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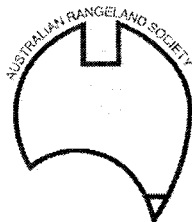
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CURRENT COSTS, RETURNS AND RANGELAND MANAGEMENT PRACTICES  
FOR A TYPICAL WESTERN COBAR PROPERTY

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ABSTRACT

This paper details an extension initiative implemented by NSW Agriculture & Fisheries staff at Cobar in western New South Wales. With the co-operation of seven local producers a discussion group was formed, and using the Local Consensus Data (LCD) technique a detailed description of the typical property in this district was obtained and documented.

The methodology of the LCD technique is explained and a brief description of the typical property is presented. This includes information on the physical features, management costs and returns for western Cobar properties.

The perceptions of landholders about the major production constraints are also outlined and the methods used by graziers to address these constraints are discussed. This information indicates that the underlying issues are not fully understood by the whole grazing community and therefore require attention in future extension programs.

Documenting such information also supplies data which can be used by individual landholders to assess their financial and managerial performance.

INTRODUCTION

The economic climate of the 1980s and changing community expectations about the use of our rangeland resources, are imposing greater demands on western NSW graziers to improve both the profitability and sustainability of their enterprises.

Now, more than ever before, graziers need to closely monitor costs and returns, and more accurately assess the impact of management changes (on enterprise profitability and rangeland stability) over time. Government agencies also need an accurate picture of whole property management and production constraints within specific areas so that relevant research and extension programs can be developed. In addition, a report documenting the profitability, production and management of the typical property will be useful for new graziers moving into the district and for newly appointed government personnel to enable them to quickly understand rangeland management activities within their district. A very useful way of assisting graziers and their advisors to obtain this information is through the use of the local consensus data recording (LCD) technique.

THE LOCAL CONSENSUS DATA TECHNIQUE

The Local Consensus Data technique involves a group discussion where participants are asked to develop consensus on a particular subject by developing typical but hypothetical models. In developing a picture of the typical western Cobar district property, seven graziers pooled their experience and knowledge with the assistance of two extension personnel.

This information was documented and details:

- \* physical features;
- \* property improvements;
- \* management practices;
- \* costs and returns;
- \* perceived production constraints.

After consensus was achieved describing current activities and production levels the participating graziers were asked to collectively identify the changes they believe need to be made over the next 5-10 years to achieve a more desirable level of profitability and sustainability for that typical property.

Division or voting within the group was avoided. The success of the LCD technique depends on:

- \* an accurate and detailed definition of what it is the organisers want the participants to describe;
- \* careful selection and knowledge of participants, representing a range of ages and experience throughout the district;
- \* the organisers having an adequate level of knowledge on the subject matter and the group discussion technique;
- \* the organisers accepting wholeheartedly the concept of information coming from the producers and that agreement between them is to be made by consensus.

The objective was made clear to the group; to describe the physical and financial features of a typical Cobar property. The producers determined the boundary of the area to be discussed. Members of the group attended meetings without any documents, and relied solely on their personal knowledge.

To form the group each grazier was approached and the objective of the exercise and technique explained. They were also asked if they would nominate another person who might suit the group and so on until the required number of persons was achieved. The number of participants was restricted to seven to ensure the active contribution of all members.

The group met on four days over a period of ten months at a quiet venue with ample wall space to hang paper, maps and white boards. As consensus on a particular subject was reached it was displayed in view of all participants for clarification and/or development. Discussions moved from category to category, guided by the extension officer who was careful not to display his own attitudes or beliefs (it was a very fine line!). The officer was objective without being dominating, ensuring each member contributed.

Group members were also selected on their communication skills. The loud dominating personality was avoided as were the very quiet and reserved characters. To be successful, this technique relies on the co-operators knowing they are each a part of the group and that it is *their* group. The silent majority (those that disagree but don't contribute) must have their opinions aired.

Discussions were guided, not dominated, by one extension officer whilst the other acted primarily as a recorder of information. Both officers had to be

good listeners and tactful in controlling awkward situations, yet stimulating and able to encourage the participation of all members of the group.

The meetings were introduced with morning tea to encourage casual conversation and to develop a friendly atmosphere. After each meeting the extension officers, mainly the recorder, compiled the details decided upon and produced a draft document. Each draft was then tabled at the next meeting with discussion invited, resulting in amendments and additions as necessary. The group concentrated on detailing specific items, quantities consumed and time periods involved. Costing of these items was done at a later date, then presented to the group in another draft report. The group always understood that a published report(1) would be produced, so they were very careful to make sure that each detail was accurate.

Initially it was thought that two meetings would satisfy the objectives of the project. Due to the enthusiasm of the group and their desire to be as accurate as possible, discussions were concluded after four meetings.

#### THE COBAR REPORT

A summary of the major features in the report is included below:

##### Physical features

Total area	28,500 hectares	(70,000 acres)	Stocking rate
Total livestock	Sheep- 7,045	7885 DSE }	3.2 ha/DSE (7.9 ac/DSE)
	Cattle - 100	1000 DSE }	

##### Soils

The soils are principally soft red earths; however, heavy red soils are present in the occasional poplar box flats. The country is gently undulating with erosion being most severe under dense stands of hopbush (*Dodonaea attenuata*) and belah trees (*Cassuarina cristata*).

##### Vegetation

There is a diversity of tree species, both edible and inedible ranging in density from isolated stands one kilometre apart to trees spaced 4 - 5 metres apart. Often there is association of shrubs beneath the trees with 60% of the property lightly encroached with woody weeds, whilst 40% has a medium to dense infestation, which could worsen.

Annual species represent a significant proportion of the pasture with a small population of perennial grass species.

##### Climate

Rainfall is both unreliable and non-seasonal. The mean rainfall is 250 mm (10") with the probability of an excellent season occurring, being once in five years, whilst a dry year occurs twice in five years.

##### Property improvements

Ten ground tanks of 8,500m<sup>3</sup> (10,000 cubic yards) are present and four of these are fenced to trap stock. The water from three bores reticulate to eight troughs through 8 kilometres of polythene piping. There is a timber/iron homestead and a five stand shearing shed. Seventy kilometres (40 miles) of boundary fencing and eighty kilometres (50 miles) of internal fences divide the property into 12 paddocks.

### Present management

Water is an important resource for both stock and domestic purposes. Subject to availability of a contractor, and if time permits, tank drains are graded every ten years and when tanks are dry they are desilted. These maintenance procedures usually occur during the summer months from December to February. Also during this season an essential part of landholders' daily tasks is checking stock water supplies, cleaning troughs regularly, and replacing seals. Windmills are also checked and maintained regularly, particularly if low wind speeds are experienced.

The merino breeding flock, consisting of 2,670 adult ewes and 800 maiden ewes are joined for a 14 week period so that rams have the opportunity to service several times. Joining usually occurs from mid March to late June because green feed can then be expected to be available at lambing time. This is particularly so in areas where grass seed problems *Aristida* and *Stipa* spp. are common.

The lambing period on the nutritious green feed is considered important particularly for the maiden ewe flock. Also this management technique helps to prevent young weaners being exposed to the hot dry period during summer. However, if the autumn joining is unsuccessful, resulting in poor lambing, a spring joining will be attempted.

Crutching (non-contract) for blowfly control occurs in February-March. Jetting for blowfly control may occur in September or February although stock may not be treated every year. Lambs are usually marked and mulesed during November.

Mustering takes a considerable amount of time, often starting at least two weeks before the proposed management operation. It can take up to four days using motor bikes and 4WD vehicles to achieve a clean muster of a large paddock. The more open country can be mustered more quickly.

Shearing begins during mid July before lambing and is usually performed by a shearing contractor. The following wool cuts from each stock class are expected:

Class	Wool Cut		Yield	Micron	Vegetable Matter Fault
	(kg)	(lb)	%	(um)	%
Wethers	6.4	14	60	24	4
Ewes	5.5	12	60	23	4
Weaners	5.1	7	60	20-21	4
Rams	7.0	15.5	60	23-24	4

Cast-for-age ewes are generally sold off shears in August-September as are the full mouth wethers which are sold to the live sheep boat trade. The property has a sheep turn-off ratio of 21% on total numbers over twelve months of age.

Cattle represent only a minor enterprise with low levels of management required. The structure of the cattle herd is 40 cows, 2 bulls and 58 other assorted stock. Calving occurs throughout the year and calves are marked whenever the cattle are mustered for sale or when very young, in the paddock.

### Property costs and returns

Total variable costs were calculated and documented in detail and include costs for shearing, crutching, wool selling costs, parasite control, fuel and

labour costs associated with the stock enterprise. Annual overhead costs were also calculated and included major items such as depreciation, maintenance on improvements, rates, insurance, telephone and accountancy fees.

Total Variable Cost	- \$82,845	Wool Sales	\$223,066
Total Overhead Costs	- \$48,753	Stock Sales	\$23,340
Total Operating Costs	-\$131,598	Total Income	\$246,406

After allowing \$22,000 for the labour of the owner/manager the net property profit was calculated at \$55,714 assuming 75% equity and 18% interest rates. The return to capital (Net Property Profit/Current Capital Value) corresponding to these figures is 9%. Based on these figures the typical western Cobar district grazier was in a sound financial position, in 1988, a year characterised by high wool prices.

#### IDENTIFYING AND ACHIEVING THE DESIRABLE PROPERTY

The co-operating graziers acknowledged that typically the western Cobar property was not being managed as efficiently as possible. For this reason time was spent identifying what changes should be made. Once the participants were satisfied that a description of the typical property was complete the project was extended and the group asked to identify the changes which needed to be made to make the typical property more profitable and sustainable over the next 5-10 years.

In addressing this question a brainstorming discussion developed, listing the perceived major production constraints and their perceived effects on production and profitability (In the authors' opinions some constraints were in fact symptoms of much larger problems.) The following are the major issues that were discussed:

##### Lamb marking percentage

A significant increase in the lamb marking percentage would give greater stock numbers, enabling more intense classing and subsequent sale of additional sheep. An increase of 10% to 67% should be possible. To develop a high fertility flock, it would be essential to class the ewes and rams prior to joining with a high priority placed on selecting for fertile ewes. A ram percentage of 3% would be necessary to ensure a complete joining. Further attention would need to be placed on ram selection and preparation including nutrition of rams, shearing before joining, and inspecting rams for teeth, testes, tassel, toes and trim. Joining also should take place in smaller paddocks with the joining period being reduced from 16 to 8 weeks. A January joining may be an advantage as lambs would then be old enough to more easily handle bad grass seed conditions during the September-October period.

##### Shrub density

The overall aim is to decrease the woody weed density, and to promote pasture growth. A two stage integrated management programme should be adopted to control woody weed densities:

1. Stop the lightly infested areas from becoming severely affected.
2. Take steps to improve the heavily shrubbed areas;

It was suggested that each year, perhaps 10% of the net property profit (in this year \$5,000) should be spent on mechanical control, and a further 10% on chemical control of lightly to moderately affected areas. A maximum of 20%

of the lightly affected areas should be managed using a broad scale method such as fire in the next 5 years, subject to desirable seasonal conditions.

#### Wool cut and yield

An increase of 1 kg (2 lb) wool cut was set as an achievable goal. To achieve this figure external parasites such as lice should be more intensively controlled, treating stragglers and sheep missed in previous musters. More intensive classing also needs to be practised so that the quality and quantity of the wool can be improved. Ram selection is critical and the manager of the desirable property must view rams before purchase rather than relying on buyers. Wool yield can also be increased by installing a sprinkler system at the yards to reduce dust contamination in the wool.

#### Pasture availability

The availability of pasture was identified as a limitation on production. Previous high stocking rates, increasing shrub density, and the increase in rabbit and kangaroo numbers have all contributed to a decrease in available forage. To improve the situation the typical property should decrease stock numbers by 10% to minimise feed gaps during the year. It is extremely important to destock paddocks during good seasons to allow pastures to set seed. Continued research is still required into the possibility of an introduced plant species which will tolerate current management practices. The rotation of sheep flocks through the paddocks may also aid in better pasture and browse utilisation.

The selection of specific stock classes to graze certain pastures would also be beneficial in pasture utilisation and distributing even grazing pressure.

Promotion of a functioning commercial market for kangaroo meat for human consumption is vital in developing the kangaroo meat industry and protecting the valuable grasses. Commercial, licensed shooters should be encouraged to shoot regularly on the property, with permission of the landholder.

#### Government controls

Government controls over the leasehold country should be reviewed and in some areas changed, to encourage expansion of property size to improve economic viability. Taxation deductions for water improvements and woody weed control should also be reviewed. It was suggested that interest rates and taxation laws have markedly influenced property decisions.

#### Other management problems

A better grazing management system needs to be developed and practised to allow the spelling of paddocks. Also paddock selection regarding flocks needs further attention.

#### CONCLUSION

The descriptions and values reported in the paper are not average because such figures can often be distorted by unusual or radically different practices or outcomes. Therefore, these typical figures and values more accurately describe the 1988 situation.

Often survey results of production and financial figures of individual properties may not be very accurate as many producers are hesitant to disclose such personal information. The use of the LCD technique disclosed many of their individual figures but were referred to as a typical

situation, putting producers at ease and avoiding them being embarrassed due to a poor management practice or low/high levels of production.

Consensus was achieved on all issues which is probably a reflection on careful selection of knowledgeable graziers with good group communication skills, and the co-ordinators of the group being committed to the local consensus group discussion technique.

To implement some of the changes as identified by producers to attain greater levels of profitability and sustainability in the next 5-10 years, a distinct change in traditional property management is needed. The erection of new fences to improve joining and the allocation of funds to manage woody weeds are just two areas where development is needed. To aid in the widespread adoption of management changes, the behaviour and attitudes of land managers should be targeted.

Listing the management changes required is useful in identifying issues, but developing a system to implement changes can be complex. It appeared that members of the group lacked detailed understanding of the underlying issues such as the ecological reasons for shrub encroachment, the various grazing management systems, flock fertility and livestock genetics. These points are an important component in changing attitudes and behaviour patterns.

The information generated by such an extension exercise can be used in a number of important ways:

First, it can be used by local producers to assess their own management operations (relevant to the typical property) and then develop the future management plans so that production can be sustained or increased.

Second, it can be used by government advisors to monitor the costs and returns in their district and the impact of their advice and recommendations on management. It can also be used by government (and private) extension staff to develop relevant programs to target the issues raised by the report.

Third, it can provide an important source of information for new graziers, prospective new graziers and commercial service agencies such as stock and station agencies, banks, accounting firms and financial institutions.

The report that has been produced will be an important resource to familiarise interested persons in agricultural activities within the western Cobar district. A most interesting part of the report is the graziers' identification of, and methods of achieving the desirable property. State government agencies can now develop and continue with confidence programs addressing these particular concerns.

#### ACKNOWLEDGEMENTS

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#### REFERENCE

1 Murphy J, and Date W (1989) "A consensus report of current costs, returns and management practices for a typical western Cobar grazing property" Farm Business Notes No. 49 NSW Agriculture & Fisheries.