Reduced grazing/erosion 	<ul style="list-style-type: none"> • Cost (\$20/ha) • Poor quality • Nutrient loss • Past optimal time
Chain/Rake	<ul style="list-style-type: none"> • Retains some stubble vs erosion • Allows better stubble handling 	<ul style="list-style-type: none"> • Time taken • Cost (\$5/ha raking) • Requires grazing to reduce amount of grain
Graze	<ul style="list-style-type: none"> • Feed value • Reduces weed seeds • Reduces amount of grain • Reduces grazing/erosion • Pressure on pastures 	<ul style="list-style-type: none"> • Not enough sheep • Some grain still in crop • Stubble condition at seeding • Erosion pressure on sandy surfaced soils
Hay freezing	<ul style="list-style-type: none"> • Stops weed seed set • Preserve nutrients - grazing • Feed retention • Organic matter retention 	<ul style="list-style-type: none"> • Weed contact • Most crops past optimal timing • Effectiveness vs burning • Cost (\$4/ha + spray)
Green manure	<ul style="list-style-type: none"> • Recycles nutrients • Stops weed seed set • Organic matter retention • Brown manure, mulch 	<ul style="list-style-type: none"> • Requires soil moisture • Requires prompt action • Potential stubble condition at seeding • Availability of suitable machinery • Cost
Swathing	<ul style="list-style-type: none"> • Stops weed seed set • Option to bale window • Grazing value of regrowth • Spray control of weed regrowth 	<ul style="list-style-type: none"> • Relocation of nutrients to windrow • Weed control under swath • Cost (\$20/ha)
Burn	<ul style="list-style-type: none"> • Recycles some nutrients • Controls surface weed seeds • Reduces disease risk recropping 	<ul style="list-style-type: none"> • Erosion risk - soil and nutrients • Fire hazard • Organic matter loss

Calculating harvest break-even point

Before deciding to forego harvesting a water stressed crop for an alternative option, it is important to ensure that the alternative will provide a greater benefit. The decision to harvest or not should be based primarily on the estimated yield of the crop. The harvest break-even point equals the yield of the crop which will cover costed harvesting plus the associated costs of harvesting and delivering the grain.

See *Guide for Estimating Crop and Pasture Yields*. It is imperative that the crop is examined rigorously before a decision is made. Estimating the yield of a crop based on examination of only a few plants/heads from the crop may not be a true indication of the possible yield.

Given the following costs of harvesting:

Depreciation (\$60/hr, 7.5 ha/hr)	\$8.00
Fuel (2000 ha)	\$2.50
Repairs (2000 ha)	\$2.50
Labour (\$15/hr, 7.5 ha/hr)	\$2.00
Own cost	\$15.00/ha
Contract cost	\$27.00/ha

The amount of grain required to break-even on operating the harvester is shown in Table 2.

Table 2: Break-even yield required to cover harvesting costs (kg/ha)

	Price net on farm	Harvest cost	
		\$15/ha	\$27/ha
Wheat	\$105/t (feed)	145 kg	260 kg
	\$125/t (general purpose)	120 kg	220 kg
	\$140/t (ASW)	100 kg	195 kg
Canola	\$275/t	55 kg	100 kg
Lupins	\$130/t (pool)	115 kg	210 kg
	\$150/t (private)	100 kg	180 kg

Advantages

Harvesting is going to be the most appropriate option for the majority of crops. Before deciding that an alternative option is more attractive than harvesting a drought-affected crop it is important to note that, although yield may be drastically reduced, the income generated from grain will at least cover some of the costs associated with growing the crop. The harvest break-even point equals the yield of the crop which will cover the

cost of harvesting plus the associated costs of harvesting and delivering of the harvested grain. Most of the other options do not generate any income but carry other benefits. Harvesting, being a standard treatment, has advantages such as the availability of machinery, preparation of the paddock for the following season and remaining stubble and straw ensures that some of the nutrients in the crop will increase the soil fertility for next season. The opportunity costs of some of the options described below must be compared against the possible income generated from harvesting. For example, swathing may appear to be the most economical option where the contracting rate for swathing is \$20/ha compared to a cost of \$25/ha for harvesting. However, if harvesting generated \$20/ha income from the grain, the net cost of the harvesting operation would be \$5/ha. Therefore, if both operations have the same agronomic benefits the swathing operation would actually be \$15/ha more expensive.

Disadvantages

The harvesting option foregoes the feed quality/conservation, nutrient recycling and weed control benefits associated with other options.

Hay cutting

Advantages

Before cutting a crop for hay, the following factors need to be determined:

- Cost of production
- Quality/type – bearded wheats, barley
- End use – on-farm vs market for hay

It is important that cutting for hay is done as soon as possible to prevent any decrease in feed quality. If weeds have not set seed this option helps reduce the weed burden in the paddock.

Disadvantages

Due to the relative lack of dry matter and late timing for cereals the quality of hay would be relatively poor compared to hay from hay producing areas. If the skills and machinery required are not readily available then the production of hay becomes expensive. Another point to consider is the harvesting of nutrients associated with hay production when compared to other options such as green manuring and some cutting/grazing options.

Swathing (cutting operations)

Advantages

Swathing/cutting can preserve some of the nutritive value of the crop without the expense associated with applying desiccant herbicides. Cutting retains nutrients either through fodder conservation or recycling of plant material. This option also has a weed control benefit. Due to the remaining stubble, swathing is especially suited to lighter textured soils where erosion can pose a problem when compared to green manuring. Once cut down, the crop can be grazed or left to degrade. Degradation and return of nutrients to the soil will be more rapid if the plant material is reduced to the smallest possible size (while keeping in mind that some stubble should be retained on erosion prone soils). Burning of stubble is not recommended due to the loss of organic matter and nutrient while also leaving soils susceptible to erosion. However, if necessary, windrowing makes a night burn possible in situations where the paddock must be managed to suit available machinery for next season's seeding operation. Cutting can be performed with harvesting machines, slashers and windrowers. Harvesters and windrowers have the advantage of performing the cutting operation much quicker than slashers. All cutting should be performed when plant material is still relatively green to stimulate more rapid degradation, to trim herbicide resistant ryegrass before seed set (therefore swath, slash or harvest as low as possible) and to reduce the fire hazard.

Disadvantages

There is an accumulation of nutrients in strips through the paddock that results from a swathing operation. Further, the continued growth of thin strips of crop occurs when machinery tyres lay plants flat so they are not incised by slashing equipment. Cutting may also result in long straw that hinders seeding next season.

Hay freezing - desiccation

Advantages

The use of herbicides to halt crop development allows large areas to be treated in a relatively short period of time and retains the nutritive value of the crop for grazing. This nutritive value can be maintained for up to three months, depending on seasonal conditions. This not only facilitates fodder conservation but hay-making operations can take second precedence over other operations if the crop is to be cut for hay.

Treatment with a desiccant halts crop development promptly. Therefore, the feed quality of the plant shoots is maintained. Herbicide resistant weeds can also be controlled, reducing the requirement for weed control next season.

Disadvantages

Despite the grazing benefits, hay freezing is expensive. The possible benefit must be weighed up against the cost. This option also results in a stubble management issue that will need to be addressed before next season. Many crops may already be past the optimal timing for hay freezing.

Green manuring

Advantages

Returning plant material to the soil facilitates the retention of the nutritive value of the crop, reducing the requirement for fertiliser and trace elements next season. Nitrogen and organic matter will increase soil fertility and soil structure respectively. A wheat crop yielding 1-2 t/ha contains around 10-20 kg/ha of nitrogen. The amount of nitrogen that will be returned to the soil can be estimated based on an estimation of crop yield. Pulse crops contain more nitrogen per unit dry matter than cereals, therefore, the resultant benefit from green manuring pulse crops is greater. The nitrogen input for lupins yielding 0.5 t/ha is 50 kg N/ha, 1.0 t/ha provides 60 kg N/ha, and 1.5 t/ha supplies 75 kg N/ha.

Green manuring can be performed with offset discs or scalped disc harrows. It is important that not all plant material is turned into the soil. Aim to leave around 40% of the plant material on the surface if performing this operation. This surface material acts as mulch, retaining soil and plant moisture. This results in a more rapid and efficient breakdown of buried plant material through microbial degradation. Green manuring should be performed as soon as possible in order to initiate the degradation process when the plant material still contains maximum moisture.

Disadvantages

Green manuring, as the name implies, requires soil moisture for breakdown and incorporation. Green manuring is not a viable proposition on light textured soils as erosion may result and leaching of the recycled nutrients is likely in the event of summer rain. The availability of suitable machinery to undertake this operation may also

pose a problem to some growers. It is important that there is adequate soil moisture to breakdown the straw to a suitable size so the seeding operation next season is not affected.

Grazing standing crops

Advantages

Leaving a crop standing may be viable when going into pasture next season or where agistment opportunities arise. If the standing crop is to be grazed, the appropriate number of sheep per unit area must be considered for the amount of available grain and soil type (see *Guide for Estimating Crop and Pasture Yields*).

Disadvantages

Due to the poor pastures and feed availability, the grazing of standing crops may lead to erosion. Sheep health issues such as pulpy kidney, grain poisoning, access to water points need to be considered. Unhealthy sheep do not gain weight. If a crop is left standing then the dry matter and grain must be dealt with before sowing next season.

Burning

Advantages

Burning is a cheap and easy method to remove the straw and grain for planting of next year's crop. It may also provide some weed control especially if burnt after the break of the season.

Disadvantages

Burning will result in nutrient and organic matter loss. Wind erosion before and after crop establishment will increase with no ground cover.

Guide for estimating crop and pasture yields

Whilst all growers have had many years experience in visually estimating the yield of wheat and barley crops grown in normal seasons, this is not a normal season. Further, the years of estimating lupins, canola and pulse yields have been significantly less. To help you with your visual yield assessments for all crops quick and easy objective guides to estimate crop yields are explained in the following sections.

Estimation of plants per metre square

The estimation of crop yields whether the crop is a cereal, oilseed or pulse requires the counting/estimation of crop density - plants per square metre. This can be done by:

Step 1: Calculating plants/heads per square metre.

Step 2: Determine the row spacing. You might need a tape measure. One row on 7" spacings x 1 m is equal to 0.1778 m² (7 x 25.4 mm x 1.0 m).

Step 3: Count the number of plants/heads for a 1 metre length of sown row. You will require a tape measure / 1 metre length of tube / a healthy pair of legs. For field peas you will need to use any of the above to form the perimeter of a 1 m quadrat - and then count the number of plants in that approximate 1 square metre area. Take the average of 10 sites.

Step 4: Multiply this figure by the following conversion factor in table 3 for the respective row spacing to obtain plants/heads per square metre.

Table 3: Row spacing conversion factors for calculating yield

Row spacing		Conversion Factor
Inches	Centimetres	
7	18	5.6
9	23	4.4
12	30	3.3
14	36	2.8
18	46	2.2
21	54	1.8

Wheat yield estimation

If practicable determine wheat variety.

Step 1: Calculate number of heads per square metre. Take the average of 10 sites.

Step 2: Count the number of spikelets per head - take the average of 10 heads.

Step 3: Count the number of grains per spikelet - take the average of 10 spikelets.

Step 4: Calculate the number of grains per square metre.

Grains/m² = Ave no heads/m² x Ave no spikelets/head x Ave no grains/spikelet.

For example - 50 heads/m² x 8 spikelets/head x 2 grains/spikelet = 800 grains/m²

Step 5: Calculate yield kg/ha.

Wheat yield kg/ha = (Grains/m² x Grain weight mg^{*})/100

Step 6: Record your estimate of crop yield kg/ha.

** From Page 33 of The Crop Variety Sowing Guide*

Note:

- If the variety normally has a 38 mg grain it should be discounted by an estimated 20% for the dry season, so a value of 30 mg would be used.
- If the variety is unknown a value of 30 mg should be used.
- Heads which are flowering/maturing within the boot are capable of producing grain.

Barley yield estimation

Step 1: Calculate number of heads per square metre.

Step 2: Use Tables 4.1 to 4.6 to estimate grain yield and likely screenings for Stirling barley.

Note:

- Screenings in Schooner are likely to be 1.5 times and Gairdner twice that predicted for Stirling.
- Once grain has reached dough stage, rainfall is unlikely to impact much on final grain size or yield potential.
- Heads which are flowering/maturing within the boot are capable of producing grain.

Table 4.1: Calculation of barley screenings from sowing date and grain

Sowing date	Likely grain size				
	Late May			average	plump
Mid June		thin	average	plump	
Late June		thin	average	plump	
Early July	very thin	thin	average		
Grain size	very thin	thin	average	plump	very plump
Likely grain weight (mg)	28	32	36	40	44
Predicted screenings (%<2.5 mm)	46%	24%	10%	3%	3%

Table 4.2: Calculation of grain yield for 100 heads per square metre

100 heads/m ²		Predicted grain yield (t/ha)				
		Grain size				
Grains per ear		very thin	thin	average	plump	very plump
very short	14	0.4	0.4	0.5	0.6	0.6
short	18	0.5	0.6	0.6	0.7	0.8
average	20	0.6	0.6	0.7	0.8	0.9
long	22	0.6	0.7	0.8	0.9	1.0
very long	24	0.7	0.8	0.9	1.0	1.1

Table 4.3: Calculation of grain yield for 200 heads per square metre.

200 heads/m ²		Predicted grain yield (t/ha)				
		Grain size				
Grains per ear		very thin	thin	average	plump	very plump
very short	14	0.8	0.9	1.0	1.1	1.2
short	18	1.0	1.2	1.3	1.4	1.6
average	20	1.1	1.3	1.4	1.6	1.8
long	22	1.2	1.4	1.6	1.8	1.9
very long	24	1.3	1.5	1.7	1.9	2.1

Table 4.4: Calculation of grain yield for 300 heads per square metre.

300 heads/m ²		Predicted grain yield (t/ha)				
		Grain size				
Grains per ear		very thin	thin	average	plump	very plump
very short	14	1.2	1.3	1.5	1.7	1.8
short	18	1.5	1.7	1.9	2.2	2.4
average	20	1.7	1.9	2.2	2.4	2.6
long	22	1.8	2.1	2.4	2.6	2.9
very long	24	2.0	2.3	2.6	2.9	3.2

Table 4.5: Calculation of grain yield for 400 heads per square metre

400 heads/m ²		Predicted grain yield (t/ha)				
		Grain size				
Grains per ear		very thin	thin	average	plump	very plump
very short	14	1.6	1.8	2.0	2.2	2.5
short	18	2.0	2.3	2.6	2.9	3.2
average	20	2.2	2.6	2.9	3.2	3.5
long	22	2.5	2.8	3.2	3.5	3.9
very long	24	2.7	3.1	3.5	3.8	4.2

Table 4.6: Calculation of grain yield for 500 heads per square metre

500 heads/m ²		Predicted grain yield (t/ha)				
		Grain size				
Grains per ear		very thin	thin	average	plump	very plump
very short	14	2.0	2.2	2.5	2.8	3.1
short	18	2.5	2.9	3.2	3.6	4.0
average	20	2.8	3.2	3.6	4.0	4.4
long	22	3.1	3.5	4.0	4.4	4.8
very long	24	3.4	3.8	4.3	4.8	5.3

Lupin yield estimation

Step 1: Calculate/count number of plants per square metre. Take the average of 10 sites.

Step 2: Count the number of pods per plant - take the average of 10 plants.

Step 3: Calculate yield t/ha

Yield (t/ha) = (Ave no. plants/m² x ave no. pods/plant x 0.235)/50

Note: Minimum harvest height of 10 cm.

Canola yield estimation

Yield estimation in canola is very difficult. There are three possible methods:

- The biomass cut x 0.4.
- Have someone with experience make a visual estimate. Due to the large variation within canola paddocks and therefore the large numbers of samples required the use of number of plants per square metre x average pods per plant x average seeds per pod x average seed mass, is not accurate and would be too time consuming for

the number of samples required. A better estimate is made visually by someone experienced in the crop.

- Look at rainfall. Canola will yield:
 - 0.5 to 1.0 t/ha at 100 mm available rainfall/soil moisture
 - 1.0 to 1.5 t/ha at 200 mm available rainfall/soil moisture
 - 1.5 to 2.0 t/ha at 300 mm available rainfall/soil moisture.

The upper limits are for even distribution of rainfall and the lower for an uneven distribution. Canola requires a threshold of 100 mm to obtain at least 0.5t/ha. For each 25 mm received above this equates to approximately 150 kg/ha seed yield.

Quality (oil content)

Predicting oil content of canola crops is too difficult due to the uncertain interactions between rainfall after anthesis and high temperatures during pod fill. Lower yielding crops also tend to have higher oil content because there are fewer seeds per plant.

Paul Carmody has estimated yields for Karoo sown on a sandy loam in the Lakes district (Table 5).

Table 5: Estimate of yield and oil for Karoo canola

Crop sown		Yield t/ha	% oil
May	1 st two weeks	1.2 – 1.0	41 – 39
	2 nd two weeks	0.8 – 0.6	39 – 37
June	1 st two weeks	0.6 – 0.4	39 – 37
	2 nd two weeks	0.0 < 0.4	40 – 38

Note:

- If the variety is Pinnacle, add an extra 1% oil.
- For each week we do not receive rain, take another 10% off the listed yields.

Pulse yield estimation

Step 1: Calculate/count number of plants per square metre. Take the average of 10 sites.

Step 2: Count the number of pods per plant - take the average of 10 plants. Alternatively use Table 6.

Step 3: Count the number of seeds per pod - take the average of 10 pods. Alternatively use Table 6.

Step 4: Use table below to estimate the approximate weight of seed.

Step 5: Calculate yield in t/ha.

Yield t/ha = (Ave no. plants /m² x ave no. pods/plant x seeds/pod x seed weight g) /100

*Example: Field pea yield calculated as t/ha

= (30 x 4 x 3.5 x 0.16)/100

= 0.7

Table 6: Pulse crop yield estimations for average and poor years

Crop	Plants/m ²	Average pods/plant	Average seeds/pod	Seed weight (g)	Yield (t/ha)
AVERAGE - YEAR/CROP					
Faba bean					
<i>Fiord</i>	40	6	2.0	0.35	1.7
<i>Fiesta</i>	30	6	2.0	0.55	2.0
Field pea	35	6	4	0.19	1.6
Chickpea					
<i>Tyson</i>	35	25	1.1	0.12	1.1
<i>Sona & Heera</i>	35	20	1.1	0.18	1.4
Lentil red	75	35	1.2	0.03	1.2

Crop	Plants/m ²	Average pods/plant	Average seeds/pod	Seed weight (g)	Yield (t/ha)
POOR - YEAR/CROP					
Faba bean					
<i>Fiord</i>	25	4	1.5	0.3	0.5
<i>Fiesta</i>	20	4	1.5	0.5	0.6
Field pea	30	4	3.5	0.16	0.7
Chickpea					
<i>Tyson</i>	30	15	1.0	0.10	0.4
<i>Sona & Heera</i>	30	15	1.0	0.16	0.7
Lentil red	50	21	1.2	0.035	0.4

Guidelines for visual pasture assessment

Herbage production

Assessments are based on ground cover, pasture height and composition and ranked into five categories. Aim for 5-10 assessments in a paddock and average the results.

Categories:

- Less than 1 t/ha dry matter to less than 75% groundcover (prominent bare areas)
- 1 to 1.5 t/ha dry matter – complete ground cover and pasture height < 5 cm
- 1.5 to 2.5 t/ha dry matter – pasture height 5-10 cm
- 2.5 to 3.5 t/ha dry matter – pasture height 10-20 cm and grass dominant
- 3.5 to 4.5 t/ha dry matter – pasture height 10-20 cm and legume or broadleaf weed dominant.

Estimate *percentage composition* (grass, broadleaf, legume). Rate the three components in order.

Seed production of legume pastures

Assessments based on flowering and pod or burr number in a quadrat made from a 2L ice-cream container 16 cm x 16 cm (0.025 m²). Aim for 5-10 assessments in a paddock and average. If possible, indicate the species i.e. sub.clover, medic, yellow serradella, Cadiz serradella, balansa.

Notes:

1. You may have to dig sub. clover pasture (sieve over flywire if possible).
2. This rating is not applicable for mature Cadiz which will break into individual seeds which should be counted separately.

Low	little flowering evident, pod/burr numbers < 15
Moderate	many flowers, pod/burr number 15 - 50
High	pod/burr number > 50

Rate colour of average pods/burrs as green, intermediate or brown (dry).

Managing the sheep enterprise in a difficult season

Planning is the key to surviving the dry season with sheep. Start by being fully aware of your situation, your options and the implications. Some issues you will need to consider include:

- Cost of carrying stock through the summer, autumn and early winter.
- Impact of reduced carrying capacity on production (lambs, wool and meat) and quality (staple strength, fat score).

- Risk of damage to soil through erosion.
- Risk to pastures through depletion of seed banks reducing plant density in following year.
- Meeting animal welfare standards.

Table 7 summarises stocking options and Table 8 provides rules of thumb for animal liveweight/condition scoring. When considering grazing pastures, to avoid the risk of wind erosion, at least 50% of ground should be covered with plant material with at least 33% of this anchored.

Table 7: Stocking options

Option	Advantages	Disadvantages
Sell livestock	Reduces wind erosion risk. Opportunity to restructure flock or change genetics.	Impacts on flock structure.
Agist or lease	Reduces wind erosion risk. Increases carrying capacity of farm, maintains flock.	Cost, security of stock managed at distance.
Increase supplementary feeding	Increases carrying capacity of farm, maintains flock.	Cost.
Graze crops that are not worth harvesting	Utilises available feed resources, may reduce supplement requirements.	Cost, health issues.
Feedlot	Get sheep off paddocks and reduces wind erosion risk. Can finish young stock for market.	Risky (no summer rain, locust damage), cost, health risk (oxalate poisoning).
Sow summer fodder crop	Out of season green feed.	No replacement sheep.
Don't mate ewes	Reduces feed requirements of flock for following year, increases mean fibre diameter of following clip.	Need to get lambs adequate weight for summer, grass seeds.
Delay mating	Lamb at peak feed supply time, increase lambing %	

Table 8: Animal live weight/condition score

Class	Acceptable liveweight loss	Condition score
Weaners (30 kg)	0.35 kg/week for up to 4 months. Liveweight can reduce to a minimum of 20 kg (safer 25 kg).	
Dry/adults (50 kg)	0.35 kg/week. Take remedial action if more than 1.5 kg/week.	Below score 2 monitor weekly and take remedial action if needed.
Pregnant ewes	0.7 kg/week.	Need score 2 or above.
Lactating ewes	Expect to lose 7 to 10 kg in first 4 weeks of lactation Minimum score 1.5.	Expect to lose score of 1 to 1.5 in first 4 weeks of lactation.

Planning is the key to survival

Faced with the difficult seasonal conditions and the threat of locusts causing further damage, how do you get through this summer and next season? Low pasture dry matter going into summer on the back of a very expensive late break and tight winter will be very difficult for everyone.

The first point to remember is there aren't any easy solutions. Some tough decisions will need to be made and they will cost money.

The second point is that sound planning and action are the keys to survival. Plan, plan and plan. This can't be emphasised enough. Thorough planning and timely action are the answer. Being prepared puts the grower in better control of the situation and allows decisions to be made rationally. This dramatically increases the chance of success. Know and understand what options are available and when and how they might be used. Do this before action needs to be taken. Leaving it all to the last minute limits the available options leading to rushed and poorly thought through decisions. Doing nothing except hoping that the problem will not eventuate is a high risk recipe for disaster.

Working to a plan and knowing where you are going puts you in control of what is happening. This in turn reduces stress, allowing you to make better decisions which serves to dramatically increase the chance of success. Inaction and poor planning is nothing short of a recipe for financial loss and disaster.

In the badly affected areas survival will be the name of the game. It will be financially and emotionally hard and will challenge everyone concerned.

However, there is always something that can be done to improve the situation. None of which will be ideal. It is likely to involve many tactics, not just one or two.

A similar situation was experienced in 1996. In that year growers that bit the bullet and took action came out of the season in a far better position than those who largely did nothing. Yes, grain was expensive and wool prices were low and it certainly was hard. But the important thing is that it did pay off in the immediate future. Those who didn't do anything suffered ewe losses as high as 30% and lambings below 50%, the cost of which took years to recover. Equally as important is the animal welfare issue. Losses such as these are just not acceptable.

There is a multitude of proven tactics available to successfully manage your way through a tight season. All that is required for success is motivation, commitment and above all, action.

Where to start?

The first step is to quantify the situation.

1. What is your current estimated summer stocking rate?
2. What is your carrying capacity likely to be?
3. What changes need to be made to stocking rate or stock numbers?

To begin with it is worth looking at what impact the season could have on the pastures. Table 9 provides a list of the possible effects and the resulting issues that will require attention.

Table 9: Impact of dry season on pasture

Extreme	Moderate	Low
Spring flush reduced by more than 40%. Potentially little to no spring flush.	Spring flush reduced by up to 40%.	Little if any reduction of spring flush.
Poor ground cover at beginning of summer.	Pastures become bare earlier than usual in summer.	Summer carrying capacity largely unaffected.
Crop stubbles only source of summer feed.	Increased and earlier reliance on stubbles for summer feed.	
Reduced seed set in pastures.	Some reduction in seed set of pastures.	
Reduced growth rate of all live stock through late spring.	Reduced growth rates of some classes of stock.	
Very stressful for all concerned.	Likely to be stressful for all concerned.	

Issues to deal with

The main issue in all scenarios will be the reduced carrying capacity through summer. How this will be addressed needs to be worked out before a decision has to be made. Growers should give serious thought to the available options making sure they understand those they are prepared to adopt. Have a clear idea when they would be used, what would be the cues for using them, and what the short and long term implications of the decision may be. This will lead to timely action, reduced stress and a greater chance of success.

A suggested outline of how to start a plan is:

1. Estimate carrying capacity of pastures and stubbles (with supplementary feeding) through summer.
2. Determine how many stock need to be removed from the farm to meet this carrying capacity.
3. Identify readily saleable stock and plan to sell.
4. Consider options of what to do with the rest.
5. Consider how you will carry retained stock through summer - How much grain will you need?

Those requiring large reductions in stocking rate will need to use several options. Where only smaller changes are needed, simply increasing supplementary feeding may be all that is required. In most cases there will be a combination.

Consider both the long and short term implications of decisions. For example, a decision to delay mating due to the poor condition of the ewes needs to be made. See Table 10 for a list of issues to consider.

Options for managing livestock

Cost, reliability and risk will need to be considered for your management of livestock. Most options will involve costs - it is up to the individual to balance the cost and reliability of the option. For example, selling all stock may be the simplest way of getting through summer, however, there is an obvious detrimental effect on future income for the farm business.

Most will appreciate that a combination of many options will get through the summer.

Table 10: Issues to deal with

Extreme situation	Moderate situation
Significantly reduced summer carrying capacity. Lower growth rates for weaners and prime lambs.	Summer carrying capacity reduced to varying extent. Growth rates of all stock will be reduced.
Potentially no liveweight gains in adult stock.	Liveweight gains possible in some classes or mobs only.
Real risk of wind erosion on pastures from very early summer.	Potential for lower body weight in ewes at joining.
Pasture density reduced in following year.	Wind erosion risk on pastures earlier than usual.
Stress management.	Some reduction in pasture density in the following year.
Lower conception and lambing rates following season.	Stress management.
High cost of feeding stock.	Moderate to high cost of managing stock.
Lower winter carrying capacity in following season.	Lower winter carrying capacity in following season.
Stock numbers will be significantly reduced with the business entering into a period (years) of rebuilding flock.	Stock numbers will be reduced with a shorter period of rebuilding flock.

Retaining/selling stock

Prioritise stock to be retained – mature ewes, ewe weaners, wether weaners, mature wethers. In the worst situation aim to only retain mature ewes - feedlot from the beginning of summer if necessary. This is more cost effective than selling and restocking at a later date.

The exception might be if someone is considering a radical change in bloodline. This is a potential opportunity to quit all ewes and to restock with a new bloodline. Obviously there is a need to organise where the replacement ewes will be sourced.

Consider bringing forward planned sales. It is going to be too expensive and risky to feed to maintain in saleable condition through winter. Feeding up to sell is usually only profitable for stock that require finishing only. This is usually around half a condition score.

If you consider you do not have any other options but to sell additional stock, do this sooner rather than later. They will only consume valuable feed and are unlikely to improve in condition. Keeping them for longer will jeopardise the remainder of the flock.

Prioritise the sheep for sale and consider time of sale (is there a best time for price), the implications for flock structure, and impact of flock structure changes on your business in the future.

It is also worth separating the tail of the entire flock and quitting for whatever you can get. These sheep are in poor condition and are the ones most likely to die during summer. If retained they will only cost money. A decision then needs to be made on what to do with the remaining surplus stock, i.e. selling for market value, agisting, feedlotting.

Agistment

People should consider agistment, if at all possible, before hand feeding. However, there may not be much agistment around until the people without sheep have decided their crops are a failure and are not worth harvesting, or some stubbles become available, after harvest. The thing is to keep the sheep going until these alternative feeds become available and this may mean maintenance feeding along the lines outlined above.

Agisting would be the easiest and most reliable option. Stock are removed from the farm while still retaining ownership. If any stock return from agistment remember to give a quarantine drench as they come off the truck.

Supplementary feeding

This is the easiest way of increasing carrying capacity. Energy is the main nutrient, so focus on buying the cheapest source. If feeding barley or wheat, remember the introduction period.

Work out requirements now (Table 11) and buy early. Grain is cheaper at harvest. Consider buying screenings. Pellets are a good option where storage is limited. They can be purchased as needed.

Table 11: Guidelines for supplementary feeding rates (kg/day) for maintenance of sheep, with no base pasture

Grain Type	Metabolisable energy (MJ/kg/DM)	% protein	Weaners (40 kg) require 7.4 MJ/d	Dry ewes or wethers (50 kg) require 6.8 MJ/d	Ewe in late pregnancy (50 kg, day 150) require 10.5 MJ/d
Wheat	12	11.5%	-	0.50	0.90
Barley	12	10.5%	-	0.50	0.90
Oats	9	9%	-	0.60	1.20
Lupins	12	30%	0.38	0.44	0.87
Oats:lupins 70:30 mix	9.9	14%	0.44	0.57	1.06

Note:

1. An introductory period of 10 to 14 days is recommended to avoid the risk of grain poisoning (acidosis).
2. Monitoring condition score and body weight regularly is important to ensure quantities of feed are adequate. Keep weaners growing (more than 0.7 kg/d and condition score 1.5). Ensure ewes are steadily improving in condition, to be about condition score 2.0 to 2.5 at mating.

The experience in the drought-affected areas of the Eastern States was that in most cases it was more economical to retain stock with increased feeding rather than to sell and restock at a later date.

Weaners do have a growth requirement and are the only stock that will benefit from higher protein diets. Aim to use the cheapest form of energy. Grain, hay, barley straw, pellets are all options.

Barley straw baled immediately after harvest is useful for adult stock. Wheat and oat straw generally doesn't do too well.

Use the dry feed before you lose it. Provide supplements to supply the nutrients that limit the intake and utilisation of dry forage.

What feed to buy?

The most accurate method for estimating the value of feedstuffs is to calculate the cost per unit of energy. The unit used is megajoules (MJ) of energy per kilo of dry matter. This will allow you to obtain the cheapest source of feed. Table 12 shows the composition of selected feed types.

The energy content of feedstuffs can be measured at a feed analysis laboratory. It costs \$45 per sample, which is equivalent to 45¢ per tonne if you have 100 tonnes of oats. The test is well worthwhile before you purchase, and for estimating the amount of feed required for maintenance.

Pasture hay may be the cheapest price per tonne but can be the most expensive when valued correctly on a value per unit energy. It may be profitable to sell hay and buy in grain.

Table 12: Value of feed types

Feedstuff	S/tonne	Energy (MJ/kg)	Protein (%)	Energy (cents/MJ)
Wheat	\$140	10-12	10-13	1.3-1.5
Oats	\$100	8-10	8-10	1.1-1.4
Barley	\$120	10-12	9-12	1.1-1.3
Lupins	\$150	10-13	28-32	1.3-1.6
Pasture hay	\$90	5-8	6-14	1.2-2.0
Silage		6-10	12-14	
Dry pasture		5-7	5-8	

Remember that 1 kg of oats provides the same amount of energy as only 750 g of lupins, so if oats costs \$100/tonne you can afford to pay \$130-140/tonne for lupins. Oats may be cheaper than lupins, in terms of ¢/MJ, but if protein is limiting then an oat:lupin mix will be the better option.

Pelletised feeds are available in production or maintenance formulations from the various feed manufacturers. Pellets should be treated as a grain unless otherwise instructed.

Where to feed? Feedlot or in paddock?

Feedlots are expensive and should be viewed as the last resort. Just for maintenance, adult sheep will be costing around \$0.70/week. Over the four to five months of summer and autumn this is likely to cost around \$15/hd – worthwhile only if agistment is not available or feasible.

With regards to sale sheep feedlots are best used to finish stock only. Generally this is for stock within half a condition score of being saleable. Work on feed conversion ratios of 6:1 for Merinos and 5:1 for prime lambs and allow for 5% deaths and shy feeders when doing the calculations on feedlotting for more than half a condition score.

All stock should be vaccinated for pulpy kidney (particularly prime lambs) and drenched before going into a feedlot. Draft off the tail and feedlot separately or sell. They will most likely be shy feeders.

Feed the cheapest supplement available. There is sufficient fibre in oats and lupins without hay or straw.

However, confining a proportion of stock into a feedlot, usually in autumn, can be a useful tactic to deal with the problems of low feed availability, the risk of wind erosion and the establishment of pasture after the break of season.

A feedlot is ideal for any dry sheep – mature aged wethers or dry ewes. It may provide an opportunity to 'finish' stock when livestock prices are attractive. Lot feeding is profitable if the cost of re-purchasing stock is greater than the current sale price plus the cost of feeding.

Lot feeding offers the following benefits:

- allows feeding of pasture paddocks to be deferred, and increase pasture production during winter
- able to keep stock, rather than sell them and need to restock later
- enables high stock numbers to be carried
- allows a higher proportion of the farm to be cropped
- reduces the costs of labour and fuel associated with frequent travelling large distances.

Lot feeding suffers the following disadvantages:

- at current wool prices wool grown during lot feeding is unlikely to pay for the cost of feed (must consider other potential longer-term 'costs' of not lot feeding)
- may not be suitable for pregnant or lambing ewes.

A feedlot can be created from a small holding paddock, ideally sheltered, with heavier soil that is well draining (on a slope). Sheep only need a minimum of about 1 square metre each. Supplementary feeds should be considered on a quality basis, and feeding rates adjusted according to animal performance (liveweight and condition score). Feed budgeting is essential to ensure sufficient feed is provided, without incurring economic losses. To reduce shy feeding, it is better to feed twice weekly, rather than daily.

Poor crops - harvest, hay or graze?

In general, crops that are marginal for harvesting are unlikely to be a worthwhile proposition for hay. The decision whether to harvest or not depends on making some estimate of the likely yield. It is as well to remember that you only have to cover actual harvest costs for the proposition to be

economic at this stage. The best strategy is to wait until you can assess the number of grains that are likely to fill before you take the decision to graze or harvest.

Grazing drought-affected crops

The poor finish to the season has already resulted in some mobs of sheep being placed onto standing drought-affected crops. What sheep eat is largely unknown and there is a wide variation in the voluntary intake, ingestion of nutrients and performance. It is essential to weigh and condition score 20 to 50 sheep (the more the better) on a regular basis to verify when the value of the stubble has declined to the extent that it cannot support grazing sheep without supplementation.

Adult wethers maintain body weight for about 20 days when grazing harvested cereal stubbles at 5 sheep/ha. Young sheep cannot maintain body weight as long on cereal stubble alone. Increasing stocking rate causes more rapid depletion of the more digestible parts of the stubble.

Sheep grazing standing drought-affected crops should preferentially graze the seed and leaf material. This is more available from a standing plant than harvested stubble. Sheep should maintain body weight for longer compared with harvested stubbles. Sheep grazing lupin and pulse crops will maintain body weight for longer compared with cereal crops. Supplementary feeding with 50 grams per head per day with lupin seed from the start will improve the utilisation and performance of sheep grazing these crops.

Failed crops should be grazed first by those sheep the grower wants to get off the property, such as lambs that need to be grown out and finished for slaughter and/or old ewes that will be sent off for slaughter to generate some cash flow. The next priority will be ewes for mating and those for an early mating need to be given a higher priority to keep them above a condition score 2. A leader-follower system can be used with the sheep having the greatest nutrient demand or need for feed being grazed first followed by the second most important group. However, we also need to keep an eye on worm control and spread of worms in such systems.

Lupins

Most of the fungus that produces the toxin that causes lupinosis is found on the stem. However, lupin plants under stress may have higher levels of toxin on all parts of the plant. The appearance of a white fungus in the pods also is an indication of higher risk of lupinosis. Graze standing drought-affected lupin crops now. The risk of lupinosis increases as sheep consume pod and leaf portion leaving mostly stem material. Delaying the grazing of a crop will also increase the risk of lupinosis particularly if there is summer rainfall. Regularly check the mob for signs of lupinosis and/or an increase in the proportion of poor doers. Immediately remove all sheep at the first signs of any problems. Ensure young sheep are trained to eat lupin seed. Do not introduce hungry sheep to any standing drought-affected crop.

Failed crops can be used to grow-out weaners, especially if some grain is available, but be mindful of acidosis from grains of both cereals and pulses. For weaners, it is probably best to feed some lupins with standing cereal crops to lift the crude protein content of the weaner's diet and promote lean growth.

Offer the weaners the crops first and use ewes as followers, or feed the better crops to weaners and poorer crops to ewes. Good crops may be better utilised with controlled grazing.

Canola

Grazing unharvested drought-affected canola crops has caused losses in a small number of cases in NSW. Remove the whole mob immediately if you notice any sheep with difficulty in breathing or find some dead animals. It should be stressed that many sheep graze drought-affected canola crops without any problems.

Cereal and pulse crops

Grain poisoning or acidosis is a potential problem with any crop with seeds containing starch. Stock must be introduced gradually over a period of 10 to 14 days. Deaths from Pulpy Kidney (PK) may also occur in the first few weeks after the introduction of sheep onto these crops. Ensure all your sheep are vaccinated against PK. Young sheep may need training to start eating the seed heads sooner. There have already been reports of deaths from annual ryegrass toxicity (ARGT). However, the biggest potential problem is overestimating the

nutritive value of a standing crop and then delaying the start of supplementary feeding.

Grazing pulse and cereal grain stubbles

Grain on the ground, plus leaf and petiole material of pulses, are the main sources of nutrients. All these grains contain starch and if rapidly consumed can lead to acidosis. Sheep need to be fully vaccinated to avoid pulpy kidney.

These grains are low in calcium and sodium, and the pulses are also low in sulphur, so provide an appropriate mineral supplement.

Feed a lupin supplement on cereal stubbles after the grain is gone to supply protein and energy to make better use of the leaf material.

It is desirable to regularly move weaners onto new stubbles so they get the best nutrition and use the ewes as followers.

Welfare issues

Livestock owners have a moral and legal responsibility to manage their animals humanely. This covers all aspects of husbandry from handling to feeding.

During times of feed shortage, farmers are obliged to monitor the health and condition of their stock. If any animals fall below a condition score 1.5 (i.e. below backward store) they may attract the attention of welfare agencies. Note that it is impossible to accurately assess the condition score of a sheep in wool without feeling along the backbone and ribs. Such animals need to have quality supplementary feed, be agisted or sold to someone who can provide feed.

In tough times the last thing needed is for an issue such as animal welfare to be raised in the public arena. It makes good sense to protect our current freedom from this sort of attention. Therefore, ensure that your animals meet reasonable welfare standards and don't allow sheep to starve or suffer from blowfly strike or undue worm burdens. Sheep should not be allowed to reach less than 1.5 in condition score.

Options for next season

Deferred grazing

All pastures will benefit from some deferment (lot feeding or grazing paddocks to be cropped). Ideally deferment would last until there was 800 kg/ha of Feed on Offer (FOO). With the late break it is unlikely you can wait that long, however any form of deferment will be beneficial.

Use cropping paddocks where possible and maintain supplementary feeding. Wethers give you the greatest flexibility and pregnant ewes the least. Rotating large mobs of sheep through paddocks on one to three day shifts is far preferable to set stocking with smaller mobs.

Control RLEM

Apply a red legged earth mite (RLEM) insecticide to all pastures not treated with the TIMERITE® package. RLEM numbers are likely to be very high and green feed will be at a premium with no room for free loaders. Keep an eye out for grubs in pasture and be prepared to control. This was a significant problem in 1996.

Nitrogen on pasture

Applying urea to deferred grass pastures will give increased growth rates for six to eight weeks. There is a one to two week lead time from application to seeing the effect, depending on rainfall and growing conditions so some forward planning is required to get the best from this tactic.

As a rule of thumb, one unit of nitrogen will increase grassy pasture growth rate by around 1%. To be useful, urea rates of 80 to 100 kg are required.

Sheep health issues

Given that retaining stock will be expensive, it is important to maintain health. An effective summer drench is essential. Avoiding drenching will not reduce costs.

A few common conditions affecting sheep are considered below. For more detailed information consult your private veterinarian or consultant.

Enterotoxaemia (pulpy kidney)

This disease is caused by changing diets to high quality feeds, such as occurs with grain feeding, moving sheep onto crop stubbles or good green feed. It also may be seen in lambs suckling ewes on lush green feed.

This disease is most often seen in lambs and weaners but can affect sheep of any age.

Signs

- Sudden death. Sheep are usually found dead without any symptoms being observed.
- The head may be thrown back, and there can be convulsions.
- There can be frothing at mouth.

Control

This is by a vaccination given to lambs at marking and weaning, and annually thereafter. Ewes are given an annual booster four weeks before lambing to protect the lamb for the first six weeks of life.

Internal parasites

Worms of sheep are a major cause of economic loss due to mortalities, ill thrift, reduced wool growth and scouring with subsequent fly control measures (crutching, jetting, strike treatment). Also, they can contribute to other conditions such as weaner nutritional ill thrift and pregnancy toxemia. Subclinical production losses occur without the producers' knowledge.

The widespread incidence of resistance to drench chemicals has made control programs more complex.

Signs

- These may be subclinical, i.e. no obvious signs.
- There can be various combinations of ill thrift, anaemia, scouring and death.

Control

Bi-annual drench resistance test.

Use a control program incorporating paddock and stock management, worm egg count monitoring, chemical rotation and drenching strategy.

Prime lambs may need to be drenched on a lower worm egg count than is used for other lambs to maintain maximum growth rates.

Acidosis (grain poisoning)

This is caused by the introduction of sheep to high grain feeding rates over a short period of time. It also is seen when self feeders run out of grain for several days and then refilled with a consequent engorgement by sheep.

Signs

- Scouring, rapid breathing, inappetence, depression.
- Occasionally lameness, bloating.
- Death in severe cases.

Control

Introduce sheep to grain feeding gradually over a two week period.

Lupinosis

This is a disease caused by consumption of the toxic phomopsins that are produced by a fungus which colonises lupin plants. Although the fungus infects the plant while it is growing, it only produces enough of the toxin to produce lupinosis after the plant has died and has subsequently been exposed to rainfall or heavy dews. For this reason lupinosis is usually seen in summer and autumn when sheep are grazed on lupin stubbles.

Signs

- These may vary greatly depending on how much toxin is consumed. Feed intake may be reduced, or there may be a complete loss of appetite.
- Sheep may not put on weight in a situation when they should, or there may be obvious loss of weight and condition.
- As the disease progresses there will be lethargy, wandering and “star gazing”, jaundice, depression and death.

Control

Plant only phomopsis-resistant lupin cultivars.

Observe sheep regularly while grazing lupin stubbles or stands of sandplain lupins during summer and autumn. If they are not growing as well as might be expected, always suspect lupinosis and move the sheep to non-lupin pasture.

Do not feed lupin seed to sheep suspected to have lupinosis; their livers cannot handle the high protein diet and they develop ammonia toxicity. Sheep should be removed from lupin stubbles at least a week before going to the abattoir. Some may have internal jaundice associated with subclinical lupinosis, and their carcasses will be rejected. The one week break from lupins is usually sufficient to allow the jaundice to resolve.

Ensure that young sheep grazed on lupin stubbles have adequate selenium and vitamin E.

Pink eye

A bacterial infection of one or both eyes. It is aggravated by congregation in dusty conditions and irritation by flies. Most sheep recover from pink eye. However, up to 4% may become permanently affected if left untreated. This problem may be confused with grass seeds in eyes.

Signs

- Inflammation and tears from affected eyes.
- Cornea becomes red then white as condition progresses.

Control

Avoid yarding during outbreak. If necessary, draft off affected animals and isolate them. Treat with antibiotic eye ointment.

Pneumonia

Caused by a variety of bacteria. Pneumonia is most commonly seen in young sheep on dry, dusty feeds. Irritation from dust allows bacteria to invade and cause inflammation and infection.

Signs

- Nasal discharge, coughing, high temperature and lethargy.

Control

Avoid finely hammer-milled feeds. Dampen feed or add dust suppressant, e.g. tallow.

Treatment of clinical cases may require antibiotic treatment as advised by a veterinarian, with strict

adherence to withholding times.

Annual ryegrass toxicity

Annual ryegrass seed heads infected with the nematode *Anguina funesta* and the associated bacterium *Clavibacter* become toxic to livestock. Danger period starts after flowering in spring and lasts while infected heads remain in the paddock. The infection can be transferred to new areas by contaminated machinery and hay.

Signs

- Disturbance of the nervous system. Collapse, convulsing and then apparent recovery after driving is common. Animals may have a stiff legged gait.
- Seriously affected sheep will remain down until they die.
- Pregnant ewes may abort.
- Mild cases can recover with rest.

Control

Use of the twist fungus on pastures.

Reduction of reliance on annual ryegrass as major pasture species.

Seed set control in early spring by heavy grazing or chemical application.

Autumn burn of affected paddocks.

Other disease conditions

Other common conditions that can affect sheep include salmonellosis, hydatids, sheep measles, cheesy gland, foot abscess, trace element deficiencies, weaner ill thrift, perennial ryegrass staggers, toxic algae, hypocalcaemia, hypothermia, foot abscess, Eperythrozoonosis (*E. ovis*) and photosensitivity.

Water requirements

The provision of adequate supplies of good quality water is important. The consumption of water increases with the increase in concentration of salt in the water. Therefore, it is essential to monitor the quality of the water and to ensure that the supply can meet the expected demand.

Lambs can only tolerate water with less than half the total salts that can be used by adult sheep (4,500 compared with 10,000 to 14,000 mg/L).

Weaners grazed on feeds with a high soluble protein content during summer can drink large quantities of water (up to 9 L/head/day). Grown sheep can even drink more water than this. This reinforces the need to have a plentiful supply of good quality water for sheep grazed on these feeds.

Similarly, supplementary-fed sheep need a good supply of water.

Debt mediation system

How can it help you?

The Debt Mediation System is a process agreed by the Western Australian Farmers Federation and the Australian Bankers Association, as a means of ensuring that all suitable and available options have been explored by the lender and borrower in cases where financial difficulties are being experienced and where mutual agreed resolve does not exist.

This process utilises the Western Australian Rural Land Sales Liaison Committee.

Details of this process are available on request from the offices of the Rural Land Sales Liaison Committee (see below).

Where a mortgagee has issued formal Notice of Demand for repayment of monies owing and there is a likelihood that the mortgagee may proceed to mortgagee sale, your position can be investigated by the Rural Land Sales Liaison Committee.

The Committee has NO legislative powers and exists to provide voluntary mediation and assessment, whilst preserving the contractual and legal rights of the lender. It is NOT to be used as a means of delaying legal action being considered by the lender.

Application must be lodged within 21 days from the date of the Notice of Demand and this will enable the Committee to investigate:

- Whether ALL financial options have been considered and
- Whether all realistically available options have been explored for selling the mortgaged property by private treaty.

A maximum of six (6) weeks from the date of the Notice of Demand will be allowed for these investigations.

Membership of the committee consists of representatives from:

- Western Australian Farmers Federation
- Pastoralists & Graziers Association of WA (Inc)
- Australian Bankers Association
- AGWEST Farm Business Development
- Agriculture Western Australia
- Valuer General's Office
- A member with relevant expertise.

For more information, please contact:

James Hamersley
Member & Executive Officer to the
Committee
Level 15, International House
26 St Georges Terrace, Perth WA 6000

Telephone 9325 0008, or
Email to jhamersley@agric.wa.gov.au , or
FREECALL on 1800 198 231
(from WA country areas only)

Postal Address:
PO Box Y3455
East St Georges Terrace
Perth WA 6832

Reimbursement of stamp duty on refinancing loans

The State Revenue Department has two Administrative Schemes that provide relief and incentive to farmers who wish to refinance loans. In both cases the Stamp Duty needs to be paid, but is reimbursed to eligible applicants on eligible loan components. The reimbursement is separate and distinct from the legislation which imposes the duty.

Refinancing of farm loan(s)

Eligibility is confined to a person or company being resident in WA and an owner, lessee, occupier or sharefarmer engaged, other than as an employee, in rural industry.

Rural industry includes agriculture, horticulture, pastoral grazing, dairy farming, poultry farming, aquaculture, beekeeping and viticulture.

Eligible refinancing is defined as the establishment of a replacement loan facility, the funds from which are used to extinguish the outstanding balance of existing (farm business) loan(s) prior to maturity and the purpose of which is to take advantage of more attractive terms offered in respect of the existing loan(s).

Refinancing of a loan transferred to a community bank

Eligibility is confined to residents and businesses within the community, within the local government authority in which the Community Bank is established.

Applications from persons outside the community will be considered where the applicants can establish that they are members of the community by their contribution to and/or participation in community activities.

Only loans from Community Banks established in a community, outside the metropolitan area, where there is no existing branch of any bank, will be eligible.

A banking agency, 'shopfront', ATM, etc. is not considered to be a branch.

Reimbursement will only be available on re-

financing of existing loans.

Amount reimbursed will be the lesser of the stamp duty calculated on the outstanding balance of the old loan and that on the refinanced loan. Duty on any additional amount borrowed will not be reimbursed.

Applications for reimbursement must be made, with the Community Bank, within three months of refinancing the loan.

For further information about receiving a reimbursement of Stamp Duty on refinancing loans please telephone the State Revenue Department on 9262 1100.

Retirement assistance for farmers

What's in it for you

The Retirement Assistance for Farmers Scheme (RAFS) helps farmers who wish to retire but keep the farm in the family. The scheme applies from 15 September 1997 and is also open to farmers who gifted their farms away in the five years prior to this date, as a "window of opportunity" until 30 June 2001. Under the scheme, low income pension-aged farmers can gift the family farm to the younger generation without affecting their own eligibility to the Age Pension.

The scheme also applies to Department for Veterans' Affairs pensioners. Contact the Department of Veterans' Affairs for more information.

Who can qualify?

The scheme is open to any farmer who:

- is of Age Pension age or whose partner is of Age Pension Age
- has owned a farm property for at least 15 years or who has been actively involved in farming for 20 years
- has transferred legal title of all their farming assets to their direct descendant(s) who has had an active involvement in the farm for the last three years
- has had an average income (including their spouse) over the three financial years immediately prior to the transfer, of no more than the maximum rate of Age Pension. This income does not include income support payments. The current maximum pension rate is around \$16,900 per annum (married) and \$10,200 per annum (single), at July 2000
- is an Australian resident and living in Australia.

Other key criteria are:

- the value of the farm and farm assets (net of debt) can be up to \$500,000
- the farmer must dispose of all farm assets
- all farm assets must be transferred. However, if you wish to continue to live on the farm you may retain a life interest in the home or subdivide the property (subject to local zoning laws) so that you keep ownership of the home and surrounding land up to two hectares.

How can you access the scheme?

Farmers who are considering gifting the farm under RAFS are advised to ensure that they consider all aspects of their situation before making a major decision, including taxation as well as financial and family issues. Before you transfer ownership of any farm assets, it is very important to seek independent professional advice and a pre-assessment from Centrelink.

1. If you or your partner are currently receiving an Age Pension at a reduced rate because you gave away the farm to your descendants before 15 September 1997.

The Retirement Assistance for Farmers Scheme may still apply to you. You should contact Centrelink as soon as possible. You will need to complete some forms to help us decide if the transfer of your farm can be disregarded under this scheme.

2. If you or your partner have claimed an Age Pension in the past but the gifting rules prevented payment.

If the farm was transferred to your descendants, you and your partner should lodge a new claim for the Age Pension as soon as possible.

3. If you or your partner have yet to claim an Age Pension.

You should lodge your claim for Age Pension as soon as you qualify under the normal pension rules, i.e. when you reach Age Pension age. Your entitlement to the pension will be assessed under RAFS when you gift your farm or, if you have already gifted the farm, when you claim.

Farmers can get Age Pension claim forms and forms requesting additional details relating to Retirement Assistance for Farmers Scheme from their local Centrelink office, or by calling the Centrelink Call Centre on 13 2300. For information in languages other than English, ring 13 1202.

Farmers who do not qualify under the Retirement Assistance for Farmers Scheme may still be able to use existing provisions, such as forgone wages, the Pension Loans Scheme or the hardship provisions of the assets test, to access the Age Pension.

Farm Help - supporting families through change

What's in it for you

The Farm Help – Supporting Families through Change program builds on from the former Farm Family Restart Scheme which commenced on 1 December 1997. The Farm Help program provides a proven, effective safety net for farm families experiencing difficulties.

Farm Help is a package of up to \$48,000 and is flexible and tailored to your needs, while you reach a decision on your future.

Key features of the Farm Help program are:

Income support is available for up to 12 months while you obtain professional advice on the future viability of the farm.

A re-establishment grant is available to farmers who have qualified for Farm Help and who decide to leave farming. The grant is up to \$45,000 and any income support received will be deducted from the amount of the grant.

An obligation for participating farm families to obtain professional advice on the viability of their businesses and future options. The cost of the advice to the value of \$3,000 per family, including \$450 payable towards travel costs and other costs associated with obtaining advice, will be met by the Government.

Applications for income support are open from 1 December 1997 to 30 November 2003, with income support available until 30 November 2004. Applications for the re-establishment grant will be available for eligible farmers who apply for Farm Help from 1 December 1997 until 30 November 2003.

To qualify you must:

- Be a farmer now and have been for a continuous period of at least two years immediately before applying for the scheme.
- Be unable to borrow against your assets.
- Not be involved in involuntary bankruptcy proceedings or an involuntary mortgagee in possession arrangement or have been issued with an eviction notice, or in any other way lost control of the management of your farm.

- Not receive other forms of welfare support such as Exceptional Circumstances Relief Payment of Newstart Allowance while receiving income support through the Farm Help program.
- Only have joined the Farm Help program a maximum of once previously and received less than six months income support during that period.

An income and asset test

Similar to the Newstart income test but income from the forced sale of livestock under certain circumstances, and farm assets are excluded.

An income and assets assessment will be conducted on application and after six months of receiving income support.

There is no requirement to satisfy an Activity Test. There is no requirement to put the farm on the market.

Ongoing eligibility for the re-establishment grant is not tested, however a 12 month limit applies.

Inability to obtain further finance

A proforma or a letter from a bank confirming that the bank will not provide additional finance is required.

A certificate or letter from a bank will be valid for six months.

What you must do:

Provide a certificate or letter from a bank confirming that the bank will not provide additional finance. A proforma is attached to the application form.

Agree to attend professional advice to help you make a decision about the future. (See the Professional Advice Information Sheet for further information). Complete the Farm Help application form and elect to receive income support and/or the re-establishment grant.

Farmers can get Farm Help application forms from their local Centrelink Office.

Further details on the Farm Help program are also available from the Centrelink Call Centre by calling 13 2850 for the cost of a local call.

Professional advice

You can access up to \$3,000 in professional advice. The \$3,000 can include up to \$450 in costs associated with obtaining the professional advice, for example travel and childcare.

This is an opportunity for you to seek a range of assistance from professional advisers who can provide options for your future.

The first professional advice consultation is compulsory, and is to help you develop a plan for further advice and provide an assessment of your farm's financial viability.

Who can provide professional advice?

A person who is a member of a professional association must provide the professional advice. The adviser must normally provide advice on one or more of the following subjects:

- Financial planning
- Business management
- Legal matter
- Career options
- Personal and family matters
- Stress management.

Who can use a rural financial counsellor?

Rural financial counsellors may provide you with the usual rural financial counselling services free of charge at any time. A Rural financial counsellor who is a member of a professional association that normally provides financial advice may provide the initial financial advice session on viability and develop an advice plan as a special one off invoicable service.

Choosing a professional adviser

Before making an appointment with a professional adviser, you will need to explain your circumstances and ask the adviser if he/she can provide you with the advice you need. Your first session is to provide an assessment on your farm's financial viability and help you develop a plan for further advice.

You should check the following points with the adviser:

- That they are able to provide advice on the financial viability of your farm
- That they are a member of a professional

association, and which one (remember you adviser must be a member of a professional association)

- Their level of experience in the field, we suggest at least five-year experience
- Whether the advice provided will be in writing, if you choose
- That the advice will be without obligation
- An estimate of the cost of the advice.

Professional associations

If you are not happy with any of the answers, contact another professional adviser.

Some examples of professional associations your adviser may be a member of include:

Financial advice

- Australian Institute of Valuers and Land Economists
- Australian Accredited Agricultural Consultants
- Australian Society of CPAs
- Institute of Chartered Accountants
- National Institute of Accountants (NIA)

Vocational guidance

- Australian Association of Career Counsellors

Legal matters

- State Law Society
- State Law Institute

Counselling - marriage, family and personal

- Australian Psychological Society
- Board of Clinical Psychologists

Please note this list is not exhaustive.

What do you need to take with you?

The following is a guide to the information you may need to provide to a Professional Adviser at your interview. It also covers types of questions you can expect to be asked and the types of things you need to think about before your interview.

- Details of your current income, including social security and/or Veterans' Affairs payments, superannuation payments, annuities and other income
- A copy of the last several years tax returns and Notices of Assessment
- Details of all your investments, including bank and building society accounts

- An idea of your planned expenditure, e.g. money required for a holiday, new car, gifts, grandchildren's education and house maintenance.

You need to think about:

- Your age
- Number of dependants
- Present and future income
- Tax liability
- Basic living expenses
- Current disposable income
- Future expenses e.g. travel, house renovations
- Assets and liabilities
- Condition of the farm
- Your personal and business goals
- Your business planning experience
- Level of superannuation and insurance held
- Any health problems which may limit your working life.

At your appointment you must sign the voucher which the professional adviser will send to Centrelink for payment.

The declaration on the voucher states that you have received the advice and agree to the fees charged. You should ask for an estimate of the cost of the advice before your appointment.

Remember that you should keep an account of the fees charged so that you can decide where the \$3,000 will be best spent.

Farm Help - Re-establishment Grant

A re-establishment grant of up to \$45,000 is available to farmers who decide to leave farming and who apply for and meet the qualification requirements for Farm Help. Any income support received through the Farm Help program will be deducted from the amount of the grant. This will provide an incentive to exit early.

The re-establishment grant will be subject to an assets test. Farmers and their partners may have up to \$100,000 in net assets to qualify for the maximum grant.

The grant phases down by \$2 for every \$3 in assets above this threshold.

No grant is payable if net assets after the sale exceed \$167,500.

The net assets exclude household and personal effects up to the value of \$10,000.

Who can qualify?

An applicant must qualify for general entry into the Farm Help program prior to selling the farm.

Note 1

For Farm Help a farmer who has been assessed as eligible may choose to forego income support in order to maximise the re-establishment grant.

Note 2

A farmer who elects to receive a re-establishment grant only will not be subject to any test of ongoing eligibility. However, if at some stage the farmer requires payment of Farm Help income support, eligibility will be re-tested.

You must agree to seek appropriate professional advice within three months of applying for a re-establishment grant if the farm has not been sold. You must not have received or have an active claim for a grant under the Rural Adjustment Scheme, the structural component of the Rural Partnership Program, the Pork Producer Exit Program, a Dairy Structural Adjustment Payment right. However, recipients of grants under these schemes may be eligible to qualify for income support.

Application procedure

The application for re-establishment grant must be lodged between 1 December 1997 and 30 November 2003. You will have 12 months to sell the farm from when you apply, or 12 months after income support has ceased. However, you must sell your farm before 30 November 2004.

Application for the scheme must be lodged before the settlement of sale of the farm.

Step 1 (Joining the scheme)

To qualify for the scheme, you must qualify for assistance and must meet the following requirements:

- You must be a farmer now and have been for two years prior to applying.
- Be unable to borrow against your assets.
- Not be involved in involuntary bankruptcy proceedings, involuntary mortgagee in possession, or have been issued with an eviction order or in any other way have lost control of the management of the farm.
- Only have joined the Farm Help program a maximum of once previously and received less than six months income support during that period.

Important: You must apply for the Farm Help program before leaving and selling the farm.

Step 2 (After the sale of the farm)

- You must provide evidence of the sale of the farm and farm assets and those of your spouse.
- Satisfy Centrelink that the sale was "at arm's length" and on commercial terms.
- Have received necessary professional advice, if the sale of the farm was completed after three months of entry onto the scheme.

The grant is targeted at applicants who undertake not to own or operate a farm again for five years.

Contact details

Farmers can get re-establishment grant application forms from their local Centrelink Office.

Further details on the Farm Help program are also available from the Centrelink Call Centres by calling 13 2850 for the cost of a local call.

Looking after yourself in difficult times

There are no magic solutions in these times of rural difficulty. You need to find positive ways to work your way through.

This section will help you as an individual to know how men and women feel in crisis situations. It will show how you can understand yourself and help control your life and how to avoid some pitfalls.

In any crisis it is normal to have a variety of strong feelings which may change from time to time. These feelings are normal. They usually last for a limited period and give way to other feelings.

Normal feelings and emotions in a crisis

Anger

- at what has happened, at whoever or whatever caused it or allowed it to happen, at those not affected or not as badly affected
- at the injustice
- at the shame and indignities
- at the lack of proper understanding by others
- Why me? Why us?

Helplessness

- crises show up human powerlessness as well as strengths.

Fear

- of the future
- of 'breaking down'
- of 'losing control'
- of being left alone
- of loved ones having to leave
- of losing the business or farm or lifestyle
- of the uncertainty.

Disappointment

- life turning out like this after years of hard work.

Failure

- blaming yourself for the ways things are turning out, when it's really beyond your control.

Guilt

- for being better off than others
- for being worse off than others
- regrets for things not done.

Shame

- for having been exposed as helpless, 'emotional' and needing others
- for not reacting as one would wish.

Sadness

- for losses of every kind.

Longing

- for all that has gone.

Isolation

- wanting to be alone
- irritated or cannot bear the demands of being with others.

Numbness

- feeling empty inside
- loss of all feelings
- can't connect with things you should feel strongly about.

Let down

- a sudden loss of energy, enthusiasm which alternates with...

Hope

- for the future, for better times.

Expressing strong feelings when they are aroused is not lack of control. Bottling them up may lead to increased stress and result in explosions (e.g. violent outbursts) and reduced efficiency. Crying gives relief.

Stress signs

Stress occurs when we lack the resources to meet extra demands on our health, energy, emotions or thoughts.

Stress can show up in a number of ways:

Physical

Tiredness, unable to rest, relax, sleep, increased tendency to illness. Dizziness, palpitations, shakes, difficulty in breathing, choking in the throat and chest, nausea, diarrhoea, muscular tensions which may lead to pain e.g. headaches, neck and backaches, menstrual disorders, change in sexual interest. Numbness, things seem unreal, in a dream.

Habits

Increased smoking, drinking or eating, craving for salt, sweets etc. No longer enjoying usual interests, recreations etc.

Social

Irritability, intolerance, not wanting to be with people or wanting to be alone or not getting on well with people anymore.

Thoughts

Poor concentration, no mental energy, can't think clearly, poor decision-making, planning, forgetfulness.

Emotional

Changeable feelings, unusually strong emotions, numbness, becoming sad or apprehensive without reason, loss of interest in things.

When you notice signs like these in yourself, this is your body's way of saying you're exhausted. Stop now and reassess before you no longer have the strength to cope.

People under stress are often so busy coping with the causes of the stress that they do not notice stress building up.

Preventing stress build-up

Awareness

You need to respond to your body's messages, take time out to relax when it tells you to, not when it's too late.

Relaxation

Seek a technique to suit yourself.

Reality

Confront the reality and try to think things through. Get outside assistance, talking to others can help sort things out and get an objective view that puts things in perspective.

Coming to terms with the situation

Concentrate on things you may be able to control and don't dwell on problems out of control.

Privacy

In order to deal with feelings, you will find it necessary at times to be alone, or just with family and close friends. DO NOT isolate yourself or your family from contact with others, this will only make things worse in the long term.

Activity and recreation

Be active, to help and give to others may give some relief, however, don't divert attention from the help you may need yourself. Do not neglect normal sport and recreation. Regular exercise promotes health and well being and will help you cope with stress.

Dealing with stress - do's and don'ts

- DON'T bottle up feelings.
- DON'T think bad things about yourself
- DO express your emotions and let your children share in problems.
- DON'T avoid talking about what is happening.
- DO discuss the problem with others.
- DON'T isolate yourself from other individuals and groups.
- DO accept support from people who care.
- DO look after yourself – diet, sleep, time-out, exercise, relaxation.
- DO take time to be with your family and close friends.
- DO let your children talk to you and others about their emotions. Encourage younger children to express themselves in games and drawings.
- DO explain to your children why expenditure is being cut back – they will cope!
- DO try to keep the rest of your lives as normal as possible during a period of stress and crisis.

- DO try and let your family keep up with their activities as much as possible.
- DO play sport.
- DO drive more carefully.
- DO be more careful working and around the home.
- DO be aware that accidents are more common during and after severe stress.
- DO remember – laughter is as good as a dose of medicine!

People who can help

Doctors, Ministers of Religion/Priests, Teachers, Church Groups, Child Health Sisters, Community Health Centres, Clinical Psychologists, Social Workers, Counsellors, Community Nurses, Family and Children's Services, Local Hospitals.

Rural family counsellors

Southern Agcare

Dot Bailey	9854 3045
Jane Weekes	9844 6039
Pearl Draper	9827 1552

Central Agcare

Janet Colbourne	9889 1244
Eve Curtis	9061 1311

Wheatbelt Agcare

Jeannette Tibben	9046 5091
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Community mental health services

For enquires call the Duty Officer at the following locations:

Albany	9892 2440
Katanning	9821 2815
Narrogin	9881 4888
Central Region	9622 5080

Organisations that may be able to provide information or assist you:

Crisis care

(24 hour counselling service)

Free call: 1800 199 008

Family helpline

(24 hour family crisis service)

Free call: 1800 643 000

Samaritans

(24 hour service offering caring support)

Countryline : 1800 198 313

Women's information service

(Monday to Friday 9am to 5pm)

Free call: 1800 199 174

Easy steps to relaxation – twice daily

1. Give yourself permission to put all worries out of your mind.
2. Sit comfortably in a quiet room.
3. Close your eyes.
4. Relax your muscles systematically, beginning with your feet and working your way slowly up the body to your face.
5. Now repeat the word 'one' to yourself every time you breath out. After ten minutes, stop and slowly come out of your state of relaxation.

Stages in response to loss

People greatly vary in their response to LOSS, but most come to terms with it by working through a number of stages.

The process outlined below highlights the sort of stages that occur as part of the healing process, but not necessarily in this exact order.

