



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

Land Values and Appraisals

- Australia

P. Collett

Partner, Collett & Co. Pty Limited,
Investment Managers, Sydney, Australia.

ABSTRACT

Australian land values are compared with that of U.S.A. and Europe. This comparison is made difficult by the fact that there are differences amongst these countries with regard to government subsidies, taxation laws, farming techniques and methods, land titles, manpower management practices and the general weather conditions. However some meaningful comparisons can be made about land values in different countries, and an indication can be obtained about comparative return to investment.

Land Values and Appraisals

- Australia

P. Collett, Australia

SOME USEFUL STATISTICS

TOTAL POPULATION 15,543,600
TOTAL RURAL POPULATION 4,790,900
TOTAL URBAN POPULATION 10,752,700
OVER 1/3 OF THE TOTAL POPULATION LIVE IN NEW SOUTH WALES

376,000 (1984) DIRECTLY EMPLOYED ON FARMS OF WHICH 248,000 WERE FAMILY PARTNERSHIPS OR OWNER OPERATORS.
TOTAL NUMBER OF FARMS 174,000

PRECIS OF AUSTRALIAN RURAL ENTERPRISES EXPRESSED AS A PERCENTAGE OF TOTAL PRODUCTION

CATTLE (MEAT)	18%
SHEEP (WOOL)	8%
SHEEP/CEREALS	14%
SHEEP (MEAT)	10%
BEEF/CEREALS	3%
MILK COWS	13%
CEREAL GRAINS	13%
VEGETABLES	2%
SUGAR CANE	3%
FRUIT	8%
OTHER	8%

CLIMATE OF AUSTRALIA

The climate of Australia is predominantly continental but the insular nature of the land mass is significant in producing some modification of the continental pattern.

The island continent of Australia is relatively dry with 50% of the area having a median rainfall of less than 300 millimetres per year and 80% less than 600 millimetres. Extreme minimum temperatures are not as low as those recorded in other continents because of the absence of extensive mountain masses and because of the expanse of ocean to the south. However, extreme maxima are comparatively high, reaching 50 degrees C over the inland, mainly due to the great east-west extent of the continent in the vicinity of the Tropic of Capricorn

ON AVERAGE 60% OF TOTAL FARM PRODUCTION IS EXPORTED
FARM PRODUCTION COMPRISES 40% OF AUSTRALIAN EXPORTS

SHEEP POPULATION	153,000,000	31/3/86
CATTLE POPULATION	23,200,000	31/3/86

AUSTRALIAN AGRICULTURE - THE PRESENT

With depressed international commodity prices due to high levels of production, large stock piles and subdued demand, coupled with rising costs, spells a depressed Australian rural sector. High interest rates and poor prospects have led to an increase in the proportion of farmers facing financial difficulties and a drop in some land values.

	1985	1986
Average Equity (Farm)	\$ 750,000	\$675,000
Average Debt (Farm)	\$ 66,741	\$ 74,100
Number of Farms at Risk	5%	7%

Definition of a farm at risk - Negative cash margin and equity level of less than 70%

Looking at the above statistics it could well be asked - is there any need for concern? Investigation will show that 38% of farms have little or no debt at all and average debt level of farmers with more than \$10,000 debt is estimated to be \$107,400 at 30th June 1985. However 25% of all farms have an equity ratio less than 60%. This is the sector which is in trouble. The average interest bill has risen during the past year by \$2,650 per farm or 34% increase over the previous year.

In the wheat/sheep belt of Western Australia average debt is double the national average with some values declining 40% over the last 3 years. In some areas, even a larger decline. Undoubtedly it is not good business to continue farming if the short term prospects spell financial ruin. The by-product of this situation is depressed rural land values and sales.

Land values during a recession have generally reacted against the gloomy predictions of the "experts". The reasons are clear:

- i) Intending sellers will do what they have always done if land values fall - tighten their belts and wait for the rise.
- ii) Australian Banks are able and prepared to offer far greater support in times of financial stress. Overseas Banks competing for a balanced portfolio are tending to give support in preference to accumulating bad debts, thus hastening the erosion of their rural lending base. Australian Banks have let it be known that it is not their intention to force sales at this stage.
- iii) Most farmers are producing and investing for returns not for capital and therefore prudently borrowed.
- iv) Falling prices have been largely offset by falling \$Aust.
- v) Traditionally, good land in Australia has been tightly held and the best way of defining good land is to examine how the effects of drought, flood, pest plagues, or recession have registered on that property's ability to be consistent in recovery and production. Certainly the farmer has much to contribute to the ultimate ability of the land to produce, however there are elements in the combination of soil and climate which no farmer can claim as his own success. At the best he can improve the soil at the worst destroy it. Consequently, as a general rule, those farms which are on the market during a recession are due to "over gearing" or some other very good reason for selling.

APPRAISAL

The method most commonly used in evaluating the productivity of a grazing property in Australia is by using the D.S.E (Dry Sheep Equivalent) formula. A DSE is defined as the amount of feed required to maintain a 50kg liveweight dry sheep for one year.

Property assessment therefore takes into account the amount of feed per hectare which can be produced during an average year. This figure is then used to calculate the number of dry sheep the property could maintain. Other forms of animal production can then be related to the D.S.E. unit.

The table below sets out energy requirements and Dry Sheep Equivalent as a unit of measure.

STOCK EQUIVALENTS (Using a dry sheep as a unit of measure)

Class of stock	Units
Sheep	
Wethers in good store condition	1.0
Breeding ewe and lamb up to 5 mths	
Merino	1.7
Corriedale and crossbred	2.1
Weaners	0.9
Cattle	
Mature dairy cow (1,000 lb liveweight) giving 200 lbs butterfat per year	12
Mature beef cow (1,000 lb liveweight) and vealer up to 8 months old	14
Weaned vealer, 8 - 12 months (500 - 750 lb) live weight.	8

It is traditional to evaluate a grazing property on its total carrying capacity, fenced and watered at the current market value of \$ per D.S.E. plus value of improvements.

eg: It is estimated that a property "A" of 1500 hectares will carry 5 Dry Sheep per hectare. One method of appraising the "commercial value" of the property is:

1500 x 5 at say \$70 per D.S.E.	\$ 525,000
Add Improvements	
Homestead	75,000
Woolshed	55,000
Yards (sheep)	10,000
Hayshed	10,000
Yards (cattle)	15,000
	165,000
Total Value	\$ 690,000
or	
	\$460.00 per hectare.

An alternative method of valuing land is to assess its net return before Tax and Finance Costs (see property B). Divide that excess by 2 (half for the owner and half for an assumed farmer) capitalise the owner's half at say 4% (his rent) and the resultant value of the property is very close to the value placed on property A. Both properties are in similar rainfall/climate areas. This method highlights the importance of separating capital from working capital.

PROPERTY B

Assume Property B of 1500 hectares is capable of the same carrying capacity per hectare as property A with similar rainfall, but also produces 300 hectares of dryland wheat.

Income Wheat (short fallow)	
300 ha @ 2 tonnes/ha @ \$90	\$ 54,000
Income from Sheep	
D.S.E.'s 1200x5 @ \$20	120,000

TOTAL	174,000
TOTAL COSTS	120,000

NET	54,000

DIVIDE 1/2	27,000

RENT of 27,000 - Capitalised at 4% Capital Value \$675,000

If property B has an expensive house on it or capital improvements in excess of requirements, the appraiser would highlight this situation and assess the earning ability of that additional capital invested.

The market price may well be in excess of both methods A & B, which demonstrates the sometimes apparent difference between the commercial reality of farming and the demand for land.

A vendor's neighbour may pay more than is economically viable at the time of purchase, fearing that he may not get the opportunity again or, all things being equal inflation will look after him.

Sworn valuations are therefore extremely difficult to give in the current climate. The traditional method, based on historic sales of like land and adopting the principle of "a willing seller and a willing buyer" still reflect 1985 values in some areas.

A one off forced sale at a very much reduced price, creates minor earth tremors in the board rooms of lending institutions, already nervous at reading the "gloom and doom" stories of the so called "press experts".

The valuer, more than ever must now consider the commercial appraisal of the property and its ability to produce a cash flow and profits. Somewhere between the market price and commercial appraisal is a realistic result which gives comfort to a would be lender/investor, and the user of the finance is reasonably certain of servicing the debt and or capital.

Whilst on this subject of commercial realism, it is equally important to ensure a flow of young people to the land. Presently in Australia the average age of farmers is increasing. The reason is obvious - high cost of getting into farming - the returns are not in proportion to the risks involved - high cost of borrowing and the psychological barrier created by watching parents/relations/friends suffer as a result of the rural down turn - added to which generally the "press" both country and city seem to enjoy talking down the rural industry in Australia.

If there is to be a return to viability, city capital must flow into the industry. In many instances the concept of capital investment owning the land component of a farm and the farmer owning stock and plant and working capital, is proving to be a success both for the farming community and the investor. Land values in Australia have traditionally increased at a rate equivalent or maybe even better than city real estate, approximately 10% per year, therefore, a farm purchased wisely as an investment with a lessee/tenant agreement to satisfy both parties is a successful and comfortable means of retaining a good long term investment on the one hand and on the other retaining a way of life and profession.

It is interesting to note that in example A, the owner whose total capital is about \$860,000 including stock and plant, could only expect a return of 4 - 5% on his capital if he's lucky. Whereas if he sold the land and invested part of his capital elsewhere to spread the risk and leased back the farm, he may be considerably better off. Theoretically, this allows the farmer to keep his occupation and traditional location (town/village) where he is known, it also guards against the financial drought which occurs when there is a rural down turn.

Table C. demonstrates the way in which income could be lifted, capital risk spread and illustrates the potential benefit from capital gain.

TABLE C

	Capital	Yield	Income
Alternative 1.	Farming Enterprise		
	Land Stock & Plant	\$860,000	5% 43,000
Alternative 2	Farming	\$170,000*	16% 27,000
	Stock & Shares	\$200,000	5% 10,000
	City Real Estate	\$200,000	7% 14,000
	Funds on Deposit	\$50,000	15% 7,500
	Rural Land Co	\$200,000	3% 6,000
	Mortgage	\$40,000	14.5% 5,800
		-----	-----
		\$860,000	\$70,300
		-----	-----
	*3000 Ewes @ \$25.00	\$ 75,000	
	60 Rams @ \$250.00	15,000	
	Plant	50,000	
	Working Capital	30,000	

		\$170,000	

\$27,000 income on capital of \$170,000 - yield 16%
 Costs assume contract rates thus reducing costly investment in large plant.

AUSTRALIA/THE WORLD

It is an interesting exercise to note the value of land in Australia compared with U.S.A. and Europe. It is not an easy comparison to make because so many factors need to be taken into account.

1. Government Subsidies
2. Taxation Laws
3. Rainfall reliability
4. Farming methods, techniques
5. Land titles
6. Man power utilisation
7. Sunlight

It is fair to say that selective comparisons can be made and the table below attempts to show such comparisons. It must be noted that figures presented are a mix of recent sales. Assumptions are:

1. Freehold land title
2. All comparisons are in U.S. (exchange rates as at 12/6/86)
4. Rainfall 25 - 30" per annum

	Australia	U.S.A.	U.K.	West Germany

At U.S. \$ Per Acre				

Enterprise				

Dryland cropping	350.00	1,800.00	2,090.00	11,170.00
(good black soils)				
Irrigation	525 - 840.00	1,500 - 2,500	NA	NA
Grazing -	35 - 350.00	130 - 650	NA	NA
Depending on Carrying Capacity				
Average % Change during				
last 3 years	*+5%	-40%	-40%	-40%

* Land values rose in 1983/84 but dropped in 1984/85 and are forecast to drop in 1985/86.

Acknowledgements:
 Commodity Letter - Editor Andrew Heap
 1986 Rural Property Report
 Bureau of Agricultural Economics - Canberra
 Australian Agricultural Year Book - Editor Julian Cribb
 Valuer General's Department - New South Wales