

FARMERS' ATTITUDES TO RURAL ADJUSTMENT ASSISTANCE: RESULTS OF A SURVEY IN JEMALONG SHIRE, N.S.W.*

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The Australian Government has provided adjustment assistance to the rural sector since 1970 under several schemes. The demand for assistance has been lower than expected, given the alleged size of the problem, particularly for the 'welfare' oriented provisions. The results of a survey of farmers' attitudes to the current Rural Adjustment Scheme are examined in an attempt to explain this phenomenon. Measures designed to ease financial difficulties or to facilitate on-farm adjustment were much preferred to those designed to assist farmers to leave agriculture. Considerable confusion about the scheme was evident and many farmers thought that information about the scheme was inadequate. Better extension and counselling is suggested to improve information flows to farmers. The formulation of a more structured set of eligibility criteria is also suggested to reduce the complexity and uncertainty which farmers face when they are considering lodging an application for assistance.

Introduction

Since 1970, the Australian Government has provided a range of assistance measures designed to facilitate resource adjustment in agriculture in response to changing economic conditions. These measures are designed to meet both efficiency and welfare objectives: the former by facilitating efficient resource allocation and the latter by providing support to those who have borne a disproportionate share of the costs of structural change in agriculture.

Despite the existence of a range of policies and measures to promote rural adjustment, the number of applications for assistance under the various schemes have been fewer than expected, given the alleged size of the problem. This is particularly so for the 'welfare' oriented provisions as many farmers choose to remain in agriculture earning low farm incomes rather than to leave.

The apparent low uptake of assistance may be partially explained by Johnson's 'asset fixity theory' (see Johnson and Quance 1972) as used in a policy context by Kingma and Samuel (1977). Adjustment may not appear to be taking place because of a perceived 'gap' between the asking and offer prices for farm resources. Society, through the government, has perceived a 'gap' and has judged that assistance is required by providing a range of adjustment assistance measures. However, government assistance provisions may not be sufficient to fill the number of individual 'transaction gaps' which exist, given that a perceived lack of

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adjustment continues. The low demand may also reflect a lack of understanding of these schemes.

The aim in this study is to explore this apparent low demand by reference to a survey of farmers' attitudes to adjustment assistance and, in particular, to the current Rural Adjustment Scheme (RAS). These attitudes are important, as they are likely to be determined by, and reflect:

- (a) information flows to farmers;
- (b) the relevance of the RAS to the individual farmer, given the eligibility criteria; and
- (c) the usefulness of the provisions of the RAS to the individual, if eligible.

Thus, an understanding of these attitudes will help in evaluating some of the factors causing the low demand for assistance and whether or not the RAS scheme is meeting its objectives.

In the next section we provide a theoretical structure for the subsequent analysis of the factors influencing attitudes to, and the uptake of, adjustment assistance. Some of the problems involved in the interpretation of attitudes, and the statistical methods used in the paper, are then briefly discussed. This is followed by an analysis of farmers' responses to adjustment policy with reference to the role of the Government in adjustment, the RAS provisions and some of the general aspects of the scheme. A summary and conclusions complete the paper. As background to this paper we have included a description of the adjustment schemes, the eligibility criteria and take-up rates during the 1970s in Appendix A.

Factors Influencing Attitudes to and the Uptake of Adjustment Assistance

Kingma and Samuel (1977, p. 212) argued that:

. . . the provisions of an assistance scheme, assuming full information to farmers, will define the set of producers who will seek assistance on efficiency/welfare grounds. Those producers who do not step forward to receive assistance under these provisions can be deemed to have made the judgment that returns received from their resources/labour are highest in their present occupation (agriculture).¹

Investigation into farmers' attitudes is justified because of the link between limited public funds available under the provisions of an adjustment scheme and the nature and extent of the 'transaction gaps' to be filled.

The assumption of full information to farmers is unlikely to be valid. Whilst information flows and the individual's ability to acquire, decode and sort market and technical information efficiently are argued here to be important, their effects are often left out of consideration under assumptions of full information and instantaneous adjustment.² More important than the unlikelihood of instantaneous adjustment is the fact

¹ Non-adjustment may be consistent with efficiency of resource allocation and may reflect an interrelated combination of benefits arising from the use of resources which are not marketed, the low opportunity costs of remaining on the farm, obstacles to adjustment caused by institutional factors, market failure and so on, and the rapidity of change in economic conditions (see Kingma and Samuel 1977, pp. 205-8).

² For discussion of the economic importance of an individual's allocative ability see Huffman (1974), Schultz (1975), and Menz and Longworth (1976).

that, even if it were possible, it may not always be economically rational to make all of the required reallocation of resources instantaneously. A farmer may need time to assess his economic position and, even if he were to perceive the need to adjust, he may be uncertain as to which action is appropriate and of the consequences of such an action. He may or may not take action on the basis of the best combination of existing information. If no action is taken, it may be because he prefers to seek new evidence to reduce uncertainty as to the appropriate decision to take and its consequences.³

Thus, some of the 'transaction gaps' may be narrowed by an improved information flow as well as changing the eligibility criteria and provisions. This is primarily because the perceived lack of adjustment can be a function of uncertainty and the complexities involved in evaluating the alternatives in an adjustment decision, as well as the risk involved in undertaking, or not undertaking, adjustment.

The Survey of Farmers' Attitudes: Method and Interpretation

The attitudes of farmers towards adjustment assistance reported in this paper are from a survey of farmers in 1978 in the Jemalong Shire in the Wheat-Sheep Zone of central N.S.W. The survey population consisted of all farmers who owned or operated properties of at least 10 ha and who used their land for primary production. Properties used solely for the production of fruit or vegetables were excluded. The survey population consisted of approximately 650 farmers.

A two-phase sample design was used. In the first phase, a postal questionnaire was sent to all those in the survey population. By the use of follow-up letters, a final response rate of 83 per cent was obtained for the first phase.⁴ On the basis of responses to questions on changes in farm size and land use and whether or not adjustment assistance had been applied for, the population was divided into eight strata. The second phase of the survey involved personal interviews of a sample of 72 farmers, selected by taking a systematic random sample from each of these strata. Equal numbers of sample points were selected from each stratum to ensure that a range of attitudes would be included in the sample. To correct for the over-representation of certain strata in the sample, the data were weighted to represent the population of the 534 farmers who responded to the postal questionnaire. Accordingly, the results of the interview survey that are reported are weighted percentages rather than unweighted raw sample frequencies. Use of the latter would have resulted in biased estimates. Further details are reported in Robinson and McMahon (1980, pp. 28-9).

In an attempt to measure attitudes to the role of the Government in adjustment and to some general aspects of the RAS, farmers were asked to indicate whether they agreed, disagreed or were uncertain about a number of specific questions or items. The method used to arrive at the final set of attitudes reported in this paper, was as follows. Initially, a

³ For an exposition on the theory of uncertainty and information see Hirshleifer and Riley (1979).

⁴ A sample of 15 of the non-respondents (approximately 115) were contacted and their responses to the first-phase questionnaire did not seem to differ from the results of those who had responded initially.

larger number of items were hypothesised as being relevant to farmers' attitudes to the role of the Government and some general aspects of the RAS. These items were pilot-tested and the number used was reduced by deleting the items which proved to be ambiguous.⁵

A different approach was used to measure farmers' responses to a number of questions about the provisions of the RAS. Farmers were asked the hypothetical question of whether or not they would apply for each of the six provisions of the RAS if they were eligible. Those who indicated that they would not apply were then asked if there were any circumstances under which they would consider applying. Further information about farmers' attitudes to the RAS provisions was gathered informally by the interviewers.

As is to be expected with an exploratory study such as this, some difficulties were encountered in the interpretation of the attitudinal information collected. It was not clear whether the attitudes of all farmers surveyed would be meaningful, given that the RAS is aimed at only a specific subset of farmers. This problem was compounded by two factors—first, some of the farmers surveyed had previously applied for assistance and, second, many farmers had little or no knowledge of the scheme.

To examine whether the attitudes of all farmers could be considered as homogeneous, the farmers were split into two groups on the basis of whether or not they were likely to be eligible for RAS assistance.⁶ The chi-square test of homogeneity was used to test for statistical differences in attitudes between these two groups of farmers. In most cases there was no significant difference in the attitudes of the 'potentially eligible' and 'potentially not eligible' farmers.⁷

Similar tests for differences in attitudes using the chi-square statistic were conducted on the basis of whether or not farmers thought RAS information was adequate and whether or not they had previously applied for RAS assistance. In most cases, the attitudes measured in this study were not found to vary between those who thought that RAS information was adequate and those who thought it was not; and no significant differences were found in any of the attitudes measured between farmers who had previously applied for assistance and those who had never applied. The attitudes of all farmers in the survey are reported, except in the few cases where significant differences were found between the above sub-groups. The relative standard errors of the estimates presented in this paper are reported in Appendix B.

⁵ This and other methods of attitude measurement are discussed in detail in Moser and Kalton (1975, pp. 350-77).

⁶ It was difficult to determine, other than in a subjective manner, whether or not a farmer may be eligible for assistance as each application for assistance is processed individually by the particular state government authority subject to the general eligibility conditions set down in the Rural Adjustment Act. We defined farmers who had substantial cash incomes and off-farm investments and/or who were employed full time off the farm as potentially not eligible for assistance, as these farmers would be unlikely to meet the eligibility criteria.

⁷ The differences between the groups were tested at the 5 per cent level of significance. The intuitive meaning of the significance is that, with repeated sampling, the null hypothesis of no difference between the groups with respect to differences in attitudes, if true, would have yielded a calculated chi-square statistic as great as, or greater than, the critical value only 5 per cent of the time. Accordingly in these cases, the null hypothesis was accepted.

TABLE 1
Farmers' Attitudes to the Role of the Government in the Adjustment Process: Jemalong Shire, 1978

Attitude	Response			
	Agree	Disagree	Uncertain	Total
	%	%	%	%
It is the responsibility of each individual farmer to adjust to the changes in the economic situation	88	4	8	100
The Government has a responsibility to look after primary producers who are in financial difficulties through no fault of their own	62	28	10	100
Government assistance is needed to help farmers make changes to their farm operations (e.g. improving fixed structures, buying more land)	69	21	10	100

Farmers' Responses to Rural Adjustment Policy

Attitudes to the role of the Government in adjustment

Farmers' attitudes toward government involvement in adjustment were sought to determine whether or not they perceived the Government to have a role in facilitating adjustment. These attitudes are shown in Table 1.

Most farmers (88 per cent) considered it to be their individual responsibility to adjust to changes in the economic situation. Many of them also considered that the Government has a role to play in assisting this process. A majority of farmers (69 per cent) approved of government assistance designed to facilitate on-farm adjustments. Almost two-thirds of the farmers considered that the Government has a responsibility to assist farmers in financial difficulties through no fault of their own.

These results show that, whilst most farmers considered it to be their individual responsibility to undertake adjustments, the majority of farmers also recognised a general need for both welfare and efficiency-based government assistance in the adjustment process. What appears to be a contradiction in attitudes can be explained when it is realised that these attitudes probably reflect both their social values and the value of the existing assistance measures to the individual.

Strong social values were evident in the attitudes to welfare assistance. Amongst a substantial minority, a strong work ethic was evident as 38 per cent of farmers disagreed with or were uncertain as to whether the Government has a responsibility to look after farmers in financial difficulties through no fault of their own. On the other hand, assistance measures designed to facilitate on-farm adjustment were approved of by nearly 70 per cent of farmers.

Attitudes to some general aspects of the Rural Adjustment Scheme

Further information was sought about farmers' attitudes to some

TABLE 2

Farmers' Attitudes to Some General Aspects of the RAS: Jemalong Shire, 1978

Attitude	Response			Total %
	Agree %	Disagree %	Uncertain %	
(i) <i>Attitude toward accepting assistance</i>				
Asking for adjustment assistance is admitting defeat as a farm operator	21	69	10	100
(ii) <i>Attitudes toward the eligibility criteria</i>				
Adjustment assistance is too difficult to obtain	24	27	49	100
The Rural Assistance Board should not be a lender of last resort	51	32	17	100
Not everyone who receives assistance deserves it	55	14	31	100
(iii) <i>Attitudes toward the effectiveness of the scheme</i>				
Current schemes do not help farmers to make adjustments	13	34	53	100
Short-term measures only postpone the inevitable	32	42	26	100

aspects of the operation of the scheme generally and, in particular, attitudes towards accepting assistance, the eligibility criteria and the effectiveness of the scheme.

Farmers were asked whether they agreed or disagreed with a series of statements relating to these aspects of the RAS. The responses to these statements are shown in Table 2.

Most farmers did not hold strong attitudes against asking for or accepting adjustment assistance. Over two-thirds of farmers felt that asking for adjustment assistance was not admitting defeat as a farm operator. It appears that the low demand for assistance cannot be explained in terms of farmers being opposed to accepting assistance in principle.

Assistance funds are allocated amongst farmers according to the eligibility criteria. Opinion was divided as to whether or not the eligibility criteria make adjustment assistance too difficult to obtain, with nearly half of the farmers being uncertain. However, over half of the farmers felt that some inequities in the allocation of funds exist as 'not everybody who receives assistance deserves it'. A common attitude expressed was that some farmers who received assistance did not meet the criterion that 'financial difficulties are due to circumstances beyond the applicant's control'. Over half of the farmers were opposed to the condition that assistance is available only when finance is unavailable from any other source, because of the inevitable lags in this process.

Attitudes toward the effectiveness of the scheme were divided, with 34 per cent of farmers regarding the RAS as effective in assisting farmers to make adjustments and 42 per cent of farmers regarding short-term measures as an effective form of assistance. Over half of the farmers were

TABLE 3

Farmers' Attitudes to the Provisions of the RAS: Jemalong Shire, 1978

Provision	Response				Total	Have applied (as a proportion of total)
	Would definitely apply	Would apply under some circumstances	Would definitely not apply	Uncertain		
	%	%	%	%	%	%
Carry-on Finance	66	10	17	7	100	3
Farm Build-up	60	6	27	7	100	4
Debt Reconstruction	49	11	27	13	100	4
Farm Improvement	45	13	38	4	100	2
Household Support	26	16	55	3	100	0
Rehabilitation	25	31	42	2	100	0

uncertain about whether or not the scheme was effective in helping farmers to adjust.

The relatively high proportions of farmers who were uncertain about these aspects of the RAS, particularly with respect to whether or not assistance is difficult to obtain and with the effectiveness of the scheme in helping farmers to adjust, suggests that the level of knowledge about adjustment policy held by many farmers was relatively low. This issue is discussed later.

Attitudes to the provisions of the Rural Adjustment Scheme

The type of assistance which is considered useful by farmers can best be determined by examining the attitudes held by farmers toward the provisions of the RAS. However, it is recognised that attitudes are determined, *inter alia*, by information flows and, therefore, it was necessary to acquaint the respondents with each of the provisions before seeking their attitude. Farmers' attitudes to each of the six provisions of the RAS (Appendix A) were obtained by asking them whether or not they would apply if eligible. The responses obtained are shown in Table 3.

In terms of the proportions of farmers who stated they would 'definitely apply' for assistance if eligible, Carry-on Finance and Farm Build-up assistance were generally considered to be the most useful forms of assistance. This is not surprising, considering the financial pressures faced by farm families during periods of severe market downturn, or the relatively large investment that is usually required for the purchase of additional land.

The Debt Reconstruction and Farm Improvement provisions were less popular, perhaps reflecting the emerging economic improvement in the rural sector in 1978 and the normally smaller investment required for farm improvement than Debt Reconstruction and Farm Build-up.

Only about one-quarter of farmers stated they would definitely apply for either Rehabilitation Assistance or Household Support if eligible. For these measures, the proportion of farmers who would not apply under any circumstances was high.

There is, of course, a question as to the value of elicited responses to questions about hypothetical situations. The less relevant the RAS provisions are to a farmer, the more questionable is the relevance of his answers. To overcome this difficulty, an attempt was made to identify the farmers who would be potentially eligible for assistance, in order to compare their responses with the responses of those who would be unlikely to be eligible for RAS assistance (see footnote 6).

The results of this analysis revealed that, with respect to the provisions of the RAS, the attitudes to the provisions held by those 'potentially eligible' and by those 'potentially ineligible' were different only in the cases of the Rehabilitation and Farm Build-up provisions. The main difference in attitudes to Rehabilitation Assistance was that nearly 60 per cent of the 'not eligible' group stated that they would 'definitely not apply' even if eligible, whilst less than 30 per cent of the 'potentially eligible' group held this attitude. In the case of Farm Build-up assistance, nearly three-quarters of the 'potentially eligible' group stated that they would 'definitely apply' whilst nearly half of the 'not eligible' group stated that they would 'definitely not apply' even if eligible. The use of several different levels of income and off-farm investment as the criteria for determining membership to the 'potentially eligible' and 'not eligible' groups did not change these results.

This information, however, does not explain in detail why some provisions are considered more useful than others, or what farmers really think about existing adjustment measures. To try to overcome this problem, farmers were asked what they thought of each provision. A wide range of comments were made and only the most important features of the farmers' comments are reported here.⁸

One of the most important features of farmers' attitudes toward the RAS provisions is the consensus about the concessional terms of the assistance measures. The terms of the assistance measures are the responsibility of the various state government administering authorities and do not vary a great deal from state-to-state. Loans made to farmers under the Farm Build-up, Farm Improvement, Debt Reconstruction and Carry-on Finance provisions are usually repayable over periods of up to 30 years at initial interest rates of between 6 and 8.5 per cent. These terms and interest rates are subject to periodic review, depending on individual circumstances.⁹ The concessional terms of these provisions were the most widely recognised and popular feature of the scheme.

The farmers who stated that they would apply only under some circumstances often identified these as being refused loans from banks and other normal sources of finance. Other conditions would be if severe economic conditions made assistance necessary; if the financial

⁸ No attempt has been made to quantify the percentages of farmers who made each comment because of the range of comments made and the informal way in which this information was collected. Many of these comments were made in passing and noted by the interviewers.

⁹ An example of the terms of assistance for N.S.W. is given in New South Wales Department of Agriculture (1979).

difficulties experienced were beyond the individual's control; or if the eligibility criteria were relaxed. However, no specific mention was made of the viability criterion, which is surprising, considering that the viability criterion is the principal condition of eligibility for assistance. Presumably, this aspect of the RAS was not widely known.

This suggests that many farmers see the scheme mainly as an alternative source of credit rather than a scheme specifically aimed at aiding farmers whose properties are potentially commercially viable in the long run, but who are unable to realise this potential without adjustment assistance.

The low demand for Rehabilitation and Household Support

A partial explanation of the low uptake of Rehabilitation Assistance and Household Support may lie in the nature of the conditions of the provisions themselves. Rehabilitation Assistance is limited to farmers whose properties have been purchased under the Farm Build-up provision or who have been unable to obtain Debt Reconstruction Assistance because their properties have been assessed as 'not viable'. Household Support is limited to those farmers whose properties have been assessed as 'not viable' and provides income support up to the level of unemployment benefits while the farmer decides whether or not to leave agriculture. However, there are many farmers who could have applied for and obtained assistance under these provisions but who did not bother to apply. For instance, from 1 January 1977 to 31 December 1979, 747 properties were assessed as 'non-viable' under the Debt Reconstruction provision and some 1800 farms were purchased under the Farm Build-up provision; yet only 70 applications for Rehabilitation Assistance were received.¹⁰ For the same period, the number of farmers potentially eligible for Household Support was 1564 (i.e. the number of farmers refused any RAS assistance on the grounds of 'non viability') and only 264 (or less than 17 per cent) had applied for this assistance (see Appendix Table A.1).

This situation is reflected by farmers' attitudes to these provisions. Even amongst the 'potentially eligible', some 27 per cent of farmers would 'definitely not apply' for Rehabilitation Assistance and approximately 40 per cent would 'definitely not apply' for Household Support.

Rehabilitation Assistance and Household Support are often referred to as the welfare-oriented provisions of the RAS. However, it is unclear whether these provisions are primarily designed to promote efficiency by removing impediments to resource movements out of agriculture or to promote welfare by assisting those who are leaving agriculture and by providing income support while a decision is being made. In either case, the perceived low uptake of Rehabilitation Assistance and Household Support can best be explained in terms of the failure of these provisions to provide enough assistance to achieve either objective.

Income support for low-income farm families and aged low-income farmers is better catered for under the social security provisions of

¹⁰ In the case of Farm Build-up, a further condition is that the applicant would suffer financial hardship in the absence of Rehabilitation Assistance, so that only a small percentage of the 1800 farmers who sold their farms under Farm Build-up would have met this condition.

unemployment benefits and the old age pension. Since May 1976, farmers have been able to obtain unemployment benefits, without having ceased all farming activities or having to make a commitment to cease farming as is required under the Household Support provision. Hence, it is clear that Household Support does not offer any real incentive to adjust out of agriculture; it merely offers the same as the unemployment benefit, but at the same time requires a commitment that many farmers find hard to make.

Farmers' awareness of the Rural Adjustment Scheme

It is necessary that farmers should be aware of the existence of the RAS if the scheme is to be effective. If deficiencies exist in information flows to farmers about the RAS, then the resulting allocation of limited public funds for adjustment assistance is likely to be sub-optimal in terms of meeting the RAS objectives.

Over one-quarter of farmers were uncertain about most of the items in Table 2 concerning the eligibility criteria and the effectiveness of the RAS. Many farmers had difficulty in answering questions about the RAS provisions as described earlier and, in general, most farmers had limited knowledge about the eligibility criteria, particularly about the commercial viability criterion. Yet it cannot be said that an information problem exists on the basis of this information alone.

A method which was used in an attempt to establish the existence or otherwise of an information problem was simply to ask farmers whether they agreed, disagreed or were uncertain that 'information about the type of assistance available from the Rural Assistance Board is inadequate'. Farmers were also asked whether or not they thought a high level of confusion existed amongst farmers about the RAS. The responses of farmers to these questions are shown in Table 4.

A majority of farmers (65 per cent) was either uncertain as to the adequacy of information about the RAS or considered the information to be inadequate. Only 35 per cent of farmers considered the information to be adequate. Most farmers (83 per cent) thought that a great deal of confusion surrounded the RAS (or were uncertain as to the amount of confusion).

Several explanations of these results are possible. First, an information problem may exist due to a deficiency in information flows about the scheme to farmers. Second, information flows to farmers may be ade-

TABLE 4

Farmers' Attitudes to Information About the RAS: Jemalong Shire, 1978

Attitude	Response			Total
	Agree	Disagree	Uncertain	
	%	%	%	%
Information about type of assistance available from the Rural Assistance Board is inadequate	39	35	26	100
A great deal of confusion surrounding the RAS	46	17	37	100

TABLE 5

Attitude to Information by Perception of the Degree of Confusion Surrounding the RAS: Jemalong Shire, 1978

Attitude ^a	A great deal of confusion surrounds the RAS			Total
	Agree	Disagree	Uncertain	
	%	%	%	%
Adequate	28	47	25	100
Inadequate	55	2	43	100

^a Those who were uncertain as to the adequacy of information are included in the 'inadequate' category.

quate but, due to the administrative flexibility of the scheme, uncertainty and confusion may exist amongst potential applicants as to how the eligibility criteria will be interpreted and how and by what methods their applications will be processed. Third, an information problem may not exist because those farmers who have little or no information about the RAS may be the farmers for whom the scheme has no relevance as they are never likely to need assistance or are never likely to be assessed as eligible even if they applied.

In a study such as this, it is difficult to test the first proposition that a problem exists in the information flows to farmers. However, an idea of the likely quality of RAS information reaching farmers can be given when the different initial sources of RAS information are considered. Most farmers (89 per cent) had first heard about the RAS through a neighbour, friend or relative or through the media, and 6 per cent of farmers had never heard of the RAS. Only 5 per cent had first heard of the RAS through a Department of Agriculture officer, bank manager or accountant.

The second proposition that the problem is one of confusion as to how the scheme operates (rather than a lack of information about the scheme itself) can be tested by comparing the attitudes of farmers to the amount of confusion surrounding the RAS with whether or not they thought RAS information was adequate. This is shown in Table 5.

Almost all of the farmers who felt that information was inadequate also thought that a great deal of confusion about the RAS existed or they were uncertain; these accounted for two-thirds of the farmers represented in the survey. Over half of the farmers who thought that information was adequate felt that a great deal of confusion surrounded the RAS. Only 17 per cent of all farmers surveyed thought that information was adequate and that no confusion about the RAS existed.¹¹

¹¹ The chi-square statistic was calculated from weighted raw frequencies upon which the percentages shown in Table 5 are based. As weighted frequencies were used to compensate for undersampling, the weighted number of cases was much higher than the unweighted number of cases. In the absence of adjustment for this effect the chi-square statistic may appear to be significant merely because of the artificially large weighted number of cases. The value of the adjusted chi-square statistic was 24.8394 and exceeded the critical value at the 5 per cent level of significance. Therefore, the null hypothesis was rejected.

TABLE 6

Attitude to Information by Farmers who are Potentially Eligible or not Eligible for RAS Assistance: Jemalong Shire, 1978

Attitude ^a	Number of farmers		
	Not eligible	Eligible	Total
	%	%	%
Adequate	46	54	100
Inadequate	42	58	100

^a Those who were uncertain as to the adequacy of information are included in the 'inadequate' category.

The third proposition can be tested by comparing the attitudes to the adequacy of information of farmers defined as potentially eligible for assistance with the attitudes of those who are likely to be 'not eligible' for assistance. There are no significant differences in the attitudes to information, as shown in Table 6.

Similar proportions of farmers felt that RAS information was adequate or not adequate, regardless of whether or not the scheme was likely to have relevance to them.¹² The group of farmers for whom an information problem was likely to exist are those who are 'potentially eligible' for assistance and who felt that RAS information was inadequate (i.e. approximately one-third of the farmers who were surveyed).

On the basis of the evidence above, it seems reasonable to conclude that a problem of information dissemination exists. The amount of RAS information reaching many farmers appears to be inadequate and many farmers are confused as to how the scheme operates. Inequities in the dissemination of RAS information to farmers could mean that the allocation of RAS funds is not only dependent on the eligibility criteria (as is intended), but also on inequities in information flows to farmers.

Summary and Conclusions

An attempt was made in this study to evaluate some aspects of the current RAS by reference to a survey of farmers' attitudes to adjustment assistance in the Jemalong Shire of N.S.W. There is a case for further evaluation of the RAS involving the commitment of resources in excess of those available to the authors for this study. Nevertheless, our results suggest some reasons why the demand for assistance has been lower than expected and which deserve to be investigated further.

Complexities involved for the individual exist in:

- (a) the perception of change;
- (b) the recognition of the need to adjust; and
- (c) how best to undertake adjustment.

Governments, in recognising this, can do much to facilitate adjustment in the rural sector. Uncertainty is a major factor in most agricultural pro-

¹² The adjusted chi-square statistic for Table 6 was 0.7474. This did not exceed the critical value at the 5 per cent level of significance. Therefore the null hypothesis was accepted.

duction and in this environment it must be difficult for the marginal producer to assess when his farm is no longer viable. The simple supply of adequate market information, the provision of technological and management advice and counselling may well hasten adjustment and enable many farmers to cope with change. Governments can also alter the rate of adjustment by altering the terms and provisions in the RAS, although it should be realised that adjustment assistance in the presence of full information does not necessarily promote a more efficient allocation of resources.

With reference to the usefulness and the operation of the RAS, a number of points can be made. First, if minimum welfare support is seen as a basic objective of society and if there is a welfare problem which is not being overcome despite the provision of assistance for non-viable producers to leave agriculture, there is a case for examining the usefulness of those provisions. Whilst the welfare provisions of the RAS require a commitment to leave agriculture and, hence, avoid the problem of assistance preventing adjustment, they offer little incentive by way of relative prices to make that commitment. Similar assistance is also available under social security provisions, with less stringent eligibility requirements and which require no commitment to leave agriculture.

Second, a substantial number of farmers in the survey had little knowledge as to the role of the RAS. A considerable number believed that the information about the scheme was inadequate. Even amongst those who considered information flows to be adequate, there was considerable confusion as to the operation of the RAS. Two possibilities stem from this result. An information problem may exist due to a deficiency in information flows about the scheme to farmers. Alternatively, information flows to farmers may be adequate but, due to the administrative flexibility and vagueness as to the eligibility criteria, uncertainty and confusion exists amongst potential users as to its usefulness.

It is possible that the role of extension in government adjustment policy has not been fully realised. The perception of farmers as to the role and operation of the RAS appears to differ from the part it actually plays. Most farmers perceived the scheme to be an alternative source of credit with more favourable terms than is available from commercial sources. Very few recognised that the scheme is primarily designed to help only those farmers who can demonstrate the ability to return their farms to commercial viability with limited assistance. It appears that those with a higher resource allocative ability and better access to information and professional advice are at an advantage with respect to obtaining rural adjustment assistance. The simple provision of better information about the RAS may actually improve efficiency and equity of the distribution of assistance.

On the second point, the assistance given depends upon a detailed review by the administering authorities of individual farm and farmer circumstances. This case-by-case approach and the lack of information on eligibility appears to create a good deal of confusion and tends to complicate the farmer's decision process. Again, those with higher allocative ability and better professional advice are at an advantage. It is possible to alleviate this problem in at least two ways. The first involves better extension and counselling. Alternatively, there may be advantages in defining a more structured set of eligibility criteria or rules of thumb.

Simon (1979, p. 50), for example, has argued that the elaborate organisations constructed in modern society '... can only be understood as machinery for coping with the limits of man's abilities to comprehend and compete in the face of complexity and uncertainty ...'. In a complex situation, efficiency and equity in its broadest sense may actually be enhanced through institutions and rules that reduce complexity. There is little doubt that a more rigidly defined set of eligibility criteria will reduce the flexibility currently applied in assessing each case on its merits. However, there may be a case for more information on how applications are processed and on the eligibility criteria.

APPENDIX A

A Brief Description of Rural Adjustment Policy in the 1970s and the Provisions and Eligibility Criteria of the Rural Adjustment Scheme

Since 1970, the role of the Government in agricultural adjustment in Australia has been substantial. Nearly \$440m was provided in adjustment assistance to agriculture during the 1970s under several general and industry-specific schemes, as shown in Table A.1. Some 90 per cent of this assistance was in the form of repayable loans with 'soft' terms and conditions.

The current scheme, the Rural Adjustment Scheme (RAS), began in January 1977 and replaced the general Rural Reconstruction Scheme and separate industry schemes for the dairy, beef and fruit-growing industries. The nature of the current RAS and the earlier schemes and their provisions have been described in detail elsewhere (IAC 1976; Threlfall 1977; Barton 1978). The provisions provided under the RAS are summarised below.

Debt Reconstruction assistance provides long-term loans at concessional rates of interest in order to ease immediate financial problems by arranging the refinancing and rearrangement of existing debt and by providing further credit. Farmers facing the prospect of having to sell their properties or other farm assets to cover their commitments, but who are able to demonstrate a return to commercial viability, if assisted, are eligible for this assistance. The two further requirements of eligibility are that finance is unavailable from normal sources and that the present financial difficulties are due to circumstances beyond the applicant's control.

Farm Build-up assistance provides long-term loans at concessional rates of interest to enable farmers to purchase additional land in order to establish long-term commercial viability through economies of size. This provision also indirectly increases the opportunities of farmers who are operating unviable properties and wish to leave agriculture, to sell their properties. To be eligible for this assistance, farmers are required to demonstrate that the built-up property would be of sufficient size to offer sound prospects of long-term commercial viability and that finance is unavailable from normal sources.

Farm Improvement assistance provides long-term loans at concessional rates of interest for property development or diversification. As with Farm Build-up and Debt Reconstruction, farmers are eligible for Farm Improvement if they can demonstrate reasonable prospects of commer-

APPENDIX TABLE A.1

Use of Rural Reconstruction/Adjustment Schemes: Australia 1970 to 31 December 1979^a

Scheme	Applications		Funds
	Received	Approved	approved
	no.	no.	\$'000
A. Industry-specific schemes			
Marginal Dairy Farms Reconstruction Scheme (1970-76)	1 136	576	14 924
Dairy Adjustment Program (1974-76)			
(i) Farm conversion to refrigerated milk	3 033	2 491	14 331
(ii) Amalgamation	550	327	10 598
(iii) Development	1 164	747	4 720
(iv) Diversification	17	7	146
(v) Carry-on	2 908	1 945	6 123
(vi) Relocation	7	6	30
(vii) Assistance to cease dairy farming	55	47	101
Sub-total farm assistance	7 734	5 570	36 049
(viii) Factory assistance	17	13	2 192
Total DAP	7 751	5 583	38 241
Total Dairy	8 887	6 159	53 165
Beef Carry-on Assistance (1975-76)	2 941 ^b	2 941	27 442
Fruitgrowing Reconstruction Scheme (1972-77)	2 761	1 765	5 500
Total industry-specific	14 589 ^b	10 865	86 107
B. General schemes			
Rural Reconstruction Scheme (1971-76)			
(i) Debt Reconstruction	13 841	5 101	123 836
(ii) Farm Build-up	7 083	3 261	104 551
(iii) Rehabilitation	183 ^b	183	534
Total RRS	21 107 ^b	8 545	228 921
Rural Adjustment Scheme (1977-79)			
(i) Farm Build-up	3 272	1 708	71 032
(ii) Farm Improvement	971	536	4 930
(iii) Debt Reconstruction	2 640	1 105	29 974
(iv) Beef Carry-on	1 592	1 352	16 512
(v) Dairy Carry-on	122	78	284
(vi) Winegrape Carry-on	117	76	388
(vii) Rehabilitation	70	57	256
(viii) Household Support	264	235	672
Total RAS (1977 to 31 December 1979)	9 048	5 147	124 048
Total RRS/RAS	30 155 ^b	13 692	352 969
Total all schemes 1971 to 31 December 1979	44 744 ^b	24 557	439 076

^a A number of farmers have applied more than once for more than one form of assistance.

^b Does not include all applications.

Source: Data supplied by state authorities to the Commonwealth Department of Primary Industry.

cial viability with assistance, if finance is unavailable from normal sources.

Carry-on Finance provides for medium-term loans to finance maintenance expenditure during short-term economic downturns in in-

dustries assessed to be in need of such assistance. During the operation of the current scheme, some farmers in the beef, dairy and wine-grape industries have received carry-on loans. To be eligible, farmers are required to exhibit prospects of returning to commercial viability, given a market recovery and that all other sources of finance have been exhausted.

Rehabilitation assistance provides grants to alleviate conditions of personal hardship experienced by those obliged to leave their farms. Farmers are eligible for this assistance if their properties have been purchased under the Farm Build-up provision or if they have failed to meet the viability criteria for Debt Reconstruction assistance.

Household Support assistance provides grants up to a level equivalent to the unemployment benefit to meet the living expenses of applicants who have been refused adjustment assistance on the grounds of a lack of prospects of long-term commercial viability and who are in need of such assistance to alleviate personal and family hardship while they consider their longer-term options.

The demand for these provisions is shown in Table A.1. The demand for Farm Build-up relative to Debt Reconstruction has increased under the current scheme compared to the previous Rural Reconstruction Scheme. These provisions are the most popular, accounting for nearly two-thirds of the applications received under the RAS. Most of the remaining applications received were for Carry-on Finance (20 per cent) and Farm Improvement (11 per cent). The demand for the 'welfare-oriented' provisions of Rehabilitation and Household Support has been very low, being only 1 per cent and 3 per cent of applications received, respectively.

The administration of the scheme is the responsibility of the various state government authorities. In general, the terms and conditions of each of the provisions do not vary a great deal from state-to-state. An example of these terms and conditions is given in New South Wales Department of Agriculture (1979, pp. 26-7).

APPENDIX B

The Reliability of Survey Estimates

Estimates based on a sample of farmers are likely to differ from the estimates which would have been obtained had information been collected from all farmers. These differences are called sampling errors and their likely sizes, in percentage terms, are measured in this study by the relative standard errors of the estimates. In general, the smaller the relative standard errors the more reliable the estimate.

The relative standard errors of the attitude estimates of Jemalong Shire farmers given in this paper are shown in Figure B.1. For example, as shown in Table 1, 88 per cent of farmers agreed with the statement that 'it is the responsibility of each individual farmer to adjust to changes in the economic situation'. For an estimated percentage of 88, the relative standard error can be read from Figure B.1 as 5 per cent. Thus, at the 5 per cent level of significance, the percentage of farmers who agreed with the above statement would be between 79 per cent and 97 per cent (i.e. $88\% \pm (2 \times 0.05 \times 88\%)$). The relative standard errors for the estimates

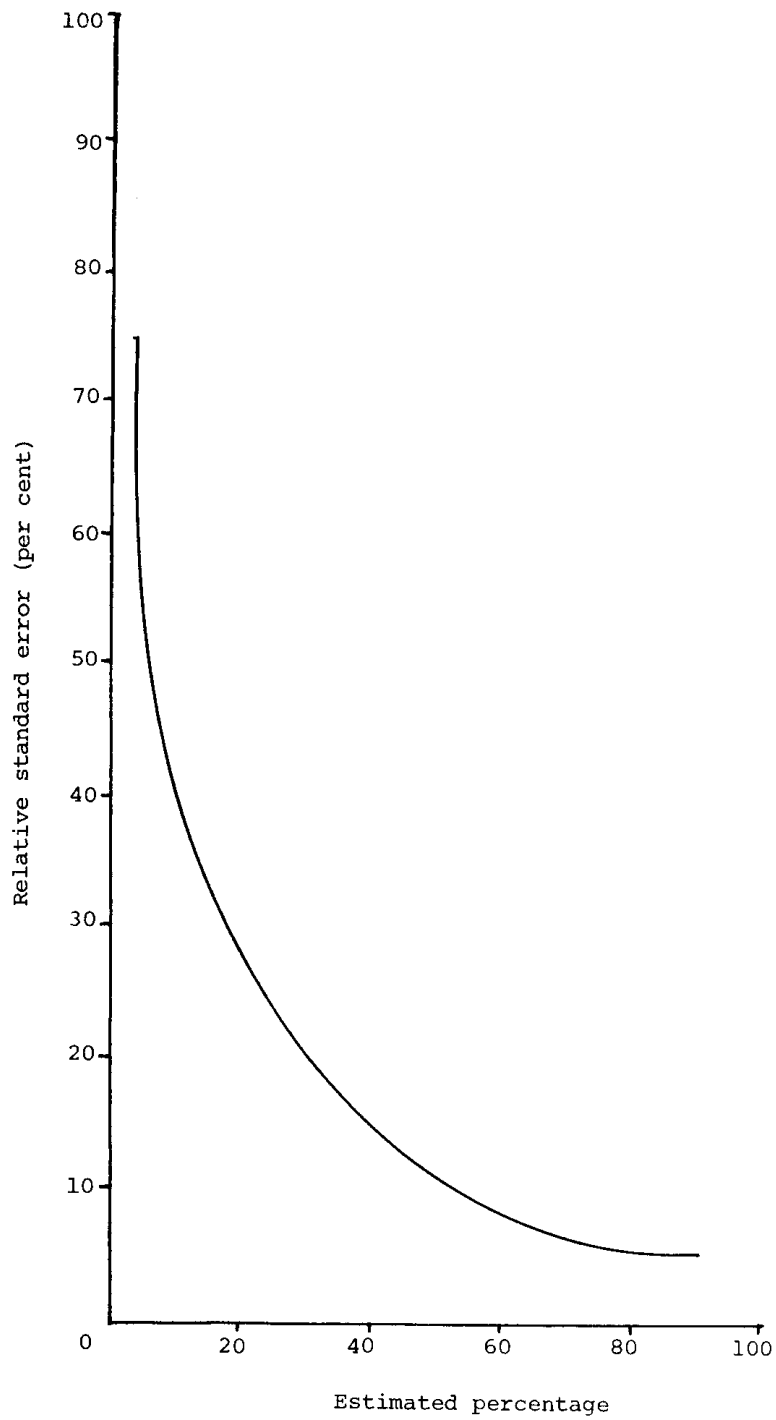


FIGURE B.1—The relative standard error curve for the distribution of farmers: Jemalong Shire, 1978.

contained in the contingency tables (i.e. Tables 5 and 6) were not calculated, but are not expected to differ significantly from those reported here.

Values obtained in a sample survey are affected by non-sampling errors, which may occur at any stage of a sample survey. For example, sections of the target population may have no chance of selection; the questionnaire may contain leading or ambiguous questions; the survey responses may be influenced by the interviewer; non-respondents may differ from the respondents in the variable being surveyed; or mistakes may occur in the editing and processing of data.

The full extent to which these results may have been affected by non-sampling errors is difficult to measure. Careful planning of procedures and some pilot testing were used to minimise the occurrence of non-sampling errors. However, both sampling and non-sampling errors should be kept in mind when assessing the reliability of the survey estimates.

References

- Barton, L. M. (1978), 'Agricultural assistance measures: a survey and assessment', *Australian Economic Review* 3rd Quarter, 71-82.
- Hirshleifer, J. and Riley, J. G. (1979), 'The analytics of uncertainty and information—an expository survey', *Journal of Economic Literature* 17(4), 1375-421.
- Huffman, W. E. (1974), 'Decision making: the role of education', *American Journal of Agricultural Economics* 56(4), 85-97.
- IAC (1976), *Rural Reconstruction*, AGPS, Canberra.
- Johnson, G. L. and Quance, C. L. (eds) (1972), *The Overproduction Trap in U.S. Agriculture*, Johns Hopkins University Press, Baltimore.
- Kingma, O. T. and Samuel, S. N. (1977) 'An economic perspective of structural adjustment in the rural sector', *Quarterly Review of Agricultural Economics* 30(3), 201-15.
- Menz, K. M. and Longworth, J. W. (1976), 'Allocative ability, information processing and farm management', *Review of Marketing and Agricultural Economics* 44(4), 203-7.
- Moser, C. A. and Kalton, G. (1975), *Survey Methods in Social Investigation*, 2nd edn, Heinemann Educational Books, London.
- New South Wales Department of Agriculture (1979), 'The rural adjustment scheme', *Agricultural Gazette* 90(3), 26-7.
- Robinson, C. and McMahon, P. (1980), Off-farm resource deployment in the Australian grazing industry. Paper presented to the Annual Conference of the Australian Agricultural Economics Society, Adelaide.
- Simon, H. A. (1979), 'Rational decision making in business organisations', *American Economic Review* 69(4), 493-513.
- Schultz, T. W. (1975), 'The value of the ability to deal with disequilibria', *Journal of Economic Literature* 13(3), 827-46.
- Threlfall, P. (1977), 'Government reconstruction and adjustment assistance measures in the Australian rural sector', *Quarterly Review of Agricultural Economics* 30(3), 177-200.