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EXTENSION SERVICES AND THE GRAZIER ON THE SOUTH-WEST SLOPE

by

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4. SUMMARY AND CONCLUSION

In this article information is presented regarding the extent to which graziers in a portion of the South West Slope have availed themselves of the extension services offered by the Department of Agriculture. Some analysis is also made of the characteristics of those who have had most, and of those who have had least, contact with the extension services. The material on which the article is based was collected, late in 1954 and early in 1955, from a random sample of 150 graziers residing in the shires of Gundagai, Tumut, Tumbarumba, Holbrook and Kyeamba. A full description of the survey area and the sampling method, has already been published in this *Review*.¹

1. GRAZIERS' CONTACTS WITH EXTENSION SERVICES

It is evident from Table I that the most popular means of obtaining information regarding approved and new agricultural practices is by attending field days: 77 per cent of the graziers interviewed had attended field days at one time or another, and 56 had been present at a field day in the 12 months prior to the survey. Quite a high proportion (64 per cent) of the graziers had met one or more of the local extension officers, but a number of these meetings had been of a casual or social

¹ See Vol. 23, No. 2 (June, 1955) pp. 59-82. Other articles dealing with the survey have appeared in Vol. 24, No. 2 (June, 1956) pp. 74-100 and Vol. 24, No. 3 (September, 1956) pp. 166-172.

nature only. Even so, one out of every two graziers had actually sought the advice of extension officers, and 40 per cent had been visited at their properties by officers at some time. Similar proportions (40 per cent) received the *Agricultural Gazette*, and had obtained pamphlets published by the Department.

These figures reveal a degree of utilisation of extension services which at first sight might appear surprisingly high. It should be noted however that *all* contacts have been recorded in Table I, and many of these

TABLE I
Graziers' Contact with Departmental Extension Services

Number (or per cent) of Graziers Who Had—	Tumba-rumba		Hol-brook		Kye-amba		Tumut		Gunda-gai		Survey Area	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Met Extension Officers	26	96	17	47	17	65	20	74	16	47	96	64
(a) and sought their advice	20	74	12	33	15	58	16	59	11	32	74	49
(b) casually or socially only	6	...	5	...	2	...	4	...	5	...	22	15
2. Originally Contacted Extension Officers												
(a) on own initiative	12	44	6	17	11	42	14	52	9	26	52	35
(b) on officer's initiative	3	...	5	...	3	...	1	...	4	...	16	11
(c) at field day or meeting	9	...	6	...	1	...	3	...	1	...	20	13
(d) in other circumstances	2	...	...	...	2	...	2	...	2	...	8	5
3. Been Visited by Extension Officers ...	18	67	8	22	12	46	10	37	12	35	60	40
4. Attended Field Days	25	93	31	86	18	69	21	77	21	62	116	77
(a) in previous 12 months	21	78	21	58	13	50	13	48	16	47	84	56
(b) in previous 3 years	4	...	4	...	5	...	5	...	2	...	20	13
(c) but not in previous 3 years ... ..	...	...	6	...	...	...	3	...	3	...	12	8
5. Obtained the "Agricultural Gazette" ...	12	44	11	31	15	58	12	44	10	29	60	40
6. Obtained Departmental Pamphlets ...	16	59	13	36	10	38	9	33	13	38	61	41
7. Had no Contact at all with Extension Services ... ..	...	...	4	...	3	...	5	...	10	...	22	15
8. Had Contact through Field Days Only ...	1	...	10	...	1	...	1	...	5	...	18	12
9. Been Unaware that Department's Advisory Services Are Free ... ..	...	...	5	...	...	...	3	...	5	...	13	9
Number of Graziers in Sample	27		36		26		27		34		150	

would have been of a rather cursory nature, and some would have occurred many years ago. There is no reason to believe that the sample was biased in favour of persons having had dealings with the extension services, except that soldier settlers—who tend to receive extra attention from extension officers—were somewhat over-represented in it.² For this reason it was decided to treat the two groups, soldier settlers and others, separately. This is done in Table II, which shows that for all types of contact soldier settlers have had more to do with the extension services than the other graziers have. However, to reduce their representation in, or even eliminate them from the sample would not substantially alter the picture given by Table I.

² There were 36 soldier settlers in the sample, whereas had they been represented in the same proportion as they bear to the total population of graziers in the area, they should have numbered about 29.

TABLE II
Comparison between Soldier Settlers and Other Graziers in their Degree of Contact with the Extension Services

Proportion of Graziers Who Had—	Soldier Settlers	Others	All Graziers
Met Extension Officers	75	60	64
Originally Contacted Extension Officers—	Per cent	Per cent	Per cent
(a) On Own Initiative	32	35	35
(b) Otherwise	43	25	29
Been Visited by Extension Officers	54	35	40
Attended Field Days	95	72	77
In previous 12 months	73	50	56
In previous 3 years	19	12	13
But not in previous 3 years	3	10	8
Obtained the "Agricultural Gazette"	46	38	40
Obtained Departmental Pamphlets	46	39	41
Had no Contact at all with Extension Services... ..	3	19	15
Had Contact through Field Days only	14	12	12
Been Unaware Department's Advisory Services are Free	5	10	9

Table I also shows that there is a small group of graziers who have had no contact with the extension services at all, and another small group whose only contact has consisted of attending field days. Together these two groups account for 27 per cent of the graziers interviewed. One-third of these men (or 9 per cent of the whole sample) were unaware that the Department's advisory services are free of charge. Ignorance on this point would thus appear to be of small importance in inhibiting contact between graziers and the extension services. Such ignorance is an indication of general apathy on the part of the persons concerned regarding the extension services and what they have to offer the grazier, and it is unlikely that many of the 9 per cent would seek extension advice on being informed that it was available free of charge.

Ignorance of what *specific* services are available may, however, be a more serious factor inhibiting the demand for those services. For instance, one-fifth of the graziers did not know that the *Agricultural Gazette* is available free of charge. On the other hand, 40 per cent, although aware that it was available—and when given the opportunity, asked to be sent it—had not bothered to arrange to receive it.

Rather large differences as between shires in the degree of contact is evident in Table I. It is not proposed to pursue this aspect here, however, since there is reason to believe that the sample is not large enough to permit of reliable shire-by-shire comparisons.

2. AN EXTENSION SCORE

Table I distinguishes one particular group of graziers, viz. those who have had little or no contact with the extension services. It would be useful to be able to distinguish other groups, according to the extent

of their contact with extension officers and activities. To this end a "contact with extension score" has been devised: each grazier has been allocated a score according to the following formula:—

<i>Type of Contact</i>	<i>Score</i>
Had met extension officer(s) on his own initiative ..	2 points
Had written or phoned to Departmental officer(s) for advice	2 points
Received the <i>Agricultural Gazette</i>	2 points
Had obtained pamphlets from the Department ..	2 points
Had attended a field day in the previous 12 months	2 points
Had attended a field day in the previous 3 years ..	1 point

Since no information was available as to how often each grazier had consulted a Departmental officer, or how many pamphlets he had received, etc., the score really measures the *variety* of types of contact which he had made. It is reasonable to suppose that those who have had the greatest variety of contacts have also, by and large, made the greatest use of the services that are available.

It should be noted that the score emphasises the *seeking* of advice and gives no weight to casual contacts with extension officers, or contacts made on the initiative of the officer. As a result the "score 0" category does not exactly coincide with the "no contact" group distinguished in Table I.

The number of graziers falling into each score category is as follows:—

Extension Score	0	1	2	3	4	5	6	7	8	9	10
Number of Graziers	29	4	31	5	22	5	25	3	15	3	8

If score categories are grouped as follows, five groups of graziers, of roughly equal numerical size, emerge:

Score	0	1-2	3-4	5-6	7-10
Number of Graziers	29	35	27	30	29

These five groups have been compared in respect of a number of characteristics of the graziers themselves, of the properties they operate, and of the manner in which they operate their properties, in order to discover whether those who have made greater use of the extension services differ in significant and recognisable ways from those who have made less.

3. FARM AND OPERATOR CHARACTERISTICS AS RELATED TO EXTENSION SCORE

Adoption of New and Approved Farm Practices

The relationship between graziers' extension scores and their adoption of various practices is examined in Tables III to VII. It is not surprising to find that new and improved practices tend to be adopted more readily by those persons who have had most to do with the extension services. Although, in some cases the differences are not startling, nor statistically significant, there is a consistent tendency for high extension scores to be associated with a higher than average degree of adoption of these practices, and because of this consistency there is little doubt that if instead of looking at individual practices, we devised some score measuring adoption of improved practices in general, a statistically significant, positive relationship would be found to exist between the two scores.

Some practices—such as the use of rhizobium inoculum, the use of trace elements, the employment of expert sheep classers and the adoption of a high rate of culling—which are relatively new, or are refinements of common practices, tend to be adopted only by graziers belonging to the two groups having highest extension scores. On the other hand the few graziers who do *not* adopt the more widely accepted practices, such as sowing improved pastures and sheep classing, tend to be concentrated in the lowest or two lowest extension score groups.

TABLE III

Relationship between Use of Rhizobium Inoculum and Extension Score

Use Rhizobium Inoculum when Sowing Clovers	Extension Score					All Graziers
	7-10	5-6	3-4	1-2	0	
Yes	13	15	5	6	3	42
		Number of Graziers				
		28	14			
No... ..	16	13	20	28	21	98
		29	69			
Total*	29	28	25	34	24	140

$\chi^2 = 15.241$; significant at 0.1 per cent level.

* Excludes graziers who have sown no improved pastures.

TABLE IV
Relationship between Use of Trace Element and Extension Score

Have tried Molybdenum as a Trace Element	Extension Score					All Graziers	
	7-10	5-6	3-4	1-2	0		
Yes	10	Number of Graziers		3	3	2	26
		8	8				
		18	8				
		41	83				
No... ..	19	22	24	32	27		124
Total	29	30	27	35	29		...

$\chi^2 = 10.315$; significant at 1 per cent level.

TABLE V
Relationship between Culling Rate Adopted and Extension Score

Sheep Culling Rate	Extension Score					All Graziers	
	7-10	5-6	3-4	1-2	0		
20 per cent and higher ...	13	Number of Graziers		5	6	3	36
		9	14				
		22	14				
		30	58				
Up to 20 per cent ...	3	7	7	4	4		25
None	10	10	8	20	15		63
Total*	26	26	20	30	22		124

$\chi^2 = 6.591$; significant at 2 per cent level.

* Excludes graziers who run wethers only.

TABLE VI.

Relationship between Extension Score and Degree of Pasture Improvement of Property

Proportion of Suitable Land Sown to Improved Pasture	Extension Score					All Graziers
	7-10	5-6	3-4	1-2	0	
25 per cent or less ...	4	8	8	11	18	49
				Number of Graziers		
				31	18	
More than 25 per cent ...	25	22	19	24	11	101
				90	11	
Total ...	29	30	27	35	29	150

$\chi^2 = 12.521$; significant at 0.1 per cent level.

TABLE VII

Relationship between Sheep Classing Practice and Extension Score

Sheep Classing	Extension Score					All Graziers
	7-10	5-6	3-4	1-2	0	
Employs Professional Classifier ...	5	5	...	1	1	12
Does own Classing ...	14	15	14	12	7	62
				Number of Graziers		
				53	21	
Does no Classing ...	10	10	8	28	35	63
				20	15	
Total* ...	29	30	22	33	23	137

$\chi^2 = 9.306$; significant at 1 per cent level.

* Excludes graziers who run wethers only.

Education and Experience

Persons having high extension scores tend to differ from the majority of graziers in educational and vocational background. Whereas the majority have received a primary school education only and have spent all their lives (apart from war service, in some cases) on the land, a high proportion of those with high scores have been educated to the secondary or tertiary level, and have had experience in occupations other than farming. (See Tables VIII and IX.) Since the characteristics "higher education" and "non-farming experience" are themselves highly

TABLE VIII
Relationship between Education and Extension Score

Education	Extension Score					All Graziers
	7-10	5-6	3-4	1-2	0	
Primary	8	14	18	20	20	80
		Number of Graziers				
		22	58			
		35	27			
Secondary	16	14	7	11	9	57
Tertiary	4	1	...	...	...	5
Total	28	29	25	31	29	142

$\chi^2 = 11.010$; significant at 0.1 per cent level.

TABLE IX
Relationship between Non-Rural Experience and Extension Score

Non-rural Experience	Extension Score					All Graziers
	7-10	5-6	3-4	1-2	0	
None	9	15	9	16	23	72
War Service only	3	5	10	14	3	35
		Number of Graziers				
		32	75			
		24	9			
Other	15	9	7	1	1	33
Total	27	29	26	31	27	140

$\chi^2 = 17.526$; significant at 0.1 per cent level.

correlated, the question arises whether the relationship between either one and extension score is a purely incidental consequence of the relationship between extension score and the other. (There is also the possibility that the operative relationship is between extension score and some third unrecorded characteristic—such as social status, which, observation suggests, is associated with the two factors under discussion—but this possibility will not be pursued further).

A partial answer to the question just posed is provided by Table X, which shows that *within* the secondary or tertiary education group a similar relationship between extension score and non-farming experience holds as for the sample as a whole.³ Thus non-farming experience would appear to have a significance of its own and not merely be incidentally correlated with extension score, *via* education. Similarly, within the “rural or services experience only” group, those who had received secondary education tended to achieve higher extension scores than those whose education had been at the primary level

TABLE X

*Relationship between Non-rural Experience and Extension Score
(Secondary or Tertiary Educated Persons Only)*

Types of Vocational Experience	Extension Score					All Graziers
	7-10	5-6	3-4	1-2	0	
Non-rural... ..	12	8	2	...	1	23
		Number of Graziers				
		20	3			
		15	24			
Service and/or Rural Only	8	7	5	11	8	39
Total	20	15	7	11	9	62

$\chi^2 = 11.938$; significant at 0.1 per cent level.

only. (See Table XI.) However, this relationship is not nearly so clear-cut as that existing in the sample as a whole. Thus, of the two relationships, that between non-farming experience and extension score would appear to be the more clearly established. Why such a relationship *should* exist, however, may not be so immediately apparent as are the reasons for the relationship between education and extension score; it is suggested, however, that there are good reasons—summarised below—for expecting such a relationship to exist.

³ Only a few graziers who had received primary education only had also had non-farming experience, so that cross-tabulation, holding education constant at the primary level, was not feasible.

- (i) Men with non-rural backgrounds, or who have spent some time in other occupations, have more need of information and advice than those who spent all their lives on the land.
- (ii) Furthermore they are likely—initially at any rate—to seek advice from formal channels, rather than informally, from their neighbours.
- (iii) Most important, however, is the fact that they are more likely to be predisposed towards accepting expert advice and new ideas, since they will be relatively unencumbered by the inertia and prejudice engendered by habit and a life-long acquaintance with traditional farming techniques.
- (iv) Finally, there is the possibility that occupational mobility, in the social stratum with which we are dealing, is a sign of superior intelligence and enterprise.

TABLE XI.

*Relationship between Education and Extension Score
(Persons with Rural Experience Only)*

Education	Extension Score					All Graziers
	7-10	5-6	3-4	1-2	0	
Secondary or Tertiary ...	8	7	5	11	8	39
		Number of Graziers				
		15	24			
		17	51			
Primary Only ...	4	13	14	19	18	68
Total ...	12	20	19	30	26	107

$\chi^2 = 1.549$; not significant at 10 per cent level.

Age and Time of Establishment

There appears to be little, if any, association between age, or time of establishment, and extension score. There is some tendency for both the highest (7—10) and the lowest (0) extension scoring groups to contain a higher than average proportion of older, and longer-established men, but this tendency is not marked. There are some reasons for expecting such a tendency to be present. The building up of a friendly and confident relationship—and with it a wide variety of types of contact—between a farmer and extension officers is a process

TABLE XII
Relationship between Extension Score and Age

Extension Score	Age		
	Less than 40	40-49	50 and over
	Number of Graziers		
7-10... ..	9	6	12
5-6	11	10	8
3-4	10	8	8
1-2	14 (35)	11 (29)	8 (24)
0	7	7	14
Total	51	42	50

$\chi^2_4 = 6.383$; not significant at 10 per cent level.

that would in most cases take some time. Hence one would expect the highest extension scores to be obtained by men established on their properties for a number of years at least.

TABLE XIII
Relationship between Extension Score and Time of Establishment on Present Property

Extension Score	Time of Establishment	
	Before 1940	1940 and Later
	Number of Graziers	
7-10	14	14
5-6	10	19
3-4	3	23
1-2	7 (20)	26 (68)
0	13	14
Total	47	96

$\chi^2_3 = 10.677$; significant at 5 per cent level.

At the same time, one might expect to find a higher proportion of unco-operative and uninterested persons among the older generation. The younger generation may, as a whole, be more willing to seek extension advice, but not have had time to have had the variety of contacts making for high extension scores.

Attitude to Borrowing

Graziers with extension scores of 0—4 are about equally divided in their attitude to borrowing, 36 being favourably disposed, and 38 having an unfavourable attitude to it. By contrast, an overwhelming majority—(42 to 9) of those with extension scores of five or more have a favourable attitude to borrowing.

Attitude to borrowing may be thought of as being primarily an indicator of attitude to risk-taking in general. However, the majority of those who are against borrowing have not considered the question, "How much am I prepared to borrow?" and decided that the answer is nothing. They "Don't believe in it," "Have never considered it", try to "Pay their own way",—to quote some typical answers. This sort of opposition to any borrowing at all may stem from unfamiliarity with the use of credit, or from such attitudes as suspicion of "the banks", and the feeling that it is in some way shameful to be in debt,—rather than from aversion to risk-taking in general. (Persons who express these attitudes frequently take risks in such matters as overstocking, failing to conserve fodder, etc.). The possession of these attitudes (or their opposites) are indicators of class affiliation or social status, rather than of any other single factor. Aversion to borrowing is typically a working class and lower middle class attitude. Persons of higher social status, on the other hand, usually regard borrowing as a normal aspect of business life. An unfavourable attitude to borrowing is also, in many instances, associated with the lack of business ability in general.

Property Size

No definite relationship is evident between property size—whether measured by area—(Table XIV)— or by labour force—(Table XV)— and extension score. There does appear to be some tendency, however, for the operators of the larger properties to belong to one of the two extreme score categories. Very large properties are well represented in the highest scoring category, and moderately large properties tend to be found in the lowest category.

TABLE XIV
Relationship between Extension Score and Size of Property

Extension Score	Property Size (acres)	
	Less than 1,500	1,500 or more
	Number of Graziers	
7-10	15	14
5-6	22	8
3-4	17	10
1-2	26 (65)	9 (27)
0	11	18
Total	91	59

$\chi^2 = 11.091$; not significant at 10 per cent level.

In so far as extension score and property size are negatively associated, the explanation may reside in the different type of property management practised on large and small holdings. Smaller properties tend to be more intensively operated than the larger, and the extension

TABLE XV

Relationship between Number of Men Employed and Extension Score

Number of Men Employed	Extension Score				
	7-10	5-6	3-4	1-2	0
1	6	10	11	22	8
2	10	13	9	4	11
3 or more	13	7	7	8	10

services have more to offer to those practising an intensive form of land utilisation than to those engaged in the simpler forms of husbandry associated with running large flocks of sheep on large tracts of land. Cutting across this association, if it exists, is the fact that some large—and in particular, some very large company-operated—enterprises have undertaken ambitious developmental programmes.

4. SUMMARY AND CONCLUSION

It is obvious that many factors, including chance, may play a part in moulding a person's attitude to the Department's extension service, their aims and activities, and in determining the extent to which he makes use of the services that are available. In this study it has been possible only to look at some easily observed factors which, *a priori*, might possibly be relevant in this connection. Despite the limited number of characteristics studied and the fairly crude statistical methods employed, some marked contrasts are evident in the characteristics of the two extreme extension score groups. Perhaps the most striking difference between the two is in their background and experience. A high proportion of the highest scoring group had a non-rural background or had spent some time in non-rural occupations, whereas the lowest-scoring group was composed almost exclusively of persons who had spent all their lives on the land—and, in many cases on the one property.

The two groups also differ in educational attainments, attitude to borrowing, and in readiness to implement new and approved farm practices. Individual graziers make use of the Department's extension services in markedly differing degrees. Of the 150 graziers interviewed, about one-fifth had had no contact at all with the extension services, and another fifth had had very little contact.

Both the extreme groups differ from the rest of the sample, and resemble one another, in containing an above-average proportion of older men, and operators of larger properties. The explanation of the age differences may be that strongly positive and strongly negative attitudes to the extension services take time to crystallise.

It is also likely that if some assessment of graziers' social status had been made, a good correlation between social status and extension score would have been revealed.

It is evident that extension services have had a markedly differing impact on different individuals and groups of graziers. If sample and survey region are broadly typical of the overall position, it would appear that there has been no contact between the extension services of the Department and roughly 20 per cent of farm operators. On the same assumptions, and also assuming that the score used here is a reasonable measure of the degree of contact, another 20 per cent would appear to have had fairly close contact with extension services.

It is also clear that extension activities have a far from random impact on the farm population. As has been shown, those who are most receptive of extension information and advice tend to share a number of characteristics which mark them off from the rest of the population. In general it can be said that they constitute the more able and enterprising stratum of farmers. Greatest use of the extension services is made by those who are likely to derive the greatest benefit from them.

The wide differences existing in the abilities and attitudes of individuals and groups of farmers pose problems for extension policies. The choice between different extension media, or between different types of emphasis in extension material, could depend on an assessment of which group it was desired to influence. More general problems also arise; for example, to what extent, if any, should extension policies *consciously* accept the present situation by concentrating on the "upper 20 per cent" who are likely to make best use of services that are available.