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# THE LAND RESOURCE: A LOOK AT RECENT AGRICULTURAL RENTS IN SOUTH AFRICA

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## INTRODUCTION

The leasing of agricultural land is an avenue which leads to several fields of debate in contemporary agricultural economics, ranging from the historical evolution of concepts in land economics to current (perennial?) difficulties in farm financing common to most developed countries. The main purpose of this article is to present results of a recent postal survey on leases\* on White farms in South Africa and discuss certain points and issues. Rents are mentioned with land prices in the broader context of land tenure, but no attempt is made to explore allied topics such as "lease or buy" or alternative methods of land valuation.

### The land market

The study of land tenure is well documented with references to the economic, legal and political aspects of ownership and management of agricultural land. The tenure form may be said to be approaching the ideal when farmers are achieving optimal production, those involved in the industry are obtaining a reasonable livelihood, and land fertility is being kept intact. The tenure form should also permit capital to be supplied to agriculture and guard against excessive fragmentation of holdings. A further consideration is that the owner of land should receive a competitive return on his investment.

However, the capital cost of buying farm land can result in the underutilisation of farming enterprises themselves. Typically in developed countries land and buildings represent a substantial share in farm total capital, ranging from 55% (France) to over 70% (USA, UK, Netherlands, Denmark, Belgium, Japan). In South Africa, the comparable figure is 76%.\* However, concern has been voiced over the apparent growth in investment in rural land not for reasons of income but for long-term capital appreciation. The farm real estate market is now said to be concerned with three factors: the business of farming, taxation and maintenance of real capital, and miscellaneous

considerations such as amenity value. Regarding business aspects in particular, the main advantages of leasing - either a complete farm unit or additional parcels of land - are the following:

- (i) The positive effect for working capital already mentioned,
- (ii) the scope for spreading certain overhead costs over a wider area,
- (iii) the possibility for temporary division of a holding permitting specialisation and increased productivity.

In practice, however, there are many difficulties.

Problems concerning agricultural rents in a theoretical context have been discussed by Bell and Susman *et al.* (1979). Lessors may not recognise the "dual valuations of the land resource", since land can be viewed both as a hedge against inflation and as a factor input to agricultural production. As land values rise under inflationary conditions lessors who feel that rents should have a fixed relationship to market values of land will press for relatively higher cash rents and shorter leases. Then lessees cannot be expected to maintain soil fertility or carry out capital improvements. Another consequence may be an increase in share leases with possibly a lower overall investment in production inputs, depending on risk aversion. When land prices rise it is suggested that rental contracts be indexed or include sharing part of the profit for considerations of allocative efficiency and equity.

According to Peters and Maunder (1982) the land market needs to be competitive in order to secure land re-allocation and preserve freedom of entry for newcomers of superior efficiency. However, institutional reasons often result in the market being poorly adapted to exchanges of land; therefore the adjustment (down) of man-land ratios and enlargement of operating units proves difficult. It is easier to accomplish if tenancy is possible, although any form of tenancy involves divergence between ownership and operation, with possibilities for the undersupply of durable or non-durable inputs, and hence a breach of the equi-marginal principle for allocation efficiency. But empirical work in Britain does not suggest significant differences when comparing operating efficiency between landlord-tenant and owner-occupier systems. Moreover there is, in Europe, evidence to suggest that farm enlargement has been achieved more often by renting than by buying. State intervention in the relationship between tenants and

\* A lease is understood to be a contract by which the owner of an asset (the lessor) grants the right to use the asset for a given term to another party (the lessee) in return for a periodic payment of rent

\* Source: Abstract of Agricultural Statistics, 1983

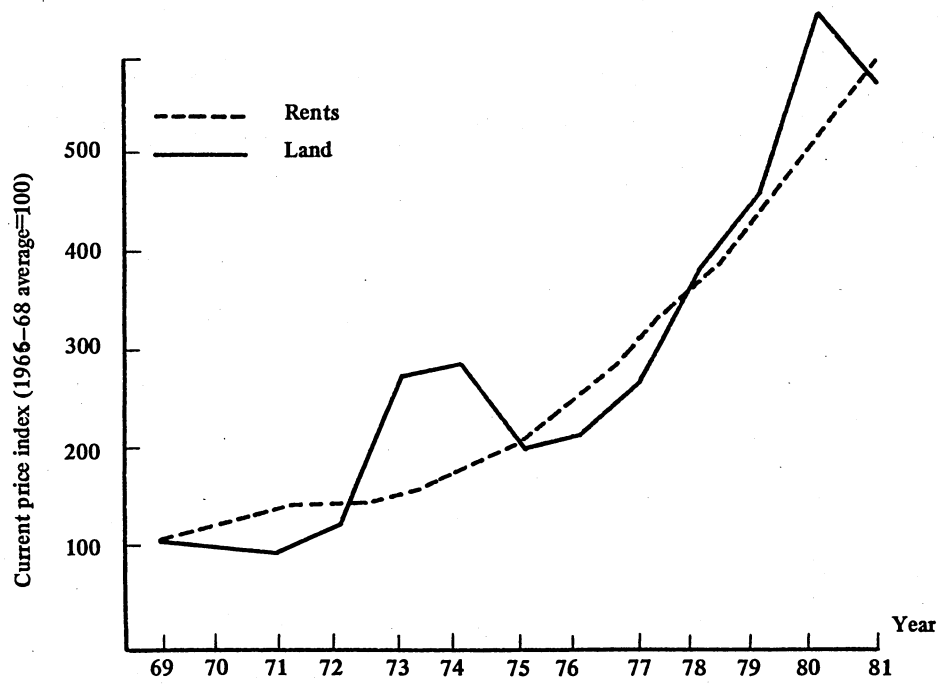


FIG. 1 - Trends in agricultural rents and land sales value in England and Wales, 1969-81

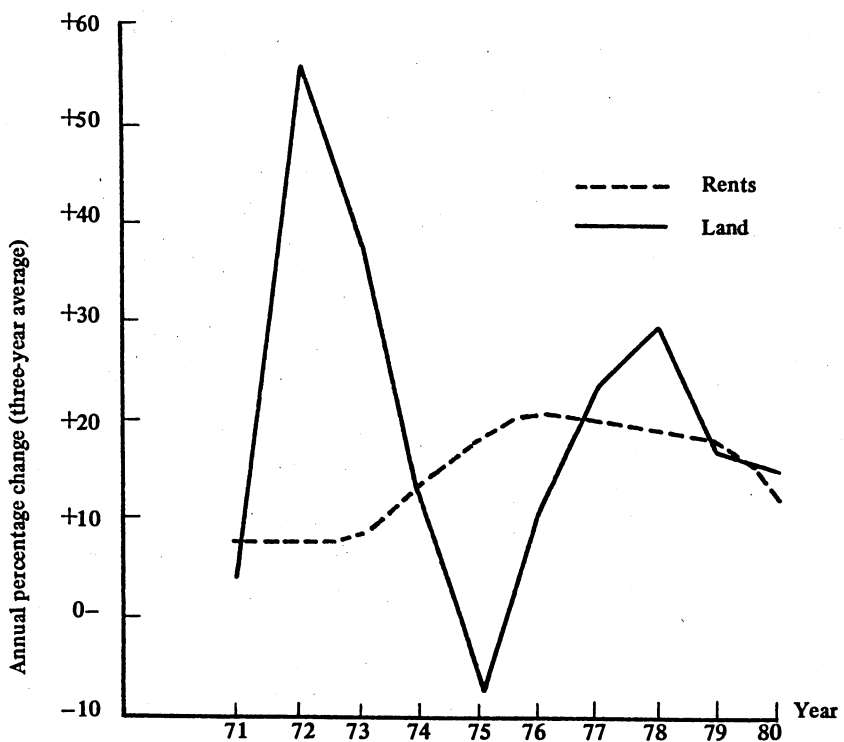


FIG. 2 - Average annual rate of change: agricultural rents and land sales value in England and Wales, 1971-80

landowners in a European context is usually directed at two areas: security of tenure and rent determination. Unfortunately the result is a mass of complex rules which in fact appear to inhibit structural adjustment; the need is for policy to ensure a flexible land-owning and tenure situation designed to assist in the creation of larger holdings offering better earning opportunities. In South Africa the main problem appears to be the converse: a lack of rules or contract guidelines, which also slows down the adjustment process.

### Relevant pointers overseas

In England and Wales Harvey (1973) estimated the determinants of rent for the twenty-year period 1949-69 using average rent figures. He found that the overall level of rents was determined by the costs, returns, and scale of farming:

"The inverse relationship of rent with cost of inputs was the most statistically significant and confirms the classic theory of rent as a residue after deduction of costs of production."

Moreover an examination of average figures for rents and land values during 1969-81 (calculated by the writer from official data and shown graphically - see Figures 1 and 2) confirms the general upward trend with violent year-to-year fluctuations for purchase prices. There is also evidence to support the notion that average rents, in a period of change, lag behind (Peters 1966). The increase in land prices at the time of the oil crisis of 1972 is especially noticeable (Figure 1). A possible reason explaining the surge in average rents (Figure 2) is the expectations of high farm product prices, after accession to the European Community, which have not been fulfilled. In Britain the proportion of total land farmed by lessees was 43% in 1975 and is still declining owing to legislation generally unfavourable to landlords.

Within the European Community the highest incidence of tenancy is in Belgium - 73% of area in 1975, with one quarter of farmers defined as part-time i.e. spend less than 25% of time on holding (EC Commission, 1977). Interestingly, Belgium has also experienced the greatest increase in average farm size (up seventy per cent) over the 1960-75 period (Peters and Maunder, 1982).

In the United States it has been shown (Chryst, 1965; Melichar, 1979) that technological advances in combination with government commodity programmes maintaining output prices were instrumental in establishing a growing real return to assets. With this growth a significant proportion of the total return to farm real estate would necessarily take the form of capital gains, implying a low rate of current return on the market value of assets. According to Castle and Hoch (1982) high real estate prices cannot be explained solely on the basis of earnings in agricultural production. Therefore the price of land does not appear to be determined by capitalisation of annual

rents, as may be expected from economic theory, but mainly by farmers' expectations of continuing inflation and increases in product prices.

An illustration of how a farmer might decide what rent to pay was put forward by Snyder (1982) in the introduction to a survey of farm rents in New York State. He argued that the importance of additional land to the farm business would have an effect on the price the farmer was willing to pay. If the rented land is not critical to the farming operation the farmer may decide that only the variable costs of the crop should be considered and he can ignore fixed costs in the short run. If the rented land, however, is considered vital for adequate farm income, the farmer is likely to be highly competitive in bidding for the land. In this case he must cover all costs, including fixed costs, because of the long-term nature of his decision. Although the farmer considering only his variable costs will be willing to bid a higher price because his former land base pays for all fixed costs, in the long run he too will come to rely on the extra land's paying its share.

### South Africa

The field of land tenure and land ownership in the Republic was reviewed by Groenewald and Joubert (1974) in a series of articles. As far as the legal aspects were concerned they declared that while a lease usually takes precedence over purchase by a third party:

"There are no laws which are primarily aimed at prescribing the basic points to be included in leases relating to agricultural land except in areas where State property is involved."

Furthermore in a subsequent postal investigation of 522 lessees Hattingh and Herzberg (1980) found that it was predominantly farmers already owning land who were lessees but most of their contracts were said to "leave much to be desired."

There are also tax implications to leasing land, since from the lessor's viewpoint income from cash rent is normally taxable. Even if part of a farm is let, rent does not constitute 'gross income derived from farming operations' unless on the basis of a share of crops. So it would appear to be more advantageous for a farmer to let part of his farm on a share-crop basis since this allows the proceeds to be used in the computation of the allowance in respect of capital expenditure.

The last available census of agriculture reveals that around 17% of White agricultural land is rented under cash or share agreements, with leasing more important within the share controlled by private/public companies, as shown in Table 1.

Although the proportion of lessees amongst farmers is said to be around 21% on a national basis (Hattingh and Herzberg, 1980), recent farm business surveys have found a much higher incidence in certain important agricultural regions, as indicated in Table 2.

TABLE 1 - Tenure Forms by Organisation in South Africa, 1976

Organisation	Number of farms Total	Total (hectares)	Area of farms of which (%)		Share-cropped
			Property	Rented	
Individual/partnership	69 529	77 582 599	82,9	15,3	1,7
Company	2 890	4 908 017	76,3	23,2	0,5
Public authority	164	1 540 169	98,9	0,8	0,3
Municipal/local authority	92	206 969	92,2	0,7	-
Other	188	274 541	83,7	16,2	-
<b>Total</b>	<b>75 562</b>	<b>85 718 742</b>	<b>82,9</b>	<b>15,5</b>	<b>1,6</b>

Source: Department of Statistics

TABLE 2 - Leasing in Farm Management Surveys, 1979-81

Region	Year	Total lessees as % farmers in sample	Total land leased as % all land	Lessees		Average tariff** (%)
				Number	Average land value* (R/ha)	
North-Western OFS	1979/80	52,8	23,3	37	651	3,0
Transvaal	1980/81	65,1	36,6	43	779	2,3
Highveld						
Swartland	1980/81	21,5	10,2	17	366	3,0

\*Land value expressed as capital investment in land and improvements

\*\*Rent as proportion of land value

Source: Division of Agricultural Production Economics

## BASIC RESEARCH INTO SOUTH AFRICAN FARM RENTS

### Outline

The main aim of the ongoing research project is to establish a pool of information on rents throughout the country. The nature of the investigation described below reflects the difficulties of mounting a widespread low-cost inquiry concerning financial transactions between a small - but by no means insignificant - sector of the farming population and landowners. Some lessors in fact are suspected of having no other connection with agriculture. A common question or problem is, given a leasing situation, how much to pay or charge? This may be established by, for example, inviting tenders, establishing the 'going' rate (implies extensive local knowledge of other leases), or imputing a return (e.g. 10% of expected gross output value). The element of bargaining in what is primarily a secretive market is an important factor in many negotiations. Therefore the collection of rent information may provide a source of reference not only for economic analysis but also for interested persons, assuming results are disseminated effectively without breaching confidentiality.

### Method

Research was carried out through postal

\*I am grateful to my colleague Mr Chris Mostert for computing assistance

questionnaires\*. The procedure involved the initial collection of an address list of lessors and lessees on the basis of existing records and with the assistance of the Agricultural Union and extension officers. A list of 2 698 addresses was compiled and formed the target of the first (1981) mail survey; it was subsequently trimmed down to a more current list of 1 344 for the second (1982) survey.

Although the gross response rate for the 1981 survey was 37%, a significant number of questionnaires could not be used for data analysis, resulting in 668 usable replies or an effective return rate of 25%. Despite a smaller send out, the 1982 survey yielded a gross response rate of 58% after fifteen weeks, with 593 codable questionnaires or an improved, 44% effective, return rate. Reminders had been sent out three weeks following the initial despatch date. A brief reference to the composition of the samples is warranted in order to qualify direct comparison between years. In general terms the total sample was not greatly changed. The tariff percentage figure - calculated simply by expressing income (rent) as a proportion of capital (estimated land value) - was used as the main indicator of rental rate.

Both questionnaire design and operating procedures\* were altered markedly between the two surveys and subsequent tables refer to the 1982 survey alone. Each addressee in 1982 was sent a two-page normal type-face questionnaire together with covering letter, newsletter, and reply envelope. Apart from elementary questions relating to farming, recipients were asked to indicate whether their agreement was with a relative, or was a special arrangement (i.e. untypical of market conditions), or a normal commercial transaction. In addition, questions were put relating to the time period of the transaction, the present rent payable,

TABLE 3 - Partial Comparison of Survey Sample in Successive Years

	Sample (%)		Average tariff (%)	
	1981	1982	1981	1982
Region				
Winter Rainfall	18	18	3,3	2,7
Karoo	20	21	2,6	2,7
Highveld	15	20	4,5	3,4
Other	47	42	3,6	3,6
	100	100		
Main farming type				
All livestock	59	54	3,2	3,1
Mixed	24	31	3,7	3,0
Crop	17	15	4,2	4,2
	100	100		
Transaction type				
Family	34	21	3,1	2,3
Special		14		
Market	64	65	4,2	3,7
	100	100		

and the year in which rental terms had last been reviewed. Each respondent was asked to estimate the current value of the holding and, finally, invited to comment generally.

Although some leases had expired, and tenants had retired etc. resulting in negative replies, a total of 623 questionnaires were returned\* with the coverage shown in Table 4.

The percentage share of completed questionnaires by geographical region - as indicated by Table 4 - indicates that any composite figure for rent in South Africa would be weighted towards prevailing conditions in the Karoo, Highveld and Winter Rainfall Regions in particular. It was suspected that inter-regional differences in leasing arrangements would, however, be reflected in tabulations.

#### Type of farming

The sorting of enterprise types and calculation of average rents for certain regions are summarised in Table 5. For sheep in regions with limited cultivation potential and good-sized farms, rates are higher than for more extensive or mixed areas. Comparison of rates for beef indicates little

\*Note: Only 593 were suitable for data processing

TABLE 4 - Mailing Distribution and Analysis of Response by Region - 1982

Region	Sent out	Negative replies	Completed replies	Completed as % of sent out	Share of total completed (%)
Winter Rainfall	205	20	114	55	18,3
Karoo	234	15	131	56	21,0
E. Cape	150	28	59	39	9,5
N. Cape & W. OFS	109	18	48	44	7,7
Central & S. OFS	175	19	90	51	14,4
Natal	77	8	29	38	4,7
Highveld	291	23	121	42	19,4
Rand	11	2	3	27	0,4
N. & E. Transvaal	92	17	28	32	4,6
<b>Total</b>	<b>1 344</b>	<b>150</b>	<b>623</b>	<b>46</b>	<b>100,0</b>

variation between regions in percentage terms, although in absolute terms the Highveld is much higher, again probably reflecting cultivation potential. For grain crops there is little variation between the two major regions.

#### Type of transaction

Generally, lower tariffs are associated with a higher incidence of family or special agreements and conversely higher rates are associated with a relatively large proportion of market rents.

#### Time period of transaction

Almost three-quarters of transactions in force during 1982 were agreements of between one year's and five year's duration but, as Table 7 indicates, there are distinct regional variations.

The incidence of longer term contracts (i.e. more than three years) is pronounced in the Winter Rainfall and Karoo Regions, where they account for 72 per cent and 60 per cent of transactions respectively within these regions, compared to a national average of 50 per cent.

#### Special transactions

Influences which result in apparent deviation from an expected rental rate should be mentioned. They are characterised by either the absolute rent or the land value being extraordinary. Examples are where a lessee is expected to carry out fixed improvements in return for a low rent or where land value includes non-agricultural development.

Although 83 respondents (14% of total) considered their rent arrangements to be 'special' only about half of them were willing to state specifically in what way. Information available from cash renters suggests an average discount of 30-40% on a realistic level. Furthermore several respondents, notably in the Winter Rainfall Region, considered share cropping to be 'special' in view of the variability in yield experienced; their rents ranged from twenty to twenty-eight per cent of output.

Some 44 respondents (7% of total), mainly in the Highveld/Eastern Transvaal Regions,

TABLE 5 - Average Rates for Selected Enterprise Types in Certain Regions

	Winter Rainfall	Karoo	Eastern Cape	Central & S. OFS	Highveld
Regional sample (number)	104	122	56	92	121
<i>Sheep</i>					
% respondents with enterprise	69	96	89	95	25
Average farm size (ha)	598	4 618	760	1 283	*
Proportion land cultivated (%)	72	1	8	6	*
Average rent (R/ha)	14,8	1,7	6,4	7,2	*
Tariff (%)	2,8	2,7	3,1	3,6	*
<i>Beef</i>					
% respondents with enterprise	39	8	82	54	53
Average farm size (ha)	*	*	810	1 106	837
Proportion land cultivated (%)	*	*	8	11	34
Average rent (R/ha)	*	*	6,8	7,6	19,5
Tariff (%)	*	*	3,0	3,1	3,2
<i>Maize or wheat</i>					
% respondents with enterprise	75	3	16	10	94
Average farm size (ha)	589	*	*	*	578
Proportion land cultivated (%)	75	*	*	*	50
Average rent (R/ha)	15,5	*	*	*	26,6
Tariff (%)	3,0	*	*	*	3,4

\*Insufficient enterprise concentration

TABLE 6 - Regional Tariffs by Type of Transaction

Region	Family	Sample % Special	Market	Average tariff (%)
Winter Rainfall	17	16	67	2,7
Karoo	39	8	53	2,7
E. Cape	30	9	61	3,1
N. Cape & W. OFS	9	15	76	3,8
Central & S. OFS	25	17	58	3,6
Natal	4	25	71	3,6
Highveld	10	15	75	3,4
N. & E. Transvaal	4	13	83	3,1
<b>Total</b>	<b>21</b>	<b>14</b>	<b>65</b>	<b>-</b>
Average tariff (%)	2,0	2,8	3,7	3,2

mentioned non-agricultural influences on land value due to either mining or urban potential. Thus the average increase in land value for 28 respondents from the Highveld Region was R1 343 per hectare. However, there was no evidence to suggest that rents paid were out of line with local conditions.

TABLE 7 - Regional Leasing Arrangements by Period of Rental Agreement

Region	Sample %				Average tariff (%)
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	
Winter Rainfall	13	15	44	28	2,7
Karoo	8	32	36	24	2,7
E. Cape	6	55	18	21	3,1
N. Cape & W. OFS	4	55	28	13	3,8
Central & S. OFS	14	54	21	13	3,6
Natal	33	13	25	29	3,6
Highveld	10	50	32	8	3,4
N. & E. Transvaal	17	46	33	4	3,1
<b>Total</b>	<b>10</b>	<b>40</b>	<b>32</b>	<b>18</b>	
Average tariff (%)	3,7	3,2	3,3	2,6	3,2

### Guide to normal market transactions in 1982

By separating commercial 'arms-length' transactions from family or special arrangements, a more realistic idea of rents was obtained, although these were based on smaller numbers of questionnaires, as is shown in Table 8.

TABLE 8 - Extraction of Normal Market Transactions

Subcategory	Number		Average tariff (%)	
	Total	Market only	Total	Market only
Lessors	217	128	3,0	3,3
Lessees	376	241	3,3	4,0
Farming types:				
sheep	169	100	3,2	4,2
beef	42	28	2,5	2,7
sheep & beef	108	54	3,1	4,2
mixed	184	115	3,0	3,4
crop	90	58	4,2	4,3

When the market transactions were further subdivided by the year in which the rent was fixed (i.e. time series), an interesting picture emerged in Table 9.



TABLE 9 - Market Leases by Year Rent Fixed

	(Tariff percentages)						
	1982 short term*	1982 long term	1981	1980	1979	1978	1977 and prior
Farming types:							
sheep	4,5	5,1	4,5	3,5	3,1	3,9	2,6
beef	2,9	2,2	2,7	2,7	4,3	2,1	2,8
mixed	6,9	3,0	3,5	3,1	3,3	2,5	2,3
crop	5,4	2,7	4,3	4,2	5,5	2,9	4,6
<b>Total</b>	<b>5,3</b>	<b>3,9</b>	<b>4,0</b>	<b>3,4</b>	<b>3,5</b>	<b>2,9</b>	<b>2,7</b>

\*Up to one year

Therefore there is evidence to support the proposition of a time-lag, and rents set in certain years were relatively high, e.g. 1981 for sheep, 1979 for beef and crops. Various reasons for these results may be suggested (e.g. the weather or the stage in the livestock cycle) and this matter merits further research. With the exception of sheep farm leases, short-term tariff rates are at a premium compared to long-term ones.

#### Respondents' comments

Respondents were specifically asked whether they had found the enclosed newsletter (summarising the results of the previous rent survey) 'interesting'. Those ticking the favourable box amounted to 89% of the total, with 5% negative and 6% 'don't know', which suggests that the project is on the right lines.

A further indication of the interest shown is the number of personal comments made. While it is difficult to classify remarks without the involved use of scaling techniques, 11% of the total sample made additional comments about their own agreement. A further 7% referred to aspects of the literature received, 5% mentioned rental conditions in their own district, with 7% making general observations as to the state of the rental market and land tenure; tax considerations were not referred to. It is significant that both product prices and inflation were often mentioned in the context of rents and several contracts incorporated escalation clauses. With the existence of a time-lag as shown above, a factor worth investigating in future is to what extent expectations of price increases influence rental negotiations. Feed-back is therefore useful in planning subsequent mail surveys and prior to field investigations.

#### Conclusion

Questions arising from agricultural rents and associated problems are frequently discussed overseas; in South Africa research in this field appears promising. In general a significant proportion of leasing agreements in the Republic are subject to two influences: family or special arrangements and long-term contracts at fixed cash rates. Although their frequency varies from region to region, they tend to result in a lower payment than might be expected commercially.

Important parameters in determining short-term rental rates for land are: the productivity of the land and the degree of local competition. Both factors are to some extent dependent on rainfall, especially in extensive grazing areas.

Data collected suggest that even normal market rents are generally low in comparison to today's land values or low compared to interest on borrowed capital. However, where there is a high degree of competition - for example in tender situations - the outcome is a rent said to be high relative to output value.

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